

Marion Kersten

# Making knowledge work



Factors, strategies and leadership to improve sharing and application of knowledge in the care and support for people with intellectual disabilities



15469

**Making knowledge work**  
**Factors, strategies and leadership to improve**  
**sharing and application of knowledge in the care and support for**  
**people with intellectual disabilities**

Proefschrift ter verkrijging van de graad van doctor aan Tilburg University  
op gezag van de rector magnificus prof. dr. W.B.H.J. van de Donk,  
in het openbaar te verdedigen ten overstaan van een  
door het college voor promoties aangewezen commissie  
in de Aula van de Universiteit op vrijdag 23 februari 2024 om 13.30 uur

door

**Maria Cornelis Odilia Kersten**  
Geboren te Roermond, Nederland

**Promotores:**

Prof. dr. P.J.C.M. Embregts (Tilburg University)

Prof. dr. ir. M.C.D.P. Weggeman (Technische Universiteit Eindhoven)

**Promotiecommissie:**

Prof. dr. T.P.L. Buyl (Tilburg University)

Prof. dr. L.A.M. van de Goor (Tilburg University)

Prof. dr. H.L.G.R. Nies (Vrije Universiteit Amsterdam)

Prof. dr. W. van der Scheer (Erasmus Universiteit Rotterdam)

Prof. dr. C. Schuengel (Vrije Universiteit Amsterdam)

Het onderzoek zoals beschreven in dit proefschrift is uitgevoerd aan het departement Tranzo, Tilburg School of Social and Behavioral Sciences, Tilburg University, Tilburg, Nederland.

Het onderzoek is financieel mogelijk gemaakt door brancheorganisatie Vereniging Gehandicaptenzorg Nederland

Het drukken van dit proefschrift is financieel mogelijk gemaakt door Tilburg University en Vereniging Gehandicaptenzorg Nederland

**ISBN:** 978-94-6469-743-8

**Omslag:** Mariël Lam

**Lay-out & Printing:** ProefschriftMaken || [proefschriftmaken.nl](https://proefschriftmaken.nl)

**Fotoverantwoording omslag**

Het beeldje is een door mijzelf gemaakt eerbetoon aan LFB-er Arnold Berkhout, na zijn dood in 2018. Van Arnold, die als geen ander ervaringskennis wist over te brengen, heb ik veel geleerd tijdens onze langdurige samenwerking. Ook aan dit proefschrift droeg hij bij via een startinterview.

**©2024 Marion Kersten**

All rights reserved. No parts of this thesis may be reproduced, stored in a retrieval system or transmitted in any form or by any means without permission of the author. Niets uit deze uitgave mag worden vermenigvuldigd, in enige vorm of op enige wijze, zonder voorafgaande schriftelijke toestemming van de auteur.

Wisdom begins in wonder.  
(Socrates)



## TABLE OF CONTENTS

<b>Chapter 1</b>	General introduction	3
<b>Chapter 2</b>	How to improve sharing and application of knowledge in care and support for people with intellectual disabilities? A systematic review	35
<b>Chapter 3</b>	Motives and strategies of CEOs for stimulating sharing and application of knowledge in the care and support for people with intellectual disabilities	73
<b>Chapter 4</b>	Contextual factors related to the execution of knowledge strategies in intellectual disabilities organizations	115
<b>Chapter 5</b>	Incoming professionals' perspectives on the application of new knowledge in care organisations for people with intellectual disabilities: A concept mapping study	145
<b>Chapter 6</b>	Contextual factors influencing knowledge sharing and application in the care and support for people with intellectual disabilities during the COVID-19 pandemic	185
<b>Chapter 7</b>	General discussion	207
	Academic summary	249
	Wetenschappelijke samenvatting	263
	Public summary / publiekssamenvatting	279
	Dankwoord	284
	Curriculum Vitae	287
	Publications	290

**CHAPTER 1**





# General introduction

*How Anne Loes got her voice*

*When she came to live with Amerpoort, things were not going well for her. She cried a lot, was gloomy, stopped eating, couldn't express herself and withdrew. Vosseveld's team set to work and, together with her mother, investigated what she could do for her. Now things are going much better with Anne Loes. She is still imprisoned in her body and needs a lot of physical care, but she has literally been given a voice with a new speech computer through eye movements.*

Retrieved from <https://www.vgn.nl/nieuws-van-leden/hoer-anne-loes-haar-stem-kreeg>, 19<sup>th</sup> of August 2021

## **Increased attention on knowledge processes**

### **Introduction**

Knowledge is a precondition for professionals working within organisations delivering care and support for people with intellectual disabilities to perform well (Buntinx & Van Genneep, 2007; Doody et al., 2022; Embregts & Hendriks, 2011), as it is for professionals working in other organisations (Council for Public Health and Society, 2017; Simons & Ruijters, 2014; Weggeman, 2007, 2015). This is because high-quality care, through which professionals contribute to the quality of life of their service users, is grounded in information as well as the experiences, skills and attitudes of professionals, in other words: knowledge (Weggeman, 2007). Given the importance of knowledge for high-quality care and its continuous development, acquiring and updating this knowledge requires ongoing commitment and effort from both professionals (i.e., professional learning) and organisations in order to facilitate the sharing and application of knowledge (i.e., a knowledge strategy) (Berends et al., 2003; Buntinx & Van Genneep, 2007; Karamitri et al., 2015; Simons & Ruijters, 2014). Knowledge strategies are therefore vital for organisations striving to enhance the quality of both care and life for people with intellectual disabilities (Reinders & Schalock, 2014; Schalock et al., 2008).

To optimally apply knowledge in the field of intellectual disability care, it is first necessary to acknowledge the heterogeneous nature of its service users, which determines the broad range of their support needs and, in turn, the content of the knowledge base required by professionals. An intellectual disability is defined by the American Association on Intellectual and Developmental Disabilities as follows:

*Intellectual disability is characterized by significant limitations both in intellectual functioning and in adaptive behaviour, as expressed in conceptual, social, and practical adaptive skills. This disability originates during the developmental period, which is*

*defined operationally as before the individual attains age 22” (Schalock et al., 2021, p. 1).*

This involves a heterogeneous population whose disabilities range from mild to profound (elaborated in box 1, page 8) and who require life-long and life-wide care and support needs (WHO, 2011). Consequently, professionals must possess knowledge about a wide range of support needs and domains, including legislation that governs care and support and the content of care and support across all the key domains of quality of life: emotional, physical and material well-being, interpersonal relationships, personal development, self-determination, social inclusion and rights (Herps et al., 2016; Schalock et al., 2008). Moreover, seeking to enhance the quality of life of their service users often necessitates input from manifold professional disciplines (i.e., psychologists, ID physicians, paramedics and support staff) in the form of evidence-based and practice-based knowledge, in conjunction with the experiential knowledge of members of service users’ informal network (Herps et al., 2016; Schalock et al., 2021). As such, the sharing and application of knowledge in intellectual disability care includes three sources of knowledge: evidence-based knowledge of researchers, practice-based knowledge of professionals, and experiential knowledge of both service users and their informal network (Cobigo et al., 2014; Embregts, 2011, 2017).

Next, it is relevant to consider the role of the organisational context in applying knowledge as optimally as possible within the daily care and support for people with intellectual disabilities. This organisational context encompasses a broad variety of both mainstream (‘community care’) and specialized services that provide healthcare and social care, and includes community support and independent living, residential support services and support in education or employment (Kroneman et al., 2016; Public Health England, 2016; WHO, 2011). In contrast to many other countries in which community care prevails, such as the United Kingdom (Farrington et al., 2015), in the Netherlands it is primarily specialized residential facilities that provide services to people with intellectual disabilities, partially in small-scale locations in the community (Schuurman, 2014; Woittiez et al., 2018). Organisational features, such as scale and structures, influence the dynamics of knowledge exchange (Farrington et al., 2015). Therefore, encouraging professionals to share and apply knowledge deriving from different sources in an organisational context requires care organisations for people with intellectual disabilities adopting a knowledge strategy that takes this (meso) organisational context into account.

### **International developments that influenced the sharing and application of knowledge within intellectual disability care in the early 2000s**

Understanding how strategies to stimulate the sharing and application of knowledge within the field of intellectual disability care have developed across time requires insights into broader international developments. This involves examining frameworks pertaining to a) processing knowledge within healthcare, b) management in healthcare organisations and c) people with intellectual disabilities.

Around the turn of the millennium, policymakers and researchers within the international field of healthcare and intellectual disability care became interested in enhancing knowledge processes. Their principal focus appeared to be on fostering greater evidence-based practice, such as evidence-based medicine which sought to integrate individual clinical expertise and the best external evidence in the care of individual patients (Sackett et al., 1996). Research conducted in Canada (Mitton et al., 2007; Straus et al., 2009; West, 2004) and the US (Rogers et al., 2009; Sudsawad, 2007), as well as by the World Health Organisation (WHO, 2006), primarily focused on *knowledge translation* from research into practice, which was perceived as a linear process and defined by the latter as “*the synthesis, exchange and application of knowledge by relevant stakeholders to accelerate the benefits of global and local innovation in strengthening health systems and advancing people’s health*” (p. 2). Both in some of these publications (Mitton et al., 2007; Straus et al., 2009; WHO, 2006) and other reviews (e.g., Gervais & Chagnon, 2010; Pentland et al., 2011), the barriers and facilitators of this linear process were also considered. Following the tradition of evidence-based medicine, policymakers concentrated on bridging the so-called ‘know-do gap’, that is, the application of evidence-based knowledge by healthcare professionals to stimulate innovation and improve the quality of care (Greenhalgh & Wieringa, 2011).

During the same time span, governmental organisations in the UK (e.g., the National Co-ordinating Centre for NHS Service Delivery and Organisation R & D) demanded greater attention to be paid to the knowledge processes within healthcare services, and, to this end, commissioned several systematic literature reviews and launched an implementation methods programme (Soper & Hanney, 2007). The reviews specifically focused on the diffusion of service innovations (Greenhalgh et al., 2004), managing knowledge within healthcare (Nicolini et al., 2008), and research utilization and knowledge mobilization by healthcare managers (Crilly et al., 2012, 2013; Ferlie et al., 2012). These reviews cast light upon the influence of both the internal (i.e., organisational) and external (i.e., socio-political) context, as well as the role of leadership. Moreover, they questioned the prevailing linear model of knowledge transfer (‘pipeline metaphor’), and underscored the need to study knowledge processes at the organisational level.

At that juncture, service provision in healthcare, including within intellectual disability care, was also heavily influenced by neoliberalism and new public management, which resulted in a market-orientated approach (Ferlie et al., 2012; Swenson, 2008). While this presupposed that care organisations could market their services to address the needs of their clients, they also became competitors with one another. Given that the emphasis placed upon financial and administrative control processes also increased at that time, management logic became ever-more dominant (Buntinx, 2008). For example, in the Netherlands quantitative methods of quality assessment were introduced, which understand 'quality of care' as being independent from the professional who generates it, while there was also a unilateral focus on efficiency. This management logic risked overshadowing the logic of relationships between staff and clients (Buntinx, 2008), and professionalism (Embregts & Hendriks, 2011; Reinders, 2008). Although knowledge remained an asset within intellectual disability care, this new approach hindered the processing of knowledge, since care organisations did not deem it worthwhile to provide the resources and conditions needed for this.

Already prior to the turn of the millennium, a new perspective upon people with disabilities had emerged within the field of intellectual disability care, one which foregrounded their position and the value of their experiential knowledge (Van Hove, 1998; Van der Lans, 2019). Like the market-oriented approach also rooted in liberalism and referred to as the citizen paradigm (Van Genneep, 1997), this new perspective was developed in response to the Scandinavian normalization paradigm. The citizen paradigm is grounded in the socio-ecological vision of Bronfenbrenner (Bronfenbrenner & Morris, 2007), which states that human functioning should be understood in terms of the interaction between people and their environment. From this perspective, identifying support needs became critical for understanding people with intellectual disabilities, as well as their treatment and how to act professionally towards them (Buntinx, 2020a; Buntinx, 2020b; Schalock, 2008). In accordance with the citizen paradigm, there was increased importance placed upon viewing people with intellectual disabilities as a rich source of knowledge for research. This challenged researchers to explore ways to utilize the experiential knowledge of people with intellectual disabilities, that is, to see them as both reliable informants and co-researchers (Van Hove, 1998).

The next subsections examine the emergence of a knowledge policy within intellectual disability care in the Netherlands (2000-2005) and the main subsequent developments while this policy remained in operation (2006-2014). This allows for the interplay between motives, knowledge strategies and contextual factors to become discernible.

### **The beginning of a knowledge policy within intellectual disability care in the Netherlands (2000-2005)**

Around the turn of the millennium, the Dutch Ministry of Health, Welfare and Sport (VWS) stimulated research and the subsequent bringing together and dissemination of knowledge within the field of intellectual disability care (Buntinx, 2020a). However, in 2003, there were several signals of poorly functioning knowledge processes within this field: there was a lack of structural exchange of knowledge, both the results and the implications of research failed to reach practice, while there were notable cutbacks in research funds and other grants (Barnard, 2003). In 2005, the Council for Health Research (RGO), commissioned by VWS, made recommendations on how to improve the infrastructure of scientific research (RGO, 2005). This was the prelude to a new ZonMw programme '*Research for people with intellectual disabilities. Life course and life stages*'<sup>1</sup> (2007-2012), which sought to stimulate both research and the infrastructure in collaboration with other stakeholders (Buntinx, 2020a).

The Dutch Association of Healthcare Providers for People with Disabilities (VGN) is dedicated to promoting conditions that enable the affiliated organisations to provide responsible care and support. VGN represents their interests in national policy discussions across a broad spectrum of themes such as quality, governance, financing and knowledge (<https://www.vgn.nl/themas>).

*Member organisations:* approximately 170 specialized service organisations.

*Service users:* 200,000 people with intellectual, physical and and/or sensory impairment. This involves most of the 142,000 Dutch residents with intellectual disabilities, of which 68,000 have severe intellectual disabilities (IQ < 50) and 74,000 mild intellectual disabilities (IQ 50-70) (VGN, 2019).

*Professionals:* 188,100 with different educational levels (38.4% lower, 49.6% middle, 41.7% higher level). This involves a broad span of professions e.g., support staff (± 115,000), speech and language therapists, ID physicians (± 251) and psychologists (VGN, 2022; Van Driesten & Wessels, 2020).

#### **Box 1 Description of VGN**

One of these stakeholders was a non-governmental organisation, the Dutch Association of Healthcare Providers for People with Disabilities (VGN)<sup>2</sup>, which in 2004 had become actively involved in fostering the sharing and application of knowledge within the field of intellectual disability care. Within the VGN, the general meeting of members (i.e., care organisations for people with intellectual disabilities) determined the policy. While in the early 2000s the VGN perceived its role to be primarily as an employers' organisation, a few years later its role in healthcare policy would become more important again (Buntinx, 2020a). Commissioned by the VGN, Rispens, a professor in Pedagogical and Educational Science, provided recommendations as to which knowledge policy the VGN

<sup>1</sup> In Dutch: *Onderzoek voor mensen met verstandelijke beperkingen. Levensloop en levensfasen.*

<sup>2</sup> In Dutch: *Vereniging Gehandicaptenzorg Nederland.*

should pursue (Rispen, 2005). After the general meeting of the VGN agreed with the advice and subsequently provided a budget it was operationalized within a knowledge policy action plan (VGN, 2005c), which was executed from 2006 onwards. The motives of the VGN to develop this knowledge policy delineated in three key policy documents of the VGN are discussed below: 1) the aforementioned advice of Rispen (2005), 2) the memorandum '*Professionalism in care for people with disabilities*'<sup>3</sup> (VGN, 2005a), 3) and the *Strategy memorandum Employers' Affairs Labour market and employment conditions policy 2006-2009*<sup>4</sup> (VGN, 2005b). The three documents are complementary and together explicate both the strategic rationale for, and the major components of, the VGN's knowledge policy.

### *Motives*

The motives for developing a knowledge policy relate to broader developments, both within the socio-political environment ('external context') and within VGN and its member organisations ('internal context').

In the *external context*, as aforementioned, the Council for Health Research advised that the infrastructure for scientific research needed to be improved, and, to this end, urged VWS to prepare a new Research Programme (Rispen, 2005). In parallel with this, there were also changes in the national policy frameworks for care for people with disabilities (VGN, 2005a), displayed in box 2 (page 10).

Due to these changing frameworks, a need arose within the *internal context* to describe the specific content of professionalism within this field of care. Consequently, in an era of growing market forces, the added value of care organisations for people with intellectual disabilities in comparison to other healthcare organisations could be explicated (VGN, 2005a), which was in line with the strategic course of VGN (VGN, 2005b). Regarding the positioning of the sector, the general meeting of VGN had spoken out in favour of deepening care and service provision for people with disabilities in the short term and expanding ('enrichment') it in the medium term.

At the same time, the scaling up of care organisations for people with intellectual disabilities and the concomitant introduction of community care led to new demands in the competences of professionals: broadly trained professionals who can be deployed in different care situations with different target groups. This was challenging considering the lack of employees within the field of intellectual disabilities (VGN, 2005b). Besides the lack of professionals in numbers, there was also a scarcity of well-qualified professionals. At the same time the field was dealing with the increased severity and complexity of their

<sup>3</sup> In Dutch: *Professionaliteit in de zorg voor mensen met functiebeperkingen Kenmerken, rol en voorwaarden.*

<sup>4</sup> In Dutch: *Strategienota Werkgeverszaken Arbeidsmarkt- en arbeidsvoorwaardenbeleid 2006-2009. Professioneel, flexibel, herkenbaar, doelmatig.*

service users' problems. Moreover, the proportion of unqualified staff in intellectual disability care was greater than in other sectors. Given that this lack of quantity and quality could threaten the quality of care for service users, it was necessary to pay attention to professionalism (VGN, 2005b).

- 1) the introduction of community care aimed towards a shift from large-scale residential care to small-scale living in the community;
- 2) modernization of the Exceptional Medical Expenses Act<sup>5</sup>, which marked a shift from a categorical facility-oriented system to a more general, individual and function-oriented healthcare system;
- 3) potential introduction of the Social Support Act<sup>6</sup>, in which the local municipality finances care and support for people requiring low-level care;
- 4) changes in the funding system, whereby supply-driven financing was replaced by need-driven financing.

**Box 2 Changes in the national policy frameworks for care for people with disabilities around 2005**

This involved explicating the meaning of professionalism within intellectual disability care, its role within care delivery and the conditions needed for fostering professionalism. It became evident that a knowledge policy was preconditional for care organisations for people with intellectual disabilities to enhance the performance of their professionals (Rispen, 2005; VGN, 2005a). This required efforts from both member organisations of the VGN and the sector as a whole regarding to training policy and competency profiles (VGN, 2005b). Moreover, given the limited contribution of scientific research to healthcare practice at that time, stimulating research and knowledge management was also required (Rispen, 2005).

To summarize, the importance placed upon professionalism and quality of care served to distinguish this field from both other healthcare organisations and voluntary care and informal care. This appeared to provide a strong motive for designing a knowledge policy.

*Strategies*

The knowledge policy proposed by Rispen (2005) consists of *"taking measures for the further development of the knowledge base of the profession, as well as ensuring that the available knowledge is used by the professional practitioners"* (p. 8). Furthermore, Rispen (2005) highlighted specific leverage points of the knowledge policy, with the most important of these being the following:

- 1) at the level of the care organisations for people with intellectual disabilities, it is critical to facilitate the processing of knowledge, so that professionals can practice

<sup>5</sup> In Dutch: *Algemene Wet Bijzondere ziektekosten (AWBZ)*.

<sup>6</sup> In Dutch: *Wet maatschappelijke ondersteuning (Wmo)*.



their profession; the role of the VGN is to encourage and organise such collaboration;

- 2) given the diversity, competition and conflicts of interest, the steering model is primarily based on stimulating, bundling, and guiding initiatives within care organisations for people with intellectual disabilities; only regarding the development and execution of the research programme is central control required.

The key ingredients of Rispens' proposals were included in the knowledge policy action plan (VGN 2005c), which was developed by policymakers of the VGN in close collaboration with its member organisations and stakeholders (e.g., VWS and the financing organisation ZonMw). Moreover, a policymaker was appointed who was solely dedicated to the execution of the knowledge action plan.

This knowledge action plan encompassed two tracks (VGN, 2005c): a) an external programming role to research and the development of knowledge products and b) an internal stimulating programme. The former resulted in a cooperation agreement concluded by VGN, Vilans<sup>7</sup> and ZonMw to improve the knowledge cycle (VGN et al., 2007). Each of these three stakeholders took the lead in the steps of the knowledge cycle that most clearly mirrored their core tasks: demand for new knowledge (VGN) – develop knowledge (ZonMw) – determine the value of this knowledge (ZonMw) – dissemination of knowledge (Vilans) – implementation of knowledge (Vilans) – use of knowledge (VGN) (Nooren, 2008).

The other track of the knowledge action plan (the internal programme) sought to facilitate and stimulate the sharing and application of knowledge within the VGN. To this end, several strategies were employed, both online and offline. Furthermore, a scientific award was established to stimulate the development of practice-based knowledge in the field of intellectual disabilities<sup>8</sup>, while a professionalisation programme was launched that offered, amongst others, masterclasses on knowledge management and scientific research.

With regard to the educational policy of the VGN, the aforementioned *Strategy memorandum* (VGN 2005b) presented a combination of measures to improve both the quality and amount of professionals, including efforts for embedding the national competency profile (Van Arensbergen & Liefhebber, 2005)<sup>9</sup>, which was launched earlier that year, in vocational training and strengthening the professional image of intellectual

<sup>7</sup> The national knowledge centre on long-term care.

<sup>8</sup> In Dutch: *de Gehandicaptenzorgprijs*.

<sup>9</sup> Competences encompass the entire range of knowledge, insight, skills, attitudes, and personal characteristics via which adequate results can be achieved in a professional context, in this case intellectual disability care. In this competence profile, the relationship between the nursing, care and agogic tasks is described. With this integrated profile, the aim was to achieve as much coherence as possible between the Nursing Care and Social Agogic Work education, which were launched in 2006 (elaborated in the next section, page 13).

disability care and its employees. While the competency profile was used as a vehicle through which to improve the quality of professionals and strengthening the image of professionals, intellectual disability care sought to improve the number of professionals by making the field more attractive in the labour market.

In summary, the knowledge policy of the VGN encompassed a broad range of strategies directed at the development, sharing and application of knowledge by professionals in care organisations for people with intellectual disabilities.

### **Major developments in the context of the knowledge policy in intellectual disability care in the Netherlands 2006-2014**

The execution of the knowledge policy from 2006 onwards was influenced by its context in which policy developments partly occurred in parallel with one another. Therefore, it is instructive to examine these major developments more closely, both within the socio-political environment ('the external context', involving governmental policy on care and welfare as well as on education), and within care organisations for people with intellectual disabilities ('the internal context').

#### *External context*

During the period 2006-2014, the Dutch governmental policy on care and welfare that influenced the knowledge policy focused on 1) knowledge development, 2) quality improvement, 3) funding and 4) transforming the care system, which will be described in turn below. Regarding knowledge development, the aforementioned ZonMw research programme '*Life course and life stages*' led to the establishment of five partnerships on knowledge in which universities, care organisations for people with intellectual disabilities and knowledge centres collaborated (elaborated in the next subsection, page 14 ). However, after this programme ended in 2012 with positive evaluations, no new research programme was initiated by VWS until 2015 (Buntinx, 2020a). The second development influencing the knowledge policy pertained to quality improvement. Several programmes targeting sustainable quality improvement were initiated by VWS between 2005-2015, both for long-term care in general and intellectual disability care specifically (Slaghuis, 2016). Furthermore, already in 2007 VWS established a quality framework together with stakeholders in intellectual disability care<sup>10</sup>. This quality framework delineated a shared vision of both the core quality of life domains<sup>11</sup> and conditional knowledge-related themes pertaining to the quality of care, among which expertise of the professionals (VGN, 2007).

---

<sup>10</sup> Organisations of service users and their relatives, Professional associations, Organisation of health care providers, HealthCare Inspectorate and Health insurers Netherlands.

<sup>11</sup> Emotional, physical and material well-being, interpersonal relationships, personal development, self-determination, social inclusion and rights.

Next, a quality assessment structure was developed, which involved the development of standardized indicators to be used for benchmarking<sup>12</sup>, external accountability<sup>13</sup>, internal improvement, and providing information for making choices. After an initial top-down attempt to implement a '*one size, fits all*' instrument failed, this was subsequently replaced by a bottom-up method in 2013, where learning and improving became the primary focus (Embregts et al., 2021). From the end of 2013, the quality framework was governed by the newly established National Health Care Institute (ZIN). Commissioned by VWS, ZIN's tasks also involve both promoting and safeguarding the availability and accessibility of healthcare and encouraging innovation within healthcare professions and training courses in cure and care (Helderman et al., 2014).

The third and fourth development influencing the knowledge policy concerned funding and transforming the care system (Schuurman, 2014). In 2009, VWS changed the funding system: instead of the previous supply-driven system, the budget would now be attuned to the amount of care that the service users needed. In parallel with this, the same department was working on initiating a major change in the Dutch care system, which came into effect on 1 January 2015, that aimed towards more control and self-reliance of the service users, inclusion and mainstream service provision, lower costs and greater cohesion. This involved a transfer of tasks and responsibilities from higher authorities to local government, which, in turn, resulted in greater competition between care organisations. Finally, in these years the ratification of the UN Convention on the Rights of Persons with Disabilities (CRPD) by the Dutch parliament (in 2016) was prepared by VWS (Schuurman, 2014).

Regarding educational policy, in 2006 the Ministry of education, culture and science (OCW) launched a major change in the vocational education of professionals in the field of health and welfare via the introduction of a new framework of professions. The former five specific professional domains (including intellectual disability care) were replaced by two generic domains, nursing and care and the socio-agogic domain. As aforesaid (page 11), the newly launched competency profile regarding professionals in intellectual disability care focused on both. Moreover, the competences of the professionals in care and welfare were outlined and connected to this new framework (VGN 2009a, 2009b; Vlaar et al., 2005). From that moment onwards, the vocational education for all professionals in care and welfare was underpinned by a common basic programme, which was then proceeded by a more specialized component (Sectorraad, 2008). It was only in this later specialized portion that future professionals in intellectual disability care could acquire the knowledge needed for this field of care.

---

<sup>12</sup> A way of comparing the performance of organisations with each other.

<sup>13</sup> Towards stakeholders like the Healthcare Inspectorate and health insurers.

In lower vocational education, regional training centres (ROCs) together with training companies (e.g., care organisations for people with intellectual disabilities) provided the training for professionals. However, the training companies experienced many bottlenecks, with the most important of these being differences between schools in terms of education and tools, lack of guidance and preparation of the interns, and a lack of expertise and skills of the students (Detmar & De Vries, 2009). In response to this unwanted situation, the main stakeholders agreed to improve their collaboration (MBO raad et al., 2010), and OCW subsequently launched an action plan comprising both measures to improve the quality of vocational education and revising the qualification structure to provide well-trained professionals (Ministerie van OCW, 2011).

To summarize, during this period, while VWS launched programmes designed to stimulate knowledge development and quality improvement, and a quality framework was developed and implemented, major changes in both the funding structure and the care system itself demanded a lot of attention from care organisations for people with intellectual disabilities. Furthermore, the connection between vocational education and professional practice proved to be incredibly challenging.

#### *Internal context*

During the same period, as a result of the knowledge policy, care organisations for people with intellectual disabilities became increasingly involved in knowledge-driven participation in collaborative partnerships. As aforementioned, the ZonMw programme *'Life courses and life stages'* encouraged care organisations for people with intellectual disabilities to participate in partnerships ('consortia') together with universities and knowledge centres, aimed towards developing knowledge<sup>14</sup> (Buntinx, 2020a). While some of these developed into academic collaborative centres, over time care organisations for people with intellectual disabilities also became increasingly involved in (co)funding chairs and lectureships, knowledge networks and platforms dedicated to target groups<sup>15</sup> (Van Balkom et al. 2014). Alongside this, regional networks of care organisations for people with intellectual disabilities and educational organisations were developed. In so doing, the knowledge infrastructure, which had previously been characterized as weak (Rispen, 2005; Schuurman, 2011), became enhanced.

The VGN also contributed to improving the knowledge infrastructure, by virtue of also becoming more involved in knowledge-driven collaborative partnerships. This

---

<sup>14</sup> The initial partnerships (i.e., consortia) were: *GOUD, Gezond ouder worden* (Healthy ageing, Erasmus University, Rotterdam), *Sterker op eigen benen* (Radboud University, Nijmegen), *Coping LVB* (Utrecht University), *Kwaliteit van leven* (Quality of life, University of Maastricht) and *Wat werkt voor ouders met verstandelijke beperkingen* (What works for parents with intellectual disabilities, VU University, Amsterdam).

<sup>15</sup> For example *Platform PIMD* (in Dutch: Platform EMG) and *Knowledge Centre Mild Intellectual Disabilities* (in Dutch: Landelijk Kenniscentrum LVB).

involved the aforementioned agreements that sought to improve the knowledge cycle in 2008, in addition to full partnership in vocational education in 2010 as well as new partnerships. For example, in 2008 the network *Knowledge Square for the Disability Care Sector*<sup>16</sup> was launched, which saw VGN, Vilans, MEE Nederland and ZonMw collaborate in online and onsite knowledge dissemination aimed towards making both experiential knowledge and evidence-based and practice-based knowledge accessible. In 2012, the lack of a new ZonMw programme urged the VGN, academic leaders of consortia of research institutes and care organisations for people with intellectual disabilities to join forces to develop a knowledge agenda. This resulted in building blocks for *Simply special*<sup>17</sup>, a new ZonMw programme funded by VWS, which started in 2015 and stimulated knowledge development, distribution and implementation. An innovative feature of this programme was its close collaboration with the *Knowledge square for the Disability Care Sector* in disseminating and making accessible knowledge (Buntinx, 2020a).

To summarize, during this period the collaboration between care organisations for people with intellectual disabilities, VGN and stakeholders like ZonMw, Vilans and the academic leaders of consortia of research institutes increased.

### *Room for improvement*

While the aforementioned knowledge policy sought to enhance the development, sharing, and application of knowledge, the actual application of this knowledge remained inadequate (i.e., the know-do gap). After exploring the level of evidence-based work in long-term care, the aforementioned National Health Care Institute established that the level was low and that the available evidence was often of poor quality. This was explained by pointing to the lack of a research tradition and culture, a deficient knowledge infrastructure, and a shortage of structural financing. The National Health Care Institute concluded that to provide effective and appropriate care, long-term care required additional attention and efforts to promote effective research, meaning that both appropriate financing and further professionalisation and academisation were needed (ZIN, 2016).

The need for improving the knowledge processes in intellectual disability care was also observable in signals about the poor quality of care and life of the service users and the experienced inadequacy of professionals. For example, in the winter of 2011, the case of Brandon, a service user who underwent a far-reaching degree of restriction of freedom for a long time, served to expose how challenging supporting people with intellectual disabilities and complex care needs was for professionals and their

---

<sup>16</sup> In Dutch: *Kennisplein Gehandicaptensector*.

<sup>17</sup> In Dutch: *Gewoon Bijzonder*.

organisations (Reinders, 2013). Exploratory research into situations in which professionals experienced inadequacy, along with scenarios in which they were able to deal with complex situations, indicate that this was related to the behaviour of professionals, their connection with service users, the culture of their organisation, and the way they used knowledge (Zomerplaa, 2016). However, the implications of these findings for the policy of care organisations for people with intellectual disabilities to encourage their professionals to share and apply knowledge are currently unclear. Therefore, improving the knowledge policy of care organisations for people with intellectual disabilities warrants further research. Specifically, one must ask which factors and strategies influence the sharing and application of knowledge within intellectual disability care. Before delineating the aims and research questions of the thesis, first the key concepts and theories related to knowledge sharing and application must be elaborated, namely knowledge, knowledge sharing, knowledge application, context, leadership, knowledge creation theory and systems thinking.

## **Key concepts and theories**

### **Knowledge, knowledge sharing and knowledge application**

In this thesis, following Weggeman (2007, 2015; Berends & Weggeman, 2002), *knowledge* is defined as the ability of professionals to perform their tasks, where knowledge is seen as derived from information, experience, skills and attitudes. This definition is in line with both our focus on professionals and the character of the aforementioned three sources of knowledge in the field of intellectual disability: evidence-based knowledge, practice-based knowledge and experiential knowledge (Embregts, 2011, 2017). A closer examination of these three sources of knowledge clearly demonstrates that they vary in terms of their properties, which has consequences for the processing of each type of knowledge (Farrington et al., 2015; Robertson et al., 2015; ZIN, 2016). In particular, this applies to the nature of knowledge, that is, whether it is codifiable and 'explicit' or non-codifiable and 'implicit' or 'tacit' (Polanyi & Sen, 2009). Explicit knowledge is codified and concerns the information part in the aforementioned definition of Weggeman (2007, 2015). For example, 'know that' knowledge, such as facts, policies, and protocols (Farrington et al., 2015). Implicit knowledge is present in the minds of individuals and groups and concerns the other parts of Weggeman's definition: experiential knowledge, skills and attitude (indicated by Farrington et al., 2015 as 'know how' knowledge). The explicit body of knowledge (e.g., evidence-based guidelines and practice-based methods), which is relatively straightforward to exchange within and between organisations, is limited in the field of intellectual disability care compared to the field of medical care. Therefore, implicit knowledge (i.e., the individual

experiences of professionals, service users and their natural network) is relatively vital for providing and receiving care and support. However, sharing implicit ('tacit') knowledge is more challenging insofar as it is situated in a specific context and limited to particular individuals and groups (Farrington et al., 2015).

*Knowledge sharing* at an individual level, which refers to the process of making explicit and tacit knowledge available to others within the organisation, is imperative for processing knowledge across all organisational levels. Sharing knowledge at the individual level requires converting knowledge held by an individual into a form that other individuals can understand, absorb, and use (Ipe, 2003). To understand the different ways of sharing explicit (e) and tacit (t) knowledge, *knowledge creation theory* (Konno & Schillaci, 2021; Nonaka & Toyama, 2003; Nonaka et al., 2000) is expedient. This organisational learning theory points to the application of four mechanisms, to share or convert knowledge between actors: from tacit or codified to tacit or codified: **S**ocialization (t->t), **E**xternalization (t->e), **C**ombination (e->e) and **I**nternalization (e->t). This process of sharing either explicit or tacit knowledge is called the SECI model. Contrary to the aforementioned linear model of knowledge translation from research to practice (page 6), this involves a spiral of knowledge creation, expanding within and across organisations. Besides the nature of knowledge (i.e., explicit or tacit), the process of knowledge sharing is influenced by four interconnected factors: motivation of the persons involved (1) internal power and reciprocity; (2) external relationship with recipient and rewards for sharing and opportunities; (3) purposive and relational learning channels to share knowledge and (4) the culture of the work environment (Ipe, 2003). In other words, internal and external motivation, the presence of learning channels and a knowledge sharing culture will encourage individuals to share their knowledge. These factors influencing knowledge sharing developed further into individual, interpersonal and team characteristics, perceptions related to knowledge sharing, and organisational context (Wang & Noe, 2010).

Regarding *knowledge application*, in line with the aforementioned definition of knowledge, this process designates the way in which professionals use information and their experience, skills and attitudes while performing their tasks. This is similar to the description of evidence-based practice: the "*best available research evidence with clinical expertise and patient values*" (Roulstone, 2011, p. 44; Sackett et al., 1996), which reflects the integration of the three sources of knowledge (evidence-based knowledge, practice-based knowledge, and experiential knowledge). Greenhalgh (2010) pinpointed that at a micro-level it is also necessary to take the specific context of the service user into account. She illustrated this via the example of her own consultation with a patient who had a cough. She decided to ignore the "*cough decision support procedure*" because of her knowledge of this patient and his situation (an asylum seeker from a war zone

living in incredibly difficult circumstances) leading her to estimate that the cough had a different cause. Concerning the organisational level, Durbin et al. (2016) demonstrated the influence of the clinical context on implementation decisions in their qualitative evaluation of the implementation of health checks. Adaption to the context is thus required when aiming to ensure successful and sustainable implementations (May et al., 2016). At a macro-level, the Dutch Council for Public Health and Society (RVS) pleaded the case for context-based practice over evidence-based practice (Council for Public Health and Society, 2017), arguing that "*This goes beyond a mere local implementation of external knowledge. It means a continuous process of learning and improving together.*" (p. 8). For professional practice, this means that the context indicates which (evidence-based) knowledge must be applied, like in the aforementioned example of Greenhalgh (2010).

### **Context, systems thinking**

Given that the influence of the context on the processes of both knowledge sharing and knowledge application turned out to be important, this raises the question: What exactly is context? Schalock et al. (2020) and Shogren et al. (2014) define this concept as follows: "*context integrates the totality of circumstances that comprise the milieu of human life and human functioning*" (p. 2), and elaborate on its power to engender change. They demonstrate its applicability in a multilevel model, that is, in the primary process ('micro-level'), at the organisational ('meso') level, and the systems ('macro') level. In other words, the functioning of people with intellectual disabilities is influenced by the context at all these levels. Hence, context provides an integrative framework through which to describe personal and environmental factors. Knowledge sharing and application of professionals are also examples of human functioning. Given that we aim to enhance these knowledge processes, and to involves all system levels, the aforementioned conceptualization of Schalock et al. (2020) is applicable in this respect. Moreover, Shogren et al. (2014) propose perceiving context both as:

- an independent variable, that is, personal and environmental characteristics that cannot or are not usually manipulated, such as age of the professional and learning style of the organisation; and
- an intervening variable, that is, organisations, systems, and societal policies and practices that can be manipulated to enhance human functioning and personal outcomes.

Context is also a key ingredient in the aforementioned *knowledge-creation theory* (Konno & Schillaci, 2021; Nonaka & Toyama, 2003; Nonaka et al., 2000). These authors describe how both at an organisational level and between organisations a 'shared context' is a precondition for knowledge sharing. While this shared context (named "*Ba*") consists of physical space (e.g., the office), virtual space (e.g., online platforms and



email) and mental space (e.g., shared ideas), it also is applicable in open innovations (e.g., living labs), when a common purpose (e.g., a vision) is acknowledged by all key players (enterprises, public sector, academics, user community).

To better understand the context of knowledge processes, following the recommendation of Best and Holmes (2010), to use system thinking in order to better understand the Knowledge to Action process, besides the *knowledge creation theory*, the *theory of systems thinking* is also beneficial. These authors reflected on the ways of thinking about how processing knowledge works. While linear thinking focuses on the components themselves, systems thinking focuses on the relationships between system components (Augustsson et al., 2019; Monat & Gannon, 2015). Application of the systems-thinking approach involves perceiving the organisation as part of a larger system, which is changed by culture, structures, priorities, and capacities. This system is dynamic and constantly changing because changes to one part of the system can influence other parts (Best & Holmes, 2010). Following Duryan et al. (2012, 2014), care organisations for people with intellectual disabilities are perceived as complex systems characterized by three levels. While the micro-level involves the primary process of professionals supporting people with intellectual disabilities, the organisation operates at the meso-level, while the intellectual disability care system functions at the macro-level.

### **Leadership**

Since enhancing knowledge sharing and application in care organisations for people with intellectual disabilities is a form of systemic change, it is vital to examine the *leadership* that is required to engender this change (Best & Holmes, 2010). Leadership is defined by Berson et al. (2006) as "*a process of influencing and teaching others to understand why and how certain activities and goals need to be accomplished*" (p. 341). According to Lakshman (2009), this involves facilitating the efforts of individuals, groups, and the organisation to learn, manage knowledge, and accomplish shared goals in organisations. This is consistent with the framework for situational leadership in the *knowledge creation theory* (Von Krogh et al., 2012), which discerns three levels of activity:

- a core level of local knowledge creation (i.e., the primary process);
- a conditional level that provides the resources and context for knowledge creation (e.g., an organisational unit); and
- a structural level that forms the overall frame and direction for knowledge creation in the organisation (i.e., the entire organisation).

At all three levels, leadership is required to transform the potential shared context (i.e., physical, virtual, and mental space) into the aforementioned SECI-mechanisms, which, in turn, are used to share explicit and tacit knowledge. This involves a shared vision (e.g., on the contribution of knowledge to enhance the performance of the

organisation) as well as environmental conditions (e.g., office arrangements) (Von Krogh et al., 2012). Within intellectual disability care organisations, the first level concerns the leadership of professionals with respect to sharing and using knowledge in daily care and support, the second concerns practice leadership of team leaders and other middle management, while the third level pertains to the organisational knowledge leadership of CEOs. The latter was introduced by Lakshman (2007, 2009), who, based on a grounded theory approach, underscored the vital role of CEOs' personal participation in knowledge management. The role of practice leadership in intellectual and developmental disability services, which comprises developing and maintaining good staff support for service users, was established in studies related to active support (Beadle-Brown et al., 2015; Bigby et al., 2020; Bould et al., 2018).

### **Thesis aims, research questions and outline**

To summarize, knowledge is an asset to professionals as it contributes to the quality of care and life for people with intellectual disabilities and the related job satisfaction of professionals. Since knowledge continually develops, acquiring and updating knowledge requires efforts from both professionals (i.e., professional learning) and their organisations (i.e., encouraging the sharing and application of knowledge). Hence, knowledge strategies are vital for organisations seeking to enhance their performance (i.e., the quality of care and life for their service users). Contextual developments in the early 2000s urged VGN and its member organisations to develop a knowledge policy, which was executed from around 2006 onwards. However, the application of knowledge remained insufficient. Therefore, the overall aim of this PhD research is to contribute to the improvement and renewal of the knowledge policy of care organisations for people with intellectual disabilities, for the purpose of stimulating professionals to share and apply knowledge. This requires insights into factors and strategies that influence the sharing and application of knowledge in care organisations for people with intellectual disabilities. For this reason, the overall research question is: *which factors and strategies enable and/or disable the sharing and application of knowledge by professionals within the care and support for people with intellectual disabilities?*

The **first goal** was to establish which barriers and facilitators of knowledge sharing and application in the field of intellectual disability care had been identified in extant literature. Hence, a systematic review was conducted which was underpinned by the following research question: *which organisational factors are enabling/disabling the sharing and application of knowledge within the care and support for people with intellectual disabilities?* **Chapter 2** presents the results of this study. All the retrieved

organisational factors were categorized into three main clusters. This served to provide an overview of the state of the art. The results underscored the key role played by both management and professionals. It was established that many factors related to the characteristics of management and professionals, such as their leadership and skills. Moreover, the pre-conditional role of management within the organisations also became clear, such as by providing resources and policymaking.

The **second goal** was to gain further insight into the pivotal role played by senior management, i.e., the chief executive officers (CEOs). Therefore, the next step was to conduct an exploratory qualitative study guided by three related research questions:

- *What are the motives of Dutch CEOs with respect to stimulating the sharing and application of knowledge in the care and support for people with intellectual disabilities?*
- *What are the strategies employed by Dutch CEOs to stimulate the sharing and application of knowledge in the care and support for people with intellectual disabilities?*
- *Which enabling/disabling factors influence the execution of strategies employed by Dutch CEOs to stimulate the sharing and application of knowledge in the care and support for people with intellectual disabilities?*

**Chapter 3** elaborates on the underlying motives and strategies (i.e., the first two research questions) behind CEOs' organisational knowledge leadership, before moving on to investigate their contribution to improving these knowledge processes. The motives and strategies identified are presented in two overviews. In **chapter 4**, the results pertaining to the third research question are presented, namely the contextual factors that influence the execution of CEOs' knowledge strategies. The contextual factors identified are presented in two overviews, dedicated to factors in the internal and external context, respectively. It was through this study that the need for aligning the knowledge policy with the incoming professionals became evident. This proved especially important with respect to those incoming professionals who are committed to service users with complex care needs. Moreover, it was found that only a minority of the strategies focused on knowledge application.

Hence, the **third goal** was to gain insight into the perspective of these incoming professionals regarding how to encourage knowledge application. Given that professionals with different educational backgrounds and positions are employed in care organisations for people with intellectual disabilities, it was necessary to explore a wide range of perspectives, namely those of support staff, psychologists and ID physicians. Since incoming professionals in particular have a strong need for new knowledge, it was

decided to focus on their perspectives. Therefore, the research question for this study was: *what are the perspectives of incoming professionals on factors stimulating the application of new knowledge in the care and support for people with intellectual disabilities?* **Chapter 5** presents the results of a concept mapping study examining the perspectives of incoming support staff, psychologists, and ID physicians with respect to the factors that stimulate the application of new knowledge within the care and support for people with intellectual disabilities.

During the execution of this particular study, the COVID-19 pandemic broke out in early 2020. As a result, along with the rest of the healthcare sector, the context of service provision changed within Dutch care organisations for people with intellectual disabilities. This 'living experiment' afforded the opportunity to realise a **fourth goal**: gaining insight into the impact of the factors influencing both knowledge sharing and the application of knowledge by professionals within the care and support for people with intellectual disabilities, both prior to and during the COVID-19 pandemic. To this end, our final study investigated the following research question: *What is the relevance of the contextual factors influencing knowledge sharing and application in the care and support for people with intellectual disabilities during the COVID-19 pandemic, compared to prior the pandemic, and according to support workers, compared to health professionals?*

In **chapter 6**, the results of this quantitative study, which investigated the perspectives of both support staff and health professionals, are presented.

Finally, in **chapter 7**, after summarizing the main findings and strengths and limitations of the five sub-studies, we provide a reflection on the new insights generated by the studies as well as their implications for research, policy and practice.

Table 1 provides a summary of the research questions, methods, and study population of all the studies.

**Table 1 Overview of the research questions, method and study population of the sub-studies**

Research question	Method	Study population
1. What are the motives of the Dutch Association of Healthcare providers for People with Disabilities to stimulate the sharing and application of knowledge?	Desk research	Not applicable
2. Which organisational factors are enabling/disabling to the sharing and application of knowledge in the care and support of people with intellectual disabilities?	Systematic review	Not applicable
3.a) What are the motives of Dutch CEOs with respect to stimulating the sharing and application of knowledge in the care and support for people with intellectual disabilities?	Qualitative interviews	CEOs of Dutch care organisations for people with intellectual disabilities (N=11)

b) What are the strategies employed by Dutch CEOs to stimulate the sharing and application of knowledge in the care and support for people with intellectual disabilities?

c) Which enabling/disabling factors influence the execution of strategies employed by Dutch CEOs to stimulate the sharing and application of knowledge in the care and support for people with intellectual disabilities?

4. What are the perspectives of incoming professionals on the factors that stimulate the application of new knowledge in the care and support for people with intellectual disabilities?

Concept mapping

Incoming professionals: support staff (N=5), psychologists (N=9) and ID physicians (N=6)

5. What is the relevance of the contextual factors influencing knowledge sharing and application in the care and support for people with intellectual disabilities during the COVID-19 pandemic, compared to prior the pandemic, and according to support staff, compared to practitioners?

Cross-sectional survey

Professionals: support staff (N=69) and practitioners (N=91)

---

## References

- Augustsson, H., Churruca, K., & Braithwaite, J. (2019). Re-energising the way we manage change in healthcare: the case for soft systems methodology and its application to evidence-based practice. *BMC health services research*, 19(1), 1-11. <https://doi.org/10.1186/s12913-019-4508-0>
- Barnard, H.P. (2003). Openingsspeech namens de staatssecretaris van het Ministerie van Volksgezondheid, Welzijn en Sport (VWS). In: Kersten, M.C.O. & D.A. Flikweert (red.). *Plenaire lezingen Focus op onderzoek. Congres over wetenschappelijk onderzoek ten behoeve van (de zorg aan) mensen met een verstandelijke handicap. Gehouden op 26 en 27 juni 2003*. Utrecht: LKNG en NGBZ.
- Beadle-Brown, J., Bigby, C., & Bould, E. (2015). Observing practice leadership in intellectual and developmental disability services. *Journal of Intellectual Disability Research*, 59(12), 1081-1093. <https://doi.org/10.1111/jir.12208>
- Berends, H., Boersma, K., & Weggeman, M. (2003). The structuration of organizational learning. *Human relations*, 56(9), 1035-1056. <https://doi.org/10.1177/0018726703569001>
- Berends, H., & Weggeman, M. (2002). Kennis, kennisdefinities en kennismanagement. In: Baalen, P. van, M. Weggeman & A. Witteveen (red.). *Kennis en management*. Schiedam: Scriptum.
- Berson, Y., Nemanich, L. A., Waldman, D. A., Galvin, B. M., & Keller, R. T. (2006). Leadership and organizational learning: A multiple levels perspective. *The leadership quarterly*, 17(6), 577-594. <https://doi.org/10.1016/j.leaqua.2006.10.003>
- Best, A., & Holmes, B. (2010). Systems thinking, knowledge and action: towards better models and methods. *Evidence & Policy: A Journal of Research, Debate and Practice*, 6(2), 145-159. <https://doi.org/10.1332/174426410X502284>
- Bigby, C., Bould, E., Iacono, T., Kavanagh, S., & Beadle-Brown, J. (2020). Factors that predict good Active Support in services for people with intellectual disabilities: A multilevel model. *Journal of Applied Research in Intellectual Disabilities*, 33(3), 334-344. <https://doi.org/10.1111/jar.12675>
- Bould, E., Beadle-Brown, J., Bigby, C., & Iacono, T. (2018). The role of practice leadership in active support: Impact of practice leaders' presence in supported accommodation services. *International Journal of Developmental Disabilities*, 64(2), 75-80. <https://doi.org/10.1080/20473869.2016.1229524>
- Bronfenbrenner, U. & Morris, P.A. (2007). The bioecological model of human development. *Handbook of child psychology*, 1.

- Buntinx, W. (2008). The logic of relations and the logic of management. *Journal of Intellectual Disability Research*, 52(7), 588-597. <https://doi.org/10.1111/j.1365-2788.2008.01067.x>
- Buntinx, W. H. E. (2020a). 50 jaar wetenschappelijk onderzoek in de verstandelijk gehandicaptenzorg. *NTZ: Nederlands Tijdschrift voor de Zorg aan Mensen met Verstandelijke Beperkingen*, 46(4), 161-174. Retrieved from: [https://www.ntzonline.nl/art/50-6208\\_50-jaar-wetenschappelijk-onderzoek-in-de-verstandelijk-gehandicaptenzorg](https://www.ntzonline.nl/art/50-6208_50-jaar-wetenschappelijk-onderzoek-in-de-verstandelijk-gehandicaptenzorg)
- Buntinx, W. H. E. (2020b). Paradigma-verschuiving in de visie op zorg voor mensen met een verstandelijke handicap. *NTZ: Nederlands Tijdschrift voor de Zorg aan Mensen met Verstandelijke Beperkingen*, 46(4), 186-188. Retrieved from: [https://www.ntzonline.nl/art/50-6205\\_Paradigma-verschuiving-in-de-visie-op-zorg-voor-mensen-met-een-verstandelijke-handicap](https://www.ntzonline.nl/art/50-6205_Paradigma-verschuiving-in-de-visie-op-zorg-voor-mensen-met-een-verstandelijke-handicap)
- Buntinx, W. H. E., & Gennepe, A. T. G. van (2007). *Professionaliteit in de hulpverlening aan mensen met verstandelijke beperkingen*. Antwerpen: Garant.
- Cobigo, V., Martin, L., Lysaght, R., Lunsy, Y., Hickey, R., & Ouellette-Kuntz, H. (2014). Quality improvement in services for adults with intellectual and developmental disabilities: Guiding principles. *Journal on Developmental Disabilities*, 20(2), 89-102. Retrieved from: [https://oadd.org/wp-content/uploads/2014/12/41018\\_JoDD\\_20-2\\_v10f\\_89-102\\_cobigo\\_et\\_al.pdf](https://oadd.org/wp-content/uploads/2014/12/41018_JoDD_20-2_v10f_89-102_cobigo_et_al.pdf)
- Council for Public Health and society (2017). *No evidence without context. About the illusion of evidence-based practice in healthcare*. Den Haag: Raad voor Volksgezondheid en Samenleving.
- Crilly, T., Jashapara, A., Trenholm, S., Peckham, A., Currie, G., & Ferlie, E. (2012). *Research utilization and knowledge mobilization by health care managers: synthesising evidence and theory using perspectives of organizational form, resource based view and critical theory. Final report*. NIHR Service Delivery and Organisation programme.
- Crilly, T., Jashapara, A., Trenholm, S., Peckham, A., Currie, G., & Ferlie, E. (2013). *Knowledge mobilisation in healthcare organisations: synthesising evidence and theory using perspectives of organisational form, resource based view of the firm and critical theory*. NIHR Service Delivery and Organisation Programme.
- Detmar, B., & De Vries, I. E. M. (2009). *Beroepspraktijkvorming in het MBO: Ervaringen van leerbedrijven* [Occupational preparation in MBO: Learning companies' experiences]. Amsterdam: Dijk12.
- Doody, O., Hennessy, T., Moloney, M., Lyons, R., & Bright, A. M. (2022). The value and contribution of intellectual disability nurses/nurses caring for people with

- intellectual disability in intellectual disability settings: A scoping review. *Journal of Clinical Nursing*. <https://doi.org/10.1111/jocn.16289>
- Durbin, J., Selick, A., Casson, I., Green, L., Spassiani, N., Perry, A., & Lunsky, Y. (2016). Evaluating the implementation of health checks for adults with intellectual and developmental disabilities in primary care: the importance of organizational context. *Intellectual and Developmental Disabilities*, 54(2), 136-150. <https://doi.org/10.1352/1934-9556-54.2.136>
- Duryan, M., Nikolik, D., van Merode, G., & Curfs, L. (2012). System dynamics modeling for intellectual disability services: A case study. *Journal of Policy and Practice in Intellectual Disabilities*, 9(2), 112-119. <https://doi.org/10.1111/j.1741-1130.2012.00342.x>
- Duryan, M., Nikolik, D., van Merode, G., & Curfs, L. M. (2014). Using cognitive mapping and qualitative system dynamics to support decision making in intellectual disability care. *Journal of Policy and Practice in Intellectual Disabilities*, 11(4), 245-254. <https://doi.org/10.1111/jppi.12095>
- Embregts, P. J. C. M. (2011). *Zien, bewogen worden, in beweging komen*. Tilburg: Tilburg University. Retrieved from: [https://pure.uvt.nl/ws/portalfiles/portal/60339804/110459\\_oratie\\_Embregts\\_web\\_1.pdf](https://pure.uvt.nl/ws/portalfiles/portal/60339804/110459_oratie_Embregts_web_1.pdf)
- Embregts, P. J. C. M. (2017). Kennisontwikkeling en kennisdeling in gelijkwaardige verbinding tussen praktijk en wetenschap. *NTZ: Nederlands Tijdschrift voor de Zorg aan Mensen met Verstandelijke Beperkingen*, 43(3), 219-26. Retrieved from: [https://www.ntzonline.nl/art/50-4446\\_Kennisontwikkeling-en-kennisdeling-in-gelijkwaardige-verbinding-tussen-praktijk-en-wetenschap](https://www.ntzonline.nl/art/50-4446_Kennisontwikkeling-en-kennisdeling-in-gelijkwaardige-verbinding-tussen-praktijk-en-wetenschap)
- Embregts, P. J., Ahaus, K., Minkman, M., Nies, H., & Meurs, P. (2021). A sector-wide response to national policy on client-centred care and support: a document analysis of the development of a range of instruments to assess clients' experiences in the care and support for people with (intellectual) disabilities. *BMC health services research*, 21(1), 1-13. <https://doi.org/10.1186/s12913-021-07341-z>
- Embregts, P., & Hendriks, A. H. C. (2011). *Menslievende professionalisering in de zorg voor mensen met een verstandelijke beperking. Aansluiten bij cliënten en hun ouders*. Nijmegen: HAN.
- Farrington, C., Clare, I. C. H., Holland, A. J., Barrett, M., & Oborn, E. (2015). Knowledge exchange and integrated services: experiences from an integrated community intellectual (learning) disability service for adults. *Journal of Intellectual Disability Research*, 59(3), 238-247. <https://doi.org/10.1111/jir.12131>



- Ferlie, E., Crilly, T., Jashapara, A., & Peckham, A. (2012). Knowledge mobilisation in healthcare: a critical review of health sector and generic management literature. *Social Science & Medicine*, 74(8), 1297-1304. <https://doi.org/10.1016/j.socscimed.2011.11.042>
- Gervais, M. J. & Chagnon, F. (2010). *Evidence based management in child welfare services: a process evaluation*. Montreal: Chair CJM-IU-UQAM.
- Greenhalgh, T. (2010). What is this knowledge that we seek to “exchange”? *The Milbank Quarterly*, 88(4), 492. <https://doi.org/10.1111/j.1468-0009.2010.00610.x>
- Greenhalgh, T., Robert, G., Macfarlane, F., Bate, P., & Kyriakidou, O. (2004). Diffusion of innovations in service organizations: systematic review and recommendations. *The Milbank Quarterly*, 82(4), 581-629. <https://doi.org/10.1111/j.0887-378X.2004.00325.x>
- Greenhalgh, T. & Wieringa, S. (2011). Is it time to drop the ‘knowledge translation’ metaphor? A critical literature review. *Journal of the Royal Society of Medicine*, 104(12), 501-509. <https://doi.org/10.1258/jrsm.2011.110285>
- Helderman, J.-K., de Kruijf, J., Verheij, J., & Thiel, S. van (2014). *Dike-Reeve of the health care polder. A political-sociological analysis of the realisation of the National Health Care Institute against a backdrop of a changing policy agenda and changing political-administrative and societal relations*. Nijmegen: Radboud University, Institute for Management Research.
- Herps, M. A., Buntinx, W. H. E., Schalock, R. L., Van Breukelen, G. J. P., & Curfs, L. M. (2016). Individual support plans of people with intellectual disabilities in residential services: content analysis of goals and resources in relation to client characteristics. *Journal of Intellectual Disability Research*, 60(3), 254-262. <https://doi.org/10.1111/j.1365-2788.2012.01598.x>
- Ipe, M. (2003). Knowledge sharing in organizations: A conceptual framework. *Human resource development review*, 2(4), 337-359. <https://doi.org/10.1177/1534484303257985>
- Karamitri, I., Talias, M. A., & Bellali, T. (2017). Knowledge management practices in healthcare settings: a systematic review. *The International journal of health planning and management*, 32(1), 4-18. <https://doi.org/10.1002/hpm.2303>
- Konno, N. & Schillaci, C. E. (2021). Intellectual capital in Society 5.0 by the lens of the knowledge creation theory. *Journal of Intellectual Capital*. <https://doi.org/10.1108/JIC-02-2020-0060>
- Kroneman, M., Boerma, W., van den Berg, M., Groenewegen, P., de Jong, J., van Ginneken, E. & World Health Organization. (2016). *Netherlands: health system review*.

- Lakshman, C. (2007). Organizational knowledge leadership: A grounded theory approach. *Leadership & Organization Development Journal*, 28(1), pp. 51-75. <https://doi.org/10.1108/01437730710718245>
- Lakshman, C. (2009). Organizational knowledge leadership: An empirical examination of knowledge management by top executive leaders. *Leadership & Organization Development Journal*, 30(4), 338-364. <https://doi.org/10.1108/01437730910961676>
- May, C. R., Johnson, M., & Finch, T. (2016). Implementation, context and complexity. *Implementation Science*, 11(1), 1-12. <https://doi.org/10.1186/s13012-016-0506-3>
- MBO raad, Calibris & BoZ (2010). *Convenant 'Naar volwaardig partnerschap in het beroepsonderwijs in de Zorg'*.
- Ministerie van Onderwijs, Cultuur en Wetenschappen (2011). *Actieplan MBO focus op vakmanschap 2011-2015*. Tweede Kamer der Staten Generaal (31.524, Nr 207).
- Mitton, C., Adair, C. E., McKenzie, E., Patten, S. B. & Perry, B. W. (2007). Knowledge transfer and exchange: review and synthesis of the literature. *The Milbank Quarterly*, 85(4), 729-768. <https://doi.org/10.1111/j.1468-0009.2007.00506.x>
- Monat, J. P., & Gannon, T. F. (2015). What is systems thinking? A review of selected literature plus recommendations. *American Journal of Systems Science*, 4(1), 11-26. doi: [10.5923/j.ajss.20150401.02](https://doi.org/10.5923/j.ajss.20150401.02)
- Nicolini, D., Powell, J., Conville, P., & Martinez-Solano, L. (2008). Managing knowledge in the healthcare sector. A review. *International Journal of Management Reviews*, 10(3), 245-263. <https://doi.org/10.1111/j.1468-2370.2007.00219.x>
- Nonaka, I. & Toyama, R. (2003). The knowledge-creating theory revisited: knowledge creation as a synthesizing process. In: Edwards, J.S. (eds). *The essentials of knowledge management* (95-110). Palgrave Macmillan, London. [https://doi.org/10.1057/9781137552105\\_4](https://doi.org/10.1057/9781137552105_4)
- Nonaka, I., Toyama, R., & Konno, N. (2000). SECI, *Ba* and leadership: a unified model of dynamic knowledge creation. *Long range planning*, 33(1), 5-34. [https://doi.org/10.1016/S0024-6301\(99\)00115-6](https://doi.org/10.1016/S0024-6301(99)00115-6)
- Nooren, J. (2008). Plenaire presentatie 'Geen eendagsvlieg - Kennisbeleid in de gehandicaptenzorg' op Focus op onderzoek. *Congres over wetenschappelijk onderzoek ten behoeve van (de zorg aan) mensen met een verstandelijke handicap. Gehouden op 27 en 28 september 2007*. [ongepubliceerd]
- Pentland, D., Forsyth, K., Maciver, D., Walsh, M., Murray, R., Irvine, L., & Sikora, S. (2011). Key characteristics of knowledge transfer and exchange in healthcare: integrative literature review. *Journal of advanced nursing*, 67(7), 1408-1425. <https://doi.org/10.1111/j.1365-2648.2011.05631.x>

- Polanyi, M. & Sen, A. (2009). *The tacit dimension*. Chicago: University of Chicago press.
- Public Health England (2016). *Learning Disabilities Observatory. People with learning disabilities in England 2015: Main report*. London, United Kingdom.
- Reinders, H. (2008). Internal and external goods: A philosophical critique of the hybridisation of professionalism. *Journal of Intellectual Disability Research*, 52(7), 634-638. <https://doi.org/10.1111/j.1365-2788.2008.01075.x>
- Reinders, H. (2013). *Eilandbestaan. Mensen met autismespectrumstoornis en 'moeilijk verstaanbaar gedrag'*. Antwerpen/Apeldoorn: Garant.
- Reinders, H. S., & Schalock, R. L. (2014). How organizations can enhance the quality of life of their clients and assess their results: The concept of QOL enhancement. *American Journal on Intellectual and Developmental Disabilities*, 119(4), 291-302. <https://doi.org/10.1352/1944-7558-119.4.291>
- RGO (2005). *Advies beperkingen en mogelijkheden: Onderzoek bij mensen met een verstandelijke beperking*. Den Haag: Raad voor Gezondheidsonderzoek.
- Rispens, J. (2005). *Naar een vernieuwd kennisbeleid in de gehandicaptenzorg*. Utrecht: VGN.
- Robertson, J., Hatton, C., Baines, S., & Emerson, E. (2015). Systematic reviews of the health or health care of people with intellectual disabilities: a systematic review to identify gaps in the evidence base. *Journal of Applied Research in Intellectual Disabilities*, 28(6), 455-523. <https://doi.org/10.1111/jar.12149>
- Rogers, J. D., Martin, F. H. & NCDDR Knowledge Translation Task Force. (2009). Knowledge translation in disability and rehabilitation research: lessons from the application of knowledge value mapping to the case of accessible currency. *Journal of Disability Policy Studies*, 20(2), 110-126. <https://doi.org/10.1177/1044207309332232>
- Roulstone, S. (2011). Evidence, expertise, and patient preference in speech-language pathology. *International Journal of Speech-Language Pathology*, 13(1), 43-48. <http://dx.doi.org/10.3109/17549507.2010.491130>
- Sackett, D. L., Rosenberg, W. M., Gray, J. M., Haynes, R. B., & Richardson, W. S. (1996). Evidence based medicine: what it is and what it isn't. *British Medical Journal*, 312(7023), 71-72. <https://doi.org/10.1136/bmj.312.7023.71>
- Schalock, R. L., Luckasson, R., & Shogren, K. A. (2020). Going beyond environment to context: Leveraging the power of context to produce change. *International Journal of Environmental Research and Public Health*, 17(6), 1885. <https://doi.org/10.3390/ijerph17061885>
- Schalock, R. L., Luckasson, R., & Tassé, M. J. (2021). *Intellectual Disability: Definition, Diagnosis, Classification, and Systems of Supports*. Washington DC: American Association on Intellectual and Developmental Disabilities. 12<sup>th</sup> Edition.

- Schalock, R. L., Verdugo, M. A., Bonham, G. S., Fantova, F., & Van Loon, J. (2008). Enhancing personal outcomes: Organizational strategies, guidelines, and examples. *Journal of Policy and Practice in Intellectual Disabilities*, 5(4), 276-285. <https://doi.org/10.1111/j.1741-1130.2007.00135.x>
- Schuurman, M. (2011). *Verbindingen gevraagd. Resultaten van een quick-scan naar activiteiten, behoeften en infrastructuur rond kennis in de gehandicaptenzorg, met het oog op de kennisagenda 2012-2015*. Nieuwegein: Kalliope Consult.
- Schuurman, M. (2014). Naar de samenleving. De transformatie van de inrichtingszorg voor mensen met verstandelijke beperkingen in Nederland, tussen 1989-2014, *NTZ: Nederlands Tijdschrift voor de Zorg aan Mensen met Verstandelijke Beperkingen*, 40(1), 10-34. Retrieved from: [http://www.kalliopeconsult.nl/images/4\\_61.pdf](http://www.kalliopeconsult.nl/images/4_61.pdf)
- Sectorraad (2008). *Vele takken, één stam. Kader voor de hogere sociaal-agogische opleidingen*. [Many branches, one trunk]. Uitgeverij SWP.
- Shogren, K. A., Luckasson, R., & Schalock, R. L. (2014). The definition of "context" and its application in the field of intellectual disability. *Journal of Policy and Practice in Intellectual Disabilities*, 11(2), 109-116. <https://doi.org/10.1111/jppi.12077>
- Simons, P., & Ruijters, M. C. (2014). The real professional is a learning professional. *International handbook of research in professional and practice-based learning*, 955-985.
- Slaghuis, S. S. (2016). *Riding the waves of quality improvement sustainability and spread in a Dutch quality improvement program for long-term care*. Thesis. Erasmus Universiteit Rotterdam.
- Soper, B. & Hanney, S. R. (2007). Lessons from the evaluation of the UK's NHS R&D Implementation Methods Programme. *Implementation Science*, 2(1), 1-13. <https://doi.org/10.1186/1748-5908-2-7>
- Straus, S. E., Tetroe, J., & Graham, I. (2009). Defining knowledge translation. *Canadian Medical Association Journal*, 181(3-4), 165-168. <https://doi.org/10.1503/cmaj.081229>
- Sudsawad, P. (2007). *Knowledge translation: introduction to models, strategies and measures*. Austin, TX: Southwest Educational Development Laboratory, National Center for the Dissemination of Disability Research.
- Swenson, S. (2008). Neoliberalism and human services: threat and innovation. *Journal of Intellectual Disability Research*, 52(7), 626-633. <https://doi.org/10.1111/j.1365-2788.2008.01076.x>
- Van Arensbergen, C., & Liefhebber, S. (2005). *Landelijk competentieprofiel beroepskrachten primair proces gehandicaptenzorg*. Utrecht: NIZW.

- Van Balkom, H., Buntinx, W., Curfs, L., Didden, R., Dupuis, H., Embregts, P., Evenhuis, H., ... & Vlaskamp, C. (2014). *Bouwstenen Nationaal Programma Gehandicapten Einddocument*. Utrecht: Vereniging Gehandicaptenzorg Nederland. Retrieved from: <https://www.vgn.nl/documenten/rapport-bouwstenen-voor-een-toekomstbestendige-gehandicaptensector181121>
- Van Driesten, G. & Wessels, K. (2020). *Zó werkt de gehandicaptenzorg*. Amsterdam: De Argumentenfabriek.
- Van Gennep, A. (1997). *Paradigma-verschuiving in de visie op zorg voor mensen met een verstandelijke handicap* [Shift in paradigm in the vision on care for people with an intellectual disability]. Maastricht: Maastricht University.
- Van Hove, G. (1998). Co-operatief onderzoek met personen met een verstandelijke handicap: op zoek naar theoretische ankerpunten en een moreel referentiekader. In: Kersten, M.C.O. & D.A. Flikweert (red.). *Wetenschappelijk onderzoek ten behoeve van de zorg aan mensen met een verstandelijke handicap. Plenaire lezingen van het congres gehouden op 29 en 30 oktober 1998*. Utrecht: BBI en NGBZ.
- Van der Lans, J. (2019). *Niet-normaal. Ontwikkelingen en dilemma's in de Nederlandse gehandicaptenzorg*. Utrecht: Uitgeverij De Graaff.
- Von Krogh, G., Nonaka, I., & Rechsteiner, L. (2012). Leadership in organizational knowledge creation: A review and framework. *Journal of management studies*, 49(1), 240-277. <https://doi.org/10.1111/j.1467-6486.2010.00978.x>
- VGN (2005a). *Professionaliteit in de zorg voor mensen met functiebeperkingen Kenmerken, rol en voorwaarden*. Utrecht: Vereniging Gehandicaptenzorg Nederland.
- VGN (2005b). *Strategienota Werkgeverszaken Arbeidsmarkt- en arbeidsvoorwaardenbeleid 2006-2009. Professioneel, flexibel, herkenbaar, doelmatig*. Utrecht: Vereniging Gehandicaptenzorg Nederland.
- VGN (2005c). *Aanpak Kennisbeleid VGN 2006-2008*. Utrecht: Vereniging Gehandicaptenzorg Nederland.
- VGN (2007). *Kwaliteitskader Gehandicaptenzorg. Visiedocument*. Utrecht: Vereniging Gehandicaptenzorg Nederland.
- VGN (2009a). *Landelijk competentieprofiel voor beroepskrachten (niveau ABC) in het primaire proces van de gehandicaptenzorg*. Utrecht: Vereniging Gehandicaptenzorg Nederland.
- VGN (2009b). *Beroepscompetentieprofiel voor beroepskrachten met een hogere functie (niveau D) in het primaire proces van de gehandicaptenzorg*. Utrecht: Vereniging Gehandicaptenzorg Nederland.

- VGN (2019). *De gehandicaptenzorg in kerngetallen*. Utrecht: Vereniging Gehandicaptenzorg Nederland. Retrieved from: <https://www.vgn.nl/feiten-en-cijfers-de-gehandicaptenzorg>
- VGN (2022). *Factsheet arbeidsmarkt*. Utrecht: Vereniging Gehandicaptenzorg Nederland. Retrieved from: <https://www.vgn.nl/feiten-en-cijfers-de-gehandicaptenzorg>
- VGN, Vilans en ZonMw (2007). *Samenwerkingsconvenant Kennis voor de praktijk*. Den Haag: ZonMw.
- Vlaar, P., Dam, C. V., Hattum, M. V., & Broeken, R. (2005). *Klaar voor de toekomst. Een nieuwe beroepenstructuur voor de branches welzijn en maatschappelijke dienstverlening, gehandicaptenzorg, jeugdzorg en kinderopvang*. Utrecht: NIZW.
- Wang, S., & Noe, R. A. (2010). Knowledge sharing: A review and directions for future research. *Human resource management review*, 20(2), 115-131. <https://doi.org/10.1016/j.hrmr.2009.10.001>
- Weggeman, M. C. D. P. (2007). *Leidinggeven aan professionals? Niet doen*. Schiedam: Scriptum.
- Weggeman, M.C.D.P. (2015). *Essenties van leidinggeven aan professionals. Hoe je door een stap terug te doen, beter vooruit komt*. Schiedam: Scriptum.
- West, P. (2004). *Applied health research: A briefing paper on knowledge transfer, dissemination and utilization*. Canada: Continuous Innovation.
- WHO (2006). *Bridging the "Know-Do" gap meeting on knowledge translation in global health*. Geneva: World Health Organization.
- WHO (2011). *World report on disability 2011*. Geneva: World Health Organization.
- Woittiez, I., Eggink, E., Putman, L., & Ras, M. (2018). *An international comparison of care for people with intellectual disabilities*. Den Haag: Sociaal Cultureel Planbureau.
- ZIN (2016). *Passend onderzoek effectiviteit Langdurige Zorg*. Diemen: Zorginstituut Nederland. Retrieved from: <https://www.zorginstituutnederland.nl/publicaties/rapport/2016/12/12/passend-onderzoek-effectiviteit-langdurige-zorg>
- Zomerplaaag, J. (2016). *Kennis en praktijk in de gehandicaptenzorg. De betekenis van het samenspel tussen kennis met een grote en een kleine k voor het omgaan met handelingsverlegenheid*. Thesis. Universiteit voor Humanistiek.



**CHAPTER 2**





# How to improve sharing and application of knowledge in care and support for people with intellectual disabilities? A systematic review

This chapter has been published as:

M.C.O. Kersten, E.F. Taminiau, M.I.M. Schuurman, M.C.D.P. Weggeman, P.J.C.M. Embregts (2018). How to improve sharing and application of knowledge in care and support for people with intellectual disabilities? A systematic review. *Journal of Intellectual Disability Research* 62, 496-520. <https://doi.org/10.1111/jir.12491>

## Abstract

*Background:* To optimise care and support for people with intellectual disabilities (ID), sharing and application of knowledge is a precondition. In healthcare in general, there is a body of knowledge on bridging the 'know-do-gap'. However, it is not known to what extent the identified barriers and facilitators to knowledge sharing and application also hold for the care and support of people with ID, due to its specific characteristics including long-term care. Therefore, we conducted a systematic review to identify which organisational factors are enabling and/or disabling in stimulating the sharing and application of knowledge in the care and support of people with ID.

*Method:* A systematic review was conducted using five electronic databases of relevant articles published in English between January 2000 and December 2015. During each phase of selection and analysis a minimum of two independent reviewers assessed all articles according to PRISMA guidelines.

*Results:* In total 2,256 articles were retrieved, of which 19 articles met our inclusion criteria. All organisational factors retrieved from these articles were categorised into three main clusters: 1) characteristics of the intervention (factors related to the tools and processes by which the method was implemented); 2) factors related to people (both at an individual and group level); and, 3) factors related to the organisational context (both material factors (office arrangements and ICT system, resources, time and organisation) and immaterial factors (training, staff, size of team)).

*Conclusion:* Overall analyses of the retrieved factors suggest that they are related to each other through the preconditional role of management (i.e., practice leadership) and the key role of professionals (i.e. (in)ability to fulfil new roles).

## Background

To optimise quality of care and support for people with intellectual disabilities (ID) it is important to make the most of the existing body of knowledge (Schalock *et al.* 2008; Reinders & Schalock, 2014). The sharing and application of knowledge are key processes in this respect (West, 2004; Pentland *et al.* 2011; Crilly *et al.* 2012). Knowledge (K) enables professionals to perform their tasks adequately and is derived from information (I), experience (E), skills (S) and attitude (A):  $K = f(I \times ESA)$  (Weggeman 2007).

With respect to the source of knowledge, the primary focus is on evidence-based knowledge, both from a perspective of quality improvement and a financial perspective (Helderman *et al.* 2014). Evidence-based knowledge, which is the result of (high quality) scientific research, originated in the medical discipline of the 1990s. Although evidence-based knowledge has become an emerging standard in the field of ID (Schalock *et al.* 2011), currently little evidence-based knowledge is available and used (Burton & Chapman, 2004, Kaiser & McIntyre, 2010, Robertson *et al.* 2015).

In addition to evidence-based knowledge, increasing attention is paid to two other sources of knowledge, i.e. practice-based knowledge produced by professionals by learning and reflecting on their work, and experience-based knowledge created by service users and relatives by reflecting on their personal experiences. Evidence-based practice (EBP) integrates these three sources of knowledge, combining the '*best available research evidence with clinical expertise and patient values*' (Sackett *et al.* 1996; Roulstone, 2011).

Since (technological) innovations (e.g., ICT) have resulted in an increase in available evidence-based, practice-based and experience-based knowledge, and a decrease in the sustainability of this knowledge, it is important to examine how (all sources of) knowledge is (are) actually shared and applied in practice. The consequent improvement of these knowledge processes is an upcoming theme of interest in the field of ID (e.g., Ouellette-Kuntz *et al.* 2010, Timmons, 2013, Naaldenberg *et al.* 2015). In healthcare in general, there is a body of knowledge on bridging the 'know-do-gap'. Since the World Health Organisation addressed this subject at a consensus meeting (World Health Organization, 2006) several reviews on this subject have been conducted, (e.g. Mitton *et al.* 2007; Nicolini *et al.* 2008; Contandriopoulos *et al.* 2010; Gervais & Chagnon, 2010; Greenhalgh & Wieringa, 2011; Pentland *et al.* 2011; Crilly *et al.* 2012; Ferlie *et al.* 2012; Goldner *et al.* 2014; Karamitri *et al.* 2015). In most of these reviews, barriers and facilitators to sharing and applying knowledge were identified. These reviews indicate the conditional role of the organisation and its management, such as the commitment of management through efficient leadership

(e.g., Karamitri *et al.* 2015), and specific organisational capacities such as sufficient time, and financial, technological and human resources (e.g., Pentland *et al.* 2011).

However, it is not known to what extent these barriers and facilitators also hold for the care and support of people with ID since this field of care has its own characteristics and developments. First, in the field of ID lifelong and life-wide care and support are provided. This implies a multidisciplinary collaboration by professionals specialized in, for example, social care, healthcare and education at different stages of life and is called 'integrated care'. When, for instance, professionals with a different professional background collaborate in a community-based team, sharing and application of knowledge at the right moment and in a common language is a vital though complicated process (Axford *et al.* 2006; Slevin *et al.* 2008; Farrington *et al.* 2015). Second, interventions for the general population are usually not suitable and have to be customised (Vlaskamp *et al.* 2007; Hodes *et al.* 2014). Third, in the field of ID increasing attention is being paid to the inclusion of experiential knowledge in conducting research and providing care and support (Embregts *et al.* 2018; Van Loon *et al.* 2013; Verbrugge & Embregts, 2013; Reinders & Schalock, 2014; Frankena *et al.* 2015).

Therefore, we have conducted a systematic review on the following research question: which organisational factors are enabling/disabling to the sharing and application of knowledge in the care and support of people with ID? Since professionals involved in care and support of people with ID are the key figures in sharing and applying knowledge, we focused on barriers and facilitators as perceived by them.

## Methods

### Search strategy

A systematic review was conducted for relevant articles published in English between January 2000 and December 2015. In accordance with e.g., Mitton *et al.* (2007), Nicolini *et al.* (2008), Pentland *et al.* (2011) and Crilly *et al.* (2012) who also performed reviews on knowledge management in the field of healthcare, databases in the fields of healthcare (*PubMed* and *Cinahl*), social sciences (*Psych info*) and management (*Business Source Elite* and *Proquest*) were chosen. The particular time span was chosen due to the fact that research on knowledge processes in ID care became apparent at the start of this millennium (see introduction). The search was performed on January 27<sup>th</sup>, 2016.

To conduct the literature search in a structured way, the Population, Intervention, Comparison and Outcomes (PICO) approach (Liberati *et al.* 2009) was used. These components were specified as follows: (1) population: professionals involved in the care and

support of people with ID; (2) exposure: enabling/disabling factors for the sharing and application of knowledge in organisations providing care and support for people with ID; (3) comparison: not applicable to the aim of this review; and, (4) outcomes: knowledge sharing and application in organisations providing care and support for people with ID.

The formulated PICO was operationalised in search terms. After extensively testing these search terms, we decided only to include keywords on ID (population) and on knowledge sharing and application (outcome) in the search strategy (Table 1). The rationale for not adding keywords on types of professionals and organisations was to acknowledge the multidisciplinary character of care and support of people with ID and to limit the possibility of overlooking relevant professional groups and organisations. In addition, we decided not to include keywords on enabling and disabling factors, since it appeared that relevant literature addressing these factors did not include these terms as key words and/or in the title or abstract. Thus, we conducted our literature search using two groups of search terms. The subject directories "OR" and "AND" were used to separate synonyms and link the two groups.

**Table 1 Search strategy PubMed using Medical Subject Headings [MeSH] and text words**

<b>PubMed final search strategy</b>	
	<i>Population: intellectual disability</i>
#1	Intellectual disability [MeSH]
#2	Mentally Disabled Persons [MeSH]
#3	Developmental Disabilities [MeSH]
#4	Learning Disorders [MeSH]
#5	TI=intellectual disab*
#6	AB=intellectual disab*
<b>#7</b>	<b>#1 OR #2 OR #3 OR #4 OR #5 OR #6</b>
	<i>Outcome: knowledge sharing and application in organisations providing care and support for people with intellectual disabilities</i>
#8	Knowledge management [MeSH]
#9	Evidence-based Practice [MeSH]
#10	"Knowledge exchange"
#11	"Knowledge sharing"
#12	"Knowledge practice"
#13	"Knowledge translation"

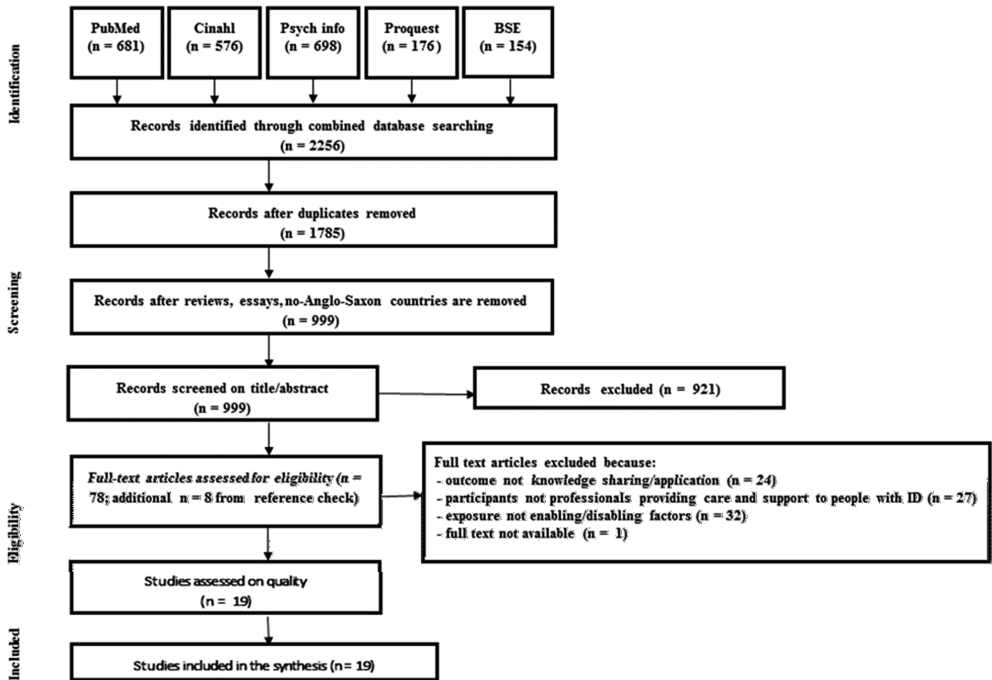
#14	"Knowledge transfer"
#15	"Knowledge utilisation"
#16	"Knowledge use"
#17	"Knowledge implementation"
#18	"Knowledge application"
#19	"Knowledge brokering"
#20	"Research utilisation"
#21	"Research use"
#22	Implementation
<b>#23</b>	<b>#8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14 OR #15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22</b>
	Combining search term groups
<b>#24</b>	<b>#7 AND #23</b>

---

Note: TI/AB refers to the search for text words within title and abstract; MeSH refers to the search for Medical Subject Headings, the thesaurus terms that were used in PubMed. This strategy is related to the PubMed search. Very similar versions were used to search Psych info, Cinahl, Proquest and Bussiness Source Elite but adapted for the specific search terms used in these databases.

### Study selection

Figure 1 shows the flowchart of the selection process. Because we were focusing on empirical studies, the first reviewer (MK) removed reviews and essays in the first selection phase. In this phase, duplicates and articles from non-Anglo-Saxon countries were removed as well, as comparison and interpretation of their results to Anglo-Saxon countries is complicated due to the different (organisational) conditions. In the second selection phase, two reviewers (MK and ET or MK and MS) independently screened titles and abstracts of all the articles, based on the inclusion and exclusion criteria (Table 2). As we were focusing on studies identifying barriers and facilitators per se, those examining the effectiveness of intervening in these barriers and/or facilitators were excluded (for example, studies on the effectiveness of training). Disagreements about inclusion were resolved by discussion between the three reviewers (MK, ET and MS). In the third selection phase, full-text versions of the publications were independently assessed for eligibility by two reviewers (MK and MS); in case of disagreement a third reviewer (ET) assessed the publication as well. The fourth reviewer (PE) was consulted throughout all selection phases. The agreement score was 90,2% in the second phase and 82% in the third phase.



**Figure 1** Flowchart of the selection process

### Assessment of methodological quality

Next, two reviewers (MK and ET) independently assessed the methodological quality of all the included publications, using the Mixed Methods Appraisal Tool checklist [MMAT; (Pluye *et al.* 2011)]. This instrument was chosen because the validity and reliability of the measure has been tested (Pace *et al.* 2012) and both qualitative and quantitative studies can be evaluated using the same method. All 21 criteria were assessed and subsequently rated as fulfilled, unfulfilled, or cannot tell. When information about the study's methodology was insufficiently presented, the authors were contacted for clarification. Relative outcome scores were converted to indications of the level of evidence (high, moderate, low), which are reported in Table 3. In the mixed methods studies, only the designs that sufficiently met the criteria for methodological quality were included (i.e. high or moderate level of evidence).

**Table 2 Inclusion and exclusion criteria***Inclusion criteria*

- Subjects of study are all professionals providing direct care and support for (amongst others) people with intellectual disabilities; in case data were also gathered on other persons (e.g. managers), separate data on professionals are available.
- Studies focusing on knowledge sharing and application of knowledge.
- Studies which pay attention to enabling / disabling factors occurring in the context where care and support for people with intellectual disabilities is provided: healthcare organisations and services, both specialised residential services as well as community-based services, GP practices, schools and work places.
- Empirical research: qualitative, quantitative and mixed methods studies.
- Original, peer-reviewed studies conducted in Anglo-Saxon countries and written in English.

*Exclusion criteria*

- Non-empirical studies such as systematic reviews and editorials.
- Studies focusing on factors on an individual level (as opposed to factors on an organisational level)
- Studies only focusing on students (i.e., future professionals).
- Studies focusing on genetic research and/or prenatal screening, genetic testing and counselling.
- Studies focusing on physical or motor disabilities, mental or psychiatric disorders, visual, hearing or acquired brain impairments, reading and language difficulties, older people in general.
- Studies focusing on research and/or the development of instruments, programs, guidelines
- Studies focusing on the effectiveness of interventions (e.g., training, educational program) or innovations.
- Studies focusing on knowledge increase in itself (not application) as outcome of interventions.

**Analysis**

After familiarising themselves with the included studies, two reviewers (MK and ET) independently extracted, for each study, the factor(s) presented as enabling and/or disabling to the sharing and/or application of knowledge that can be influenced by an organisation. Disagreements were resolved by discussion between the reviewers. Next, all factors were incorporated in Atlas-Ti (Muhr 2005), to facilitate clustering of codes. The factors of quantitative as well as qualitative studies were analysed separately. Consequently, in mixed methods studies each design was also analysed separately.

Data analysis was iterative, with matrices used to summarise the information and guide a bottom-up analysis of emerging themes. In this way, thematic clusters became apparent (Thomas 2006). Two reviewers (MK and MS) then analysed the data across all studies using the final version of the thematic clustering (see Table 4), which was verified by the third reviewer (ET). Finally, a model was developed in which all clusters were positioned (see Figure 2 in the results section). Throughout the period of analysis, the findings were discussed with PE and MW.



## Results

### Background and research quality

Initially, 999 unique research publications were retrieved. After the selection process, 19 papers were included. The design characteristics and research focus of the included papers are presented in Table 3. In the following section, we refer to these papers by their sequence number (also included in Table 3). With respect to background information, seven studies were conducted in the USA (3, 4, 6, 11, 12, 13, 16), seven in the UK (1, 5, 7, 9, 10, 18, 19), three in Australia (2, 14, 15), one in Canada (8) and one in the Netherlands (17).

Two publications had a quantitative, non-randomised design (1, 2), three a quantitative descriptive design (3, 4, 5), nine a qualitative design (6, 8, 9, 10, 11, 14, 16, 18, 19), and five a mixed methods design (7, 12, 13, 15, 17).

The study population consisted of direct care staff working in residential settings (1, 2, 5, 18), members of multidisciplinary teams working in integrated services (7, 9, 19), job coaches in diverse ID agencies (8), speech and language therapists in diverse ID settings (10), general practitioners (14), clinicians in paediatric practices (16), ID physicians and physical therapists in diverse ID services (17), teachers (in special and general education) in different kinds in elementary schools (6, 11, 12, 15) and special (and general) education teachers in mainstream secondary schools (3, 4, 13).

With respect to the knowledge processes, 10 studies focused on knowledge application (1, 3, 4, 5, 6, 8, 12, 13, 15, 16), one on knowledge sharing (9) and eight on both knowledge sharing and application (2, 7, 10, 11, 14, 17, 18, 19). As to the kind and character of knowledge, all the studies involved new knowledge, which was combined with existing knowledge in two studies (5, 9). The knowledge itself concerned instructional practices (3, 4, 6, 11, 12, 13, 15), active support (1, 2, 18), assessment (8, 14, 16), interventions (10, 17), an outcome measurement system based on Goal Attainment Scaling (7), practice-based knowledge (9), evidence-based and practice-based practices (5) and care pathways (19).

The quality assessment with the MMAT (Pluye *et al.* 2011) resulted in eight studies of high evidence, ten of moderate evidence and one of mixed (i.e. a combination of high and low) evidence (see Table 3). Overall, the main methodological limitation concerned the lack of information on how findings were related to researcher influence (e.g., the researcher's perspective, role and interaction with participants). In addition, in the quantitative studies the response rate did not meet the criterion of 60% or above (3, 4) or

Table 3 Descriptive information and characteristics of the included studies

#, authors, year, country	Focus research <sup>18</sup>	Design; level of evidence <sup>19</sup>	Results <sup>20</sup>
<b>Quantitative non-randomized studies</b>			
1. Beadle-Brown <i>et al.</i> 2014 (UK)	Role of practice leadership in Active Support in residential services (EBP) (I)	Compares data gathered in 2009/2010 (233 staff in 64 services) with that collected in 2005/2006 (505 staff in 137 services). On 116 Adults with severe or profound ID data were available at both times.  Method: questionnaires*	<ul style="list-style-type: none"> <li>• <b>Practice leadership</b> mediated by <b>management quality</b> result in significant change in active support (<math>p &lt; .001</math>) (KA+)</li> </ul>
2. Fyffe <i>et al.</i> 2008 (Australia)	Organisational factors associated with the implementation of Active Support (EBP) (I)	Staff (n=64) in shared community-based houses answered questions about the organisational activities and processes thought to assist AS implementation, their understanding of engagement and their experiences of changes in staff practice consistent with AS.  Method: questionnaires*	<ul style="list-style-type: none"> <li>• Positive significant correlation between <b>training, teamwork, meetings and paperwork &amp; recording systems</b> and changes in staff practice (<math>p &lt; .01</math>) and fewer implementation problems (<math>p &lt; .05</math>) (KS+ and KA+)</li> </ul>
<b>Quantitative descriptive studies</b>			
3. Kim & Dymond 2010 (USA)	Perceptions, barriers and components of community-based vocational instruction (EBP) (I)	Special education teachers in public high schools (n=68)  Method: survey*	<p>In ranked order of effect in implementation:</p> <ul style="list-style-type: none"> <li>• Not enough staff (KA-)</li> <li>• Lack of preparation time (KA-)</li> <li>• Lack of transportation (KA-)</li> <li>• Lack of administrative support (KA-)</li> </ul>

<sup>18</sup> EBP (Evidence-Based Practice); RBP (Research-based Practice); PB (Practice-based knowledge); I (Innovation), E (Existing Knowledge)

<sup>19</sup> \*Total score 75-100%: high evidence; \*\*total score 50-74%: moderate evidence; \*\*\*total score 0-49%: low evidence

<sup>20</sup> In terms of Knowledge Sharing (KS) and Knowledge Application (KA), enabling factors (+) and disabling factors (-). In the quantitative studies the actual factors are shown in bold.

<p>4. Maccini &amp; Gagnon 2002 (USA)</p>	<p>Perceptions and applications of NCTM standards (EBP) by special and general education teachers (I)</p>	<p>Teachers (special and general education) of secondary schools (n=129)  Method: survey*</p>	<p>In ranked order of effect in implementation:  <ul style="list-style-type: none"> <li>Lack of materials (KA-)</li> <li>Current textbook (KA-)</li> <li>Lack of information/knowledge (KA-)</li> <li>Lack of administrative support (KA-)</li> </ul> </p>
<p>5. Parahoo et al. 2000 (UK)</p>	<p>Research utilisation and attitudes towards research among learning disability nurses (EBP and PB) (I and E)</p>	<p>Learning disability nurses working in the three main hospitals (n=87)  Method: survey**</p>	<ul style="list-style-type: none"> <li>Lack of time (KA-)</li> <li>Limited access to research findings (KA-)</li> <li>No supportive culture to do and to use research (KA-)</li> </ul>
<p><b>Qualitative studies</b></p>			
<p>6. Boardman et al. 2005 (USA)</p>	<p>Special education teachers' views of instructional practices (EBP and PB) (I)</p>	<p>Special education teachers of elementary schools (n=49)  Method: focus groups interviews*</p>	<ul style="list-style-type: none"> <li>Teachers' influence: expertise, autonomy at program selection, adaptations (KA+)</li> <li>Teachers' perceptions of research-based practices (KA-)</li> <li>Lack of support in access to materials and resources (KA-)</li> <li>Lack of collaboration between teachers within the organisation (KS-, KA-)</li> <li>Lack of access to materials and resources (KA-)</li> <li>Unavailability of resources needed for different new practices (KA-)</li> <li>No provision of evidence or research for effectiveness of new practice (KA-)</li> <li>Not being able to do everything (KA-)</li> <li>Lack of professional development opportunities (KA-)</li> </ul>
<p>7. Chapman et al. 2006 (UK)</p>	<p>Implementation of an outcome measurement system based on Goal Attainment Scaling (PB) (I)</p>	<p>Staff of 4 teams in community intellectual disability teams (n=13)  Method: Questionnaires* and interviews*** (triangulation of the data)</p>	<ul style="list-style-type: none"> <li>Difficulties in completing forms (KS-)</li> <li>More and duplicated paperwork (KS-)</li> <li>Management pressure (KA-)</li> <li>Lack of consultation of professionals before the implementation (KA-)</li> <li>Introduction through community id teams – not professional group (KA-)</li> <li>Time consuming process (KS-)</li> </ul>
<p>8. Cobigo et al. 2010 (Canada)</p>	<p>Implementation of method for assessing of vocational interests (RBP) (I)</p>	<p>Job coaches in four agencies (n=16)  Method: interviews**</p>	<ul style="list-style-type: none"> <li>Timing of the assessment: low productivity schedule and caseload (KA+)</li> <li>Training, supervision and feedback on performance (KA+)</li> </ul>

- |   |  |   |   |
|---|--|---|---|
| 9. Farrington <i>et al.</i> , 2015 (UK) | Knowledge exchange in integrated services (PB) (I and E)                                       | Members of an urban and a rural team of an integrated intellectual disability service (n= 24)<br><br>Method: interviews** | <ul style="list-style-type: none"> <li>• Decrease of potential distractions (when the assessment is performed) (KA+)</li> <li>• Formal knowledge exchange – MDT meetings (KS+)</li> <li>• Informal knowledge exchange mechanisms – e.g., conversations, emails (KS+)</li> <li>• Arbitrariness which knowledge reaches which members of the teams (KS-)</li> </ul> <p>Sustainability: team members are temporarily absent or depart (KS-)</p> <ul style="list-style-type: none"> <li>• (In)adequate office arrangements (access to email and online resources) (KS+, KS-)</li> <li>• Inaccessibility of care records: mix of paper and electronic records (KS-)</li> <li>• Irreliability of care records (incomplete or out of date) (KS-)</li> </ul>      |
| 10. Goldbart <i>et al.</i> , 2014 (UK)  | Speech and language therapists decision making in communication interventions (EBP and PB) (I) | Speech and language therapists in diverse settings (n= 55)<br><br>Method: survey**  | <ul style="list-style-type: none"> <li>• Tool to share client-centred information between systems, places and persons (KS+)</li> <li>• Tool to enable better interpretation of the person's communication (KA+)</li> <li>• Intervention is easy to access (KA+)</li> <li>• Lack of staff commitment (KS-)</li> <li>• Lack of managerial support (KS-)</li> <li>• Availability of resources for intensive interaction (KA+)</li> <li>• The day to day environment (is a barrier to communication) (KS-)</li> <li>• Tool is in accordance with organisational policy (KA+)</li> <li>• Opportunities imposed by the organisation and service structures (KA+)</li> <li>• Training of staff (KS+, KA+)</li> <li>• Lack of staff availability (KA-)</li> </ul> |
| 11. Greenway <i>et al.</i> , 2013 (USA) | Practice and decision-making for students with ID and DD (EBP and PB) (I)                      | Special education teachers of elementary schools (n=9)<br><br>Method: interviews**  | <ul style="list-style-type: none"> <li>• (Lack of) understanding and perspective of Evidence Based Practice (KA+, KA-)</li> <li>• Autonomy to use professional judgement and lack of accountability (KA+)</li> <li>• Lack of accountability to school (and district) administration (KA-)</li> <li>• Sustainability: team members are temporarily absent or depart (KS-)</li> <li>• Lack of access to appropriate tools (materials or technologies) (KA-)</li> </ul>  |

<ul style="list-style-type: none"> <li>• Lack of access to the research literature / research-based information (KA-)</li> <li>• Lack of access to professional development and support in implementation (KA-)</li> </ul>			
<ul style="list-style-type: none"> <li>• Teachers feeling sufficiently prepared for strategy implementation (KA+)</li> <li>• (In)sufficient administrative support from administrators (KA+, KA-)</li> <li>• (In)sufficient administrative support from principals (e.g., providing materials) KA+. KA-</li> <li>• Lack of materials (KA-)</li> <li>• Lack of sufficient instructional time for students (KA-)</li> <li>• Too many competing demands on time (KA-)</li> </ul>	<p>Teachers in resource, special education and general education classrooms of elementary schools (n= 29)</p> <p>Method: interviews*, logs**</p>		
<ul style="list-style-type: none"> <li>• Scheduling problems of transportation and CBI activities (KA-)</li> <li>• (Lack of) administrative support from special education coordinators and building principals (KA+, KA-)</li> <li>• Additional costs of transportation and CBI activities (KA-)</li> <li>• Time constraints – mostly for teachers in traditional resource room models (KA-)</li> </ul>	<p>Special education teachers of secondary schools (n=36)</p> <p>Method: questionnaire and interviews**</p>		
<ul style="list-style-type: none"> <li>• A tool for generating a comprehensive written history that could be held by support workers and their organisations (KS+, KA+)</li> <li>• A tool for greater collaboration between the support worker and the GP (KS +, KA+)</li> <li>• Lack of capacity of support workers (KS-, KA-)</li> <li>• Inadequate interest or motivation of support workers (KS-, KA-)</li> <li>• The coordination of all parties (KA+)</li> <li>• Lack of consistent support workers for some patients (KS-, KA-)</li> <li>• Time needed for preparation and follow-up (KS-)</li> </ul>	<p>General practitioners (n=46)</p> <p>Method: interviews*</p>		
<ul style="list-style-type: none"> <li>• Lack of abilities of the teachers to motivate the students and to align the activities to the individual needs (KA-)</li> <li>• General lack of resources (KA-)</li> <li>• Time constraints in remote highly autonomous one teacher schools (KA-)</li> </ul>	<p>Teachers in inclusive middle years classrooms in three regions of Queensland (Metropolitan, remote, regional) (n=37)</p>	<p>Teachers' knowledge and attitudes and their implementation of practices around the teaching of writing (EBP) (I)</p>	
<p>12. Klinger <i>et al.</i> 2003 (USA)</p> <p>The upscaling of the implementation of research-based practices in inclusive classrooms (RBP) (I)</p>			
<p>13. Langone <i>et al.</i> 2000 (USA)</p> <p>Development and implementation of Community Based Instruction (CBI) (EBP) (I)</p>			
<p>14. Lennox <i>et al.</i> 2013 (Australia)</p> <p>Implementation of health assessment for people with ID (CHAP) (RBP) (I)</p>			
<p>15. Moni <i>et al.</i> 2007 (Australia)</p> <p>Teachers' knowledge and attitudes and their implementation of practices around the teaching of writing (EBP) (I)</p>			

16. Morelli <i>et al.</i> 2014 (USA)	Implementation of developmental screening in urban primary care (RBP) (I)	Method: questionnaires**, discussions in workshops**, observation**	<ul style="list-style-type: none"> <li>• Lack of time for planning tasks that are meaningful in regional schools (KA-)</li> <li>• Teachers development (KA+)</li> <li>• Lack of teacher-aid training (in regional schools) (KA-)</li> <li>• Lack of professional development (in remote highly autonomous one teacher schools) (KA-)</li> <li>• Lack of allocation of teacher-aid training (KS-)</li> <li>• Lack of support related to the teacher-aides (KA-)</li> <li>• Size and kind of school: in metropolitan schools: the administration and organisation (-&gt; top-down administrative restrictions and bureaucracy) (KA-)</li> <li>• Size and kind of school: in larger primary schools the focus on assessment (KA-)</li> <li>• Model and associated practices were easy to incorporate into the existing structure (KA+)</li> </ul>
17. Smulders <i>et al.</i> 2013 (the Netherlands)	Implementation of a tailored multifactorial fall risk assessment and intervention strategy (EBP and PB) (I)	Clinicians four urban paediatric practices in a metropole (n=22) Method: focus groups**	<ul style="list-style-type: none"> <li>• Attitude of the clinicians (rely on their clinical acumen and to watch and wait) (KA-)</li> <li>• Lack of training in the use of developmental screening tools (KA-)</li> </ul>
18. Totsika <i>et al.</i> 2008 (UK)	Staff experiences of an interactive training and implementation of Active Support in a community residential service (EBP) (I)	ID physicians and physical therapists in three service provider facilities (n=9) Method: focus groups**	<ul style="list-style-type: none"> <li>• Arranging the multidisciplinary meeting (KA-)</li> <li>• Lack of information because certain aspects of medical history were unknown (KS-)</li> <li>• Not correct caregivers accompanying the person with ID (KS-)</li> <li>• Lack of information because of changes in personal (KS-)</li> <li>• The AS plans are not flexible enough for unpredictable changes (KS-, KA-)</li> <li>• The AS plans involve too many details (KS-, KA-)</li> <li>• Lack of management input and support to the AS plans (KS-, KA-)</li> <li>• Lack of manager or discontinuity of management input (KS-, KA-)</li> <li>• Lack of priority for AS in the team meetings (KS-, KA-)</li> <li>• Lack of team meetings (KS-, KA-)</li> <li>• Not enough staff to do (more) activities with the residents (KA-)</li> <li>• Lack of time to develop the AS plans (KS-, KA-)</li> <li>• Not enough time to do the paperwork because of other tasks (KS-, KA-)</li> </ul>

<p>19. Wood <i>et al.</i> 2014 (UK)</p>	<p>The transition process to care pathways in adult ID services (PB) (1)</p> <p>Health professionals in an intellectual disability service (n=50)</p> <p>Method: observations and minutes of meetings, written correspondence*</p>	<ul style="list-style-type: none"> <li>• Lack of time in the team meetings to discuss AS issues (KS-, KA-)</li> <li>• Storyboard methods were seen as a useful tool to aid understanding of the care pathways by both the professionals and the Care Pathway Implementation Team (CPIG) (KS+)</li> <li>• Pathway protocols were viewed as clear and easy to follow (KS+, KS+)</li> <li>• Unclear of some of the documents (KS-, KA-)</li> <li>• Some aspects of the pathway procedures (KS-, KA-)</li> <li>• (In)ability of the health professionals to take on new roles (possession of skills and knowledge) (KS+, KS-, KA+, KA-)</li> <li>• Attitudes towards care pathways (KS+, KS-, KA+, KA-)</li> <li>• (Absence of) clear leadership in the teams (KS+, KS-, KA+, KA-)</li> <li>• Role, (lack of) capacity and (bad) performance of administrators (to assist health professionals including documenting core information, updating the referral spread sheet, and assisting the chairperson to follow the care pathways approach in the team meetings) (KS+, KS-, KA+, KA-)</li> <li>• Access to and input from other professionals through meetings (KS+, KA+)</li> <li>• Nonattendance of professionals at the team meetings (KS-, KA-)</li> <li>• Multi-Disciplinary team working: providing support and assistance to others (KS+, KA+)</li> <li>• Support and guidance from the Care Pathway Implementation Group (amongst others the clinical director) (KA+)</li> <li>• The communication from the Care Pathway Implementation Group (amongst others the clinical director) had been inconsistent (KS-, KA-)</li> <li>• Organisation of the documentation in the ICT system (=the organisation of the care pathways documents in the shared folder) (KS+, KS-, KA+, KA-)</li> <li>• Applying the pathway terminology in the clinical information system (KS-, KA-)</li> <li>• Communication system for the implementation process (visits of Care Pathway Implementation Group, issue logs and email correspondence) (KS+, KA+)</li> </ul>
---	--	--

- Lack of communication on the latest version of pathway protocols (KS-, KA-)
  - Lack of time to read guidelines, and complete core information – especially in smaller teams and short staffed disciplines (KA-)
  - Substantial time burden on administrator's time difficulty in localities with less administrative support and smaller teams (KS-, KA-)
  - Size of the locality teams:
    - larger teams had the advantage of adequate representation of various disciplines (KS+, KA+)
    - smaller teams lack of adequate representation from all professional disciplines (KS-, KA-)
    - larger teams more difficult to manage all referrals and to achieve meaningful discussion (KS-, KA-)
-



was not reported at all (2, 5). In five of the qualitative studies (6, 8, 11, 13 16), no information was provided on the location in which the data collection took place.

### **An integrating framework**

We categorised all retrieved organisational factors that were enabling/disabling in sharing and application of knowledge in the care and support of people with ID into three main clusters: 1) characteristics of the intervention (factors related to the tools and processes by which the method was implemented); 2) factors related to people (both at an individual and group level); and 3) factors related to the organisational context (both material factors (office arrangements and ICT system, resources, time and organisation) and immaterial factors (training, staff, size of team)) (see Table 4). In presenting our results this model is used as an integrating framework (see Figure 2).

#### *Characteristics of the intervention*

Characteristics of the intervention, i.e. paperwork and recording systems, were found to be enabling factors for sharing and application of knowledge in a quantitative (non-randomised) study (2). In qualitative studies, characteristics of the intervention, i.e. availability of tools (10, 14, 19), user-friendliness of protocols (7, 18, 19) and accessibility of the intervention (10), were also reported as enabling factors. For example, availability of information carriers (tools) such as communication passports or the Comprehensive Health Assessment Program (CHAP), facilitated the sharing of client-related information between systems, places and people (10, 14), as well as collaboration between professionals (14) and understanding of the intervention (19). However, when the intervention was not user-friendly, e.g., when it involved more and duplicated paperwork, professionals considered the availability of tools as a disabling factor in sharing and applying knowledge (1, 18, 19).

#### *Factors related to people*

At an individual level, factors related to management were reported in several quantitative studies. A non-randomised study of the implementation of active support (1) established, for example, that practice leadership mediated by management quality was a facilitator of knowledge application. Support from management (12, 19) was also considered enabling. Two other studies (3, 4) found that teachers in secondary schools considered 'lack of administrative support' a barrier for the application of knowledge. Lack of management input and support (6, 10, 12, 13, 15 18), and lack of a manager or discontinuity of management input (18) were also found to be disabling factors in several qualitative

**Table 4 Organisational factors enabling/disabling the sharing and application of knowledge in the care and support for people with intellectual disabilities**

Knowledge sharing enabling	Knowledge sharing disabling	Knowledge application enabling	Knowledge application disabling
<p><b>1.Characteristics of the intervention (= tools and processes in which the method is implemented)</b></p>			
<p>Availability of tools:</p> <ul style="list-style-type: none"> <li>• for sharing client-related information between systems, places and persons (10; 14), for greater collaboration between professionals (14);</li> <li>• to aid the understanding of the intervention (19)</li> </ul>	<p>Availability of tools:</p> <ul style="list-style-type: none"> <li>• for sharing client-related information between systems, places and persons (14), for greater collaboration between professionals (14);</li> <li>• to aid the understanding of the person (10)</li> </ul>	<p>Paperwork (e.g., plans and protocols) and recording systems used in the intervention are user-friendly (e.g., clear and easy to follow) (2; 19)</p>	<p>The forms used in the intervention are not user-friendly (more and duplicated paperwork, not in good working order, unclarity for some of the documents, too many details, not flexible enough for unpredicted changes, some aspects of the procedures) (18; 19)</p>
<p><b>2 Factors related to persons: a) individual factors</b></p>			
<p><b>Professionals: all individuals who implement the intervention in the primary process</b></p>			
<p>Ability of the professionals to fulfil new roles (possession of skills and knowledge) (19)</p>	<p>Inability of some professionals to fulfil new roles (lack of skills and knowledge) (14; 19)</p>	<p>Ability of the professionals to fulfil new roles (possession of skills and knowledge) (19)</p>	<p>Inability of some professionals to fulfil new roles (lack of skills and knowledge) (14; 19)</p>

- Understanding and perspective of Evidence Based Practice (11)
- Teachers feeling sufficiently prepared for strategy implementation (12)
- Lack of understanding and perspective of Evidence Based Practice (11)
- Teachers perceptions of research-based practices (6)

Lack of abilities of the teachers to motivate the students and to align the activities to the individual needs (15)

Positive attitudes towards the intervention (19)

Negative attitudes towards the intervention (19)

Positive attitudes towards the intervention (19)

- Negative attitudes towards the intervention (19)
- Attitude of the clinicians (rely on their clinical acumen and to watch and wait) (16)

Teachers' influence: expertise, autonomy at program selection, adaptations (6; 11)

Inadequate interest or motivation of support workers (14)

Lack of clear leadership in the teams (19)

Clear leadership in the teams (19)

Lack of clear leadership in the teams (19)

**Administrative staff**

Role, capacity and performance of administrators (to assist health professionals including e.g., documenting core information) (19)

Role, capacity and performance of administrators (to assist health professionals including e.g., documenting core information) (19)

Role, lack of capacity and performance of administrators to assist health professionals including e.g., documenting core information) (19)

- Scheduling problems of e.g., transportation (13)
- The coordination of all parties (14)
- Arranging the multidisciplinary meeting (17)

**Management**

Lack of management input and support to the AS plans (18)	Practice leadership mediated by management quality and support and guidance from the Implementation Group (amongst others the clinical director) (1; 19)	Lack of management input and support to the AS plans (18)
Inconsistent communication from the Implementation Group and lack of and delay in response from them to issues (19)	Administrative support from special education coordinators and building principles (e.g., providing materials) and from administrators (12)	Lack of administrative support from special education coordinators and building principles (e.g., providing materials) and from administrators (3; 4; 6; 10; 12; 13; 15)
Lack of manager or discontinuity of management input (18)	Access to and input from other professionals through meetings (2; 19)	Lack of manager or discontinuity of management input (18)
<b>2 Factors related to persons: b) groups factors (team factors)</b>	<ul style="list-style-type: none"> <li>• Formal knowledge exchange – MDT meetings (9)</li> <li>• Access to and input from other professionals through meetings (2; 19)</li> </ul>	<ul style="list-style-type: none"> <li>• Management pressure (7)</li> <li>• Lack of consultation of professionals before the implementation (7)</li> <li>• Introduction through community id teams – not professional group (7)</li> </ul>
Access to and input from other professionals through meetings (2; 19)	<ul style="list-style-type: none"> <li>• Lack of team meetings (18)</li> <li>• Lack of priority for the intervention in the team meetings (18)</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of team meetings (18)</li> <li>• Lack of priority for the intervention in the team meetings (18)</li> </ul>

Nonattendance of professionals in meetings (19)	Nonattendance of professionals in meetings (19)
Informal mechanisms of knowledge exchange: conversations, emails, impromptu meetings and phone calls (9)	Arbitrariness which knowledge reaches which members of the teams (9)
Sustainability: team members are temporarily absent or depart (9; 11)	Sustainability: team members are temporarily absent or depart (9; 11)
Multi-Disciplinary team working: providing support and assistance to others (2; 19)	Multi-Disciplinary team working: providing support and assistance to others (2; 19)
Lack of collaboration of the teachers within the organisation (6)	Lack of collaboration of the teachers within the organisation (6)

**3 Factors related to the organizational context: a) material factors**

**Office arrangements and ICT system: factors related to the administrative preconditions necessary for the implementation of the intervention**

Organisation of the documentation in the ICT system (=having only the latest documents available) (19)	Organisation of the documentation in the ICT system (=the organisation of the documents in the shared folder) (19)	Organisation of the documentation in the ICT system (=having only the latest documents available) (19)	Organisation of the documentation in the ICT system (=the organisation of the documents in the shared folder) (19)
Communication system for the implementation process (visits of Implementation Group, issue logs and email correspondence) (19)	Applying the pathway terminology in the clinical information system (19)	Applying the pathway terminology in the clinical information system (19)	Applying the pathway terminology in the clinical information system (19)
Adequate office arrangements (access to email and online resources) (9)	Lack of communication on the latest version of the protocols (19)	Communication system for the implementation process (visits of Implementation Group, issue logs and email correspondence) (19)	Lack of communication on the latest version of the protocols (19)
Inadequate office arrangements: no access to email, online resources and paper records (9)	Inadequate office arrangements: no access to email, online resources and paper records (9)	Inadequate office arrangements: no access to email, online resources and paper records (9)	Inadequate office arrangements: no access to email, online resources and paper records (9)

Inaccessibility of care records: mix of paper and electronic records (9)  
 Irreliability of care records (incomplete or out of date) (9)  
 Lack of information because certain aspects of medical history were unknown (17)

**Resources: factors related to the resources which are necessary for the implementation of the intervention**

Availability of resources for intensive interaction (10)

- Unavailability of (access to) materials, resources and tools (4; 6; 11; 12; 15)
- Current textbook (4)
- No provision of evidence or research for effectiveness of new practice (6)
- Lack of access to the research literature / research-based information (4; 5; 11)
- Lack of transportation (3)
- Additional costs of transportation and CBI activities (13)

**Time: factors related to the time needed for the implementation of the intervention**

Time needed for the intervention or lack of time to develop the AS plans or to do the paperwork (7; 14; 18)  
 Timing of the assessment: low productivity schedule and caseload (8)

Time needed for the intervention or lack of time to e.g., develop the AS plans, to do the paperwork, to read guidelines, and complete core information; not being able to do everything, too many competing demands on time (3; 5; 6; 7; 12; 13; 15; 18; 19)

Lack of time:

Lack of time:

- in the team meetings to discuss AS issues (18)
  - to attend meetings– especially in smaller teams and short-staffed disciplines (19)
- Substantial time burden on administrator's time difficulty in localities with less administrative support and smaller teams (19)

**Organisation: factors related to the schools and agencies where the intervention is implemented**

- Size and kind of school:
- in metropolitan schools: the administration and organisation (-> top-down administrative restrictions and bureaucracy) (15)
  - in larger primary schools the focus on assessment (15)

- The day to day environment (is a barrier to communication) (10)
- Decrease of potential distractions (when the assessment is performed) (8)
  - Tool is in accordance with organisational policy (10)
  - Model and associated practices were easy to incorporate into the existing structure (15)
- Opportunities imposed by the organisation and service structures (10)

**3 Factors related to the organisational context: b) immaterial factors**

- Training of staff (by SLT's) (2; 10)
- Training, supervision and feedback on performance (2; 8; 10; 15)
- Lack of training, professional development opportunities and support in implementation (6; 11; 15; 16)

- Lack of consistent support workers for some patients (14)
  - Lack of information because of changes in personal (17)
  - Not correct caregivers accompanying the person with ID (17)
- Lack of staff availability (3; 10; 15; 18)
- Lack of a consistent support worker for some patients (14)
- Size of the team:
- smaller teams lack of adequate representation from all professional disciplines (19)
  - larger teams more difficult to manage all referrals and to achieve meaningful discussion (19)
- Size of the locality teams:
- larger teams had the advantage of adequate representation of various disciplines (19)
  - smaller teams lack of adequate representation from all professional disciplines (19)
  - larger teams had the advantage of adequate representation of various disciplines (19)
- Size of the locality teams:
- larger teams had the advantage of adequate representation of various disciplines (19)
  - smaller teams lack of adequate representation from all professional disciplines (19)
  - larger teams more difficult to manage all referrals and to achieve meaningful discussion (19)
- No supportive culture to do and to use research (5)

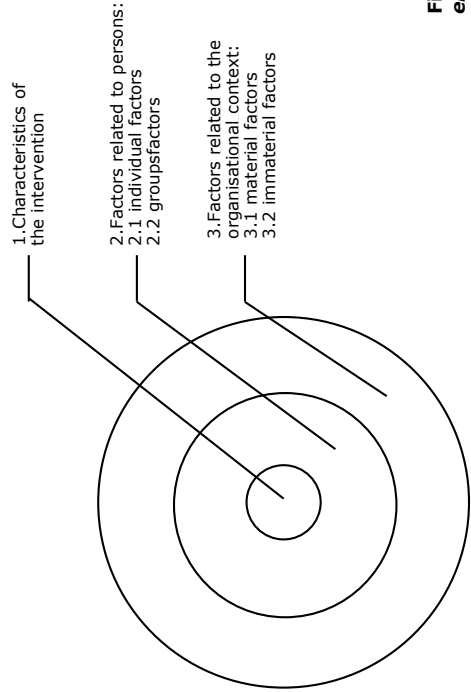


Figure 2 Graphic representation of the clustering of the enabling and disabling factors of knowledge sharing and knowledge application



studies. In addition, inappropriate behaviour, such as not consulting professionals before implementation (7) and inconsistent communication (19), were reported as disabling factors at management level.

Although in quantitative studies only individual factors related to management were reported, in qualitative studies individual factors were also related to health professionals and administrative staff. In many studies, the same factors appeared both as enabling and disabling (when the person involved disposed of or lacked this characteristic respectively). With respect to health professionals, the following characteristics were identified: their (in)ability to fulfil new roles, which was often related to (lack of) skills and knowledge (6, 11, 12, 14, 15, 19); (lack of) leadership in the teams (19); (lack of) motivation, interest and commitment (10,14); and attitudes towards the interventions, for example toward the introduction of care pathways (16, 19). In addition, the autonomy of professionals to select programmes was also reported as an enabling/disabling factor (6, 11). As for administrative staff, their role, (lack of) capacity and performance was mentioned (13, 14, 17, 19) as facilitating, for example in cases where they assisted health professionals in documenting core information and disabling in cases where they did not.

At a collective level, a quantitative, non-randomised study (2) found that teamwork as well as team meetings facilitated knowledge sharing and application. This is in line with the identification of enabling factors in qualitative studies, such as meetings, conversations and emails, and access to and input from other professionals (9, 19). However, these qualitative studies also identified barriers: lack of team meetings or lack of priority given to the intervention in team meetings (18); non-attendance/departure of health professionals (e.g. in meetings) (9, 11, 19); and lack of collaboration with other professionals and the arbitrary way in which knowledge reached specific team members (6, 9, 11).

#### *Factors related to the organisational context*

As to material factors, in the quantitative studies the following barriers regarding knowledge application were found: lack of time (3, 5); lack of transportation (i.e., to the community in which the vocational instruction took place) (3); lack of materials, current textbook (being inappropriate to the intervention), lack of information/knowledge (4); limited access to research findings (5). Barriers concerning time and resources were also reported in the qualitative studies. More specifically, they concerned lack of time for implementation of the intervention (6, 7, 12, 13, 14, 15, 18, 19), as well as for attending meetings (18, 19). With respect to resources, the following barriers were identified: no access to materials, resources and tools (6, 11, 12, 15); no evidence or research

provided on the effectiveness of the new practice and lack of access to the research literature / research-based information (6, 11); and additional costs (13). Additionally, the conditional role of office arrangements and the ICT system of the organisation itself was highlighted. That is, documentation in the ICT system (i.e. having only the latest documents available) (19) was an enabling factor in knowledge sharing and application, as was access to email, online resources and paper records (9), information (17) and communication (19). Lack of the last three factors also proved to be a barrier with respect to knowledge sharing. The organisation as a whole was facilitating in case the intervention was in line with its policy or was easy to incorporate into the existing organisation structure (15), or in case the organisation provided the opportunities for knowledge application (10). The day-to-day environment was mentioned both as enabling (8), for example in terms of reducing potential distractions when the assessment took place, and disabling (not further specified, 10). In schools, the size (large) and organisational structure (top-down, administrative restrictions and bureaucracy) were identified as barriers (15).

As to immaterial factors, the quantitative, non-randomised study (2) established training of staff as a facilitator, whereas 'no supportive culture to conduct and use research' (5) was reported as a barrier (3). Lack of staff was established as a barrier in the latter study (3) as well as in several qualitative studies (10, 14, 15, 17, 18). In these latter ones, size of team was identified as being both an enabling and disabling factor (19): larger teams had an advantage with respect to adequate representation from all professional disciplines, as opposed to smaller teams. However, larger teams encountered more difficulties in managing referrals and achieving meaningful discussions in the team. Finally, the availability of training opportunities, supervision and feedback on staff performance were identified as facilitating factors (8, 10, 15), whereas not having this kind of support was identified as a barrier (6, 11, 15, 16).

## Discussion

The application and sharing of knowledge is indispensable in optimising the quality of care and support for people with ID (Schalock *et al.* 2008; Reinders & Schalock, 2014). In order to contribute to improving these knowledge processes, we conducted a systematic review aimed at identifying enabling and disabling factors at an organisational level, perceived by professionals.

Quantitative and qualitative studies were analysed separately, though, irrespective of the research designs, the same factors were identified and were clustered as characteristics of the intervention; factors related to people; and factors related to the organisational context. The results of the qualitative studies enabled deeper insight into

the results derived from the quantitative studies. For example, one quantitative study identified teamwork as a facilitator (2), which was made more explicit in qualitative studies describing the provision of support and assistance in a team as facilitating (19). Moreover, in combining the results of the qualitative and the quantitative studies our understanding of the cohesion between the identified factors has been enhanced.

An overall analysis of the retrieved factors indicates that they are related through the pre-conditional role of the management of the organisations. Management seems to provide the identified material and immaterial factors, such as time, resources and training. In addition, management is usually guiding in the choice of the method, tool or ICT system; whether user-friendliness and suitability for the professionals are considered as criteria is up to the management. Moreover, the selection of professionals, the composition of teams and policymaking is performed by managers. In this way, management is able to influence the organisational culture in terms of being more or less supportive of knowledge processes. In this way, management has a key position in facilitating processes of sharing and application of knowledge.

These results are in line with the (included) study of Beadle Brown *et al.* (2014), in which management quality is indicated as a facilitator of knowledge application when combined with practice leadership. In this study, active support was not better implemented by higher quality of management on its own, but only in combination with practice leadership. Beadle Brown and colleagues applied the following definition of practice leadership: “the development and maintenance of good staff support for the people served, through: focusing, in all aspects of the manager’s work, on the quality of life of service users and how well staff support this; allocating and organising staff to deliver support when and how service users need and want it; coaching staff to deliver better support by spending time with them, providing feedback and modelling good practice; reviewing the quality of support provided by individual staff through regular one-to-one supervision and finding ways to help staff improve it; reviewing how well the staff team is enabling people to engage in meaningful activity and relationships in regular team meetings, and finding ways to improve this.” (Mansell *et al.* 2005: p. 839). These are all important clues for managers pursuing the application of evidence-based practice such as active support.

Besides the preconditional role of managers, overall analyses also highlight the key role of professionals in processes of knowledge sharing and application, and as such underscore our choice to focus on their perspective. Many of the factors found were related to these professionals, both individually and in teams: their personal characteristics, such as (lack of) motivation, interest and commitment, positive or negative attitude towards the intervention, their (in)ability to fulfil new roles and (absence of) leadership in teams, their (lack of) collaboration in teams and their level of

knowledge exchange in team meetings. These results and insights are helpful in understanding the importance of a stimulating learning culture, in which professionals take on responsibility for themselves and collaborate in self-steering teams.

A third overall analysis shows that, depending on the specific context, the same factors can be both enabling and disabling, for example professionals' (in)ability to fulfil new roles. Most likely, in practice the retrieved factors will be realized on a continuum ranging from enabling to disabling. Future research is needed to further explore the optimal position of factors on this continuum. The fact that far more barriers than facilitators were identified does underline the need for improving knowledge sharing and application in practice.

In addition to practice leadership of management, scientific leadership of researchers is also needed to improve sharing and application of knowledge. When researchers develop evidence-based practices, it is a precondition for successful (knowledge) application that they pay attention to the user-friendliness of the intervention. Ideally a research program will have a co-creating design, in which practice-based knowledge of professionals and experience-based knowledge of service users and their relatives are included (Embregts 2017).

Reviews conducted in general healthcare reveal similar factors to those found in our review, e.g., the role of professionals, management, leadership, the ICT-system and the availability of time (Nicolini *et al.* 2008; Pentland *et al.* 2011; Goldner *et al.* 2014; Karamitri *et al.* 2015). However, the comparison also shows differences. First, these reviews revealed enabling factors which were not (explicitly) identified in our study, such as the use of opinion leaders, political influence and knowledge brokers. Second, these studies did not mention factors found in the field of ID, such as collaboration and knowledge exchange in teams, or tools to share knowledge such as communication passports. These factors are related to specific characteristics of care and support of people with ID, in which multidisciplinary teams have to share information with many stakeholders. It is also relevant to address the finding that the focus of the general health care reviews differed from that of our study. Whereas these reviews were aimed to review the literature on knowledge processes in general, in our study we specifically searched for enabling and disabling factors in processes of sharing and application of knowledge.

In that respect, the review of Fleuren *et al.* (2004) has more similarities to ours. While focusing on innovation within health care organisations, the authors identified 49 determinants for implementing innovations successfully. Many of these determinants are identical to the results of our review, such as the predominant role of the organisation and management. Interestingly, they also established different determinants, which were connected to the influence of the socio-political context, such as fit with existing rules,

regulations and legislation, patient co-operation, patient awareness of benefits and patient discomfort. These factors raise awareness of the importance of the socio-political context in improving knowledge processes. In addition, they also point at the lack of factors related to service-users in the studies included in this review. This is consistent with Best & Holmes (2010) and Contandriopoulos *et al.* (2010), who state that for successful knowledge exchange processes, the organisational context (e.g., culture, leadership, the users of knowledge) must be taken into account.

In future research it is thus not only important to explore the role of management in more depth, but the role of stakeholders in the socio-political context and the perspective of service users in improving knowledge processes as well. More specific, the experiential knowledge service users can provide is an increasingly important source of knowledge to combine with evidence-based and practice-based knowledge. Establishing collaborations between people with and without ID (e.g., in academic collaborative centres) is key in successfully combining these sources of knowledge (Embregts, 2017; Embregts *et al.* 2018).

In our review, some limitations need to be acknowledged. Only one of the included studies (Farrington *et al.* 2015) explicitly addressed the key concept 'knowledge sharing'. In all other studies this concept is operationalised in phenomena like training, meetings, teamwork and paperwork. We have interpreted these terms as 'knowledge sharing' making it subjective interpretations of this knowledge process. However, as all analysis were performed by at least two researchers, the chance of misinterpretation has been minimalised. Furthermore, all but one (17) of the selected studies in our review were conducted in the USA and Commonwealth countries. That means that our results may not be applicable to other countries because local conditions can be different. Notwithstanding these limitations, this systematic literature review does provide both scientifically sound and practical indications to stimulate knowledge sharing and application, thereby contributing to optimising the care and support for people with ID.

## References

- Axford, N., Berry, V., Little, M. & Morpeth, L. (2006). Developing a common language in children's services through research-based inter-disciplinary training. *Social Work Education*, 25(2), 161-176. <https://doi.org/10.1080/02615470500487648>
- Beadle-Brown, J., Mansell, J., Ashman, B., Ockenden, J., Iles, R. & Whelton, B. (2014). Practice leadership and active support in residential services for people with intellectual disabilities: an exploratory study. *Journal of Intellectual Disability Research*, 58(9), 838-50. <https://doi.org/10.1111/jir.12099>
- Best, A. & Holmes, B. (2010). Systems thinking, knowledge and action: towards better models and methods. *Evidence & Policy: A Journal of Research, Debate and Practice*, 6(2), 145-159. <https://doi.org/10.1332/174426410X502284>
- Boardman, A. G., Argüelles, M. E., Vaughn, S., Hughes, M. T. & Klingner, J. (2005). Special education teachers' views of research-based practices. *The Journal of Special Education*, 39(3), 168-180. <https://doi.org/10.1177/00224669050390030401>
- Burton, M. & Chapman, M. J. (2004). Problems of evidence based practice in community based services. *Journal of Learning Disabilities*, 8(1), 56-70. <https://doi.org/10.1177/1469004704041705>
- Chapman, M., Burton, M., Hunt, V. & Reeves, D. (2006). Implementation of Goal Attainment Scaling in community intellectual disability services. *Journal of Policy and Practice in Intellectual Disabilities*, 3(2), 119-128. <https://doi.org/10.1111/j.1741-1130.2006.00063.x>
- Cobigo, V., Lachapelle, Y. & Morin, D. (2010). Choice-making in vocational activities planning: Recommendations from job coaches. *Journal of Policy and Practice in Intellectual Disabilities*, 7(4), 245-249. <https://doi.org/10.1111/j.1741-1130.2010.00273.x>
- Contandriopoulos, D., Lemire, M., Denis, J. L. & Tremblay, É. (2010). Knowledge exchange processes in organizations and policy arenas: a narrative systematic review of the literature. *The Milbank Quarterly*, 88(4), 444-483. <https://doi.org/10.1111/j.1468-0009.2010.00608.x>
- Crilly, T., Jashapara, A., Trenholm, S., Peckham, A., Currie, G. & Ferlie, E. (2012). Research utilization and knowledge mobilization by health care managers: Synthesising evidence and theory using perspectives of organizational form, resource based view and critical theory. *Final report. NIHR Service Delivery and Organisation programme*.
- Embregts, P. (2017). Kennisontwikkeling en kennisdeling in gelijkwaardige verbinding tussen praktijk en wetenschap. *NTZ: Nederlands Tijdschrift voor de Zorg aan Mensen met Verstandelijke Beperkingen*, 43(3), 219-226. Retrieved from:

<https://www.ntzonline.nl/art/50-4446> Kennisontwikkeling-en-kennisdeling-in-gelijkwaardige-verbinding-tussen-praktijk-en-wetenschap

- Embregts, P.J.C.M., Taminau, E.F., Heerkens, L., Schippers A.P., & van Hove, G. (2018). Collaboration in inclusive research: competencies considered important for people with and without intellectual disabilities. *Journal of Policy & Practice in Intellectual Disabilities*, 15(3), 193-201. <https://doi.org/10.1111/jppi.12248>
- Farrington, C., Clare, I. C., Holland, A. J., Barrett, M. & Oborn, E. (2015). Knowledge exchange and integrated services: experiences from an integrated community intellectual (learning) disability service for adults. *Journal of Intellectual Disability Research*, 59(3), 238-47. <https://doi.org/10.1111/jir.12131>
- Ferlie, E., Crilly, T., Jashapara, A. & Peckham, A. (2012). Knowledge mobilisation in healthcare: a critical review of health sector and generic management literature. *Social Science & Medicine*, 74(8), 1297-1304. <https://doi.org/10.1016/j.socscimed.2011.11.042>
- Fleuren, M., Wiefferink, K. & Paulussen, T. (2004). Determinants of innovation within health care organizations. *International journal for quality in health care*, 16(2), 107-123. <https://doi.org/10.1093/intqhc/mzh030>
- Frankena, T. K., Naaldenberg, J., Cardol, M., Linehan, C. & Van Schrojenstein Lantman-De Valk, H. (2015). Active involvement of people with intellectual disabilities in health research. A structured literature review. *Research in developmental disabilities*, 45, 271-283. <https://doi.org/10.1016/j.ridd.2015.08.004>
- Fyffe, C., McCubbery, J. & Reid, K. J. (2008). Initial investigation of organisational factors associated with the implementation of active support. *Journal of Intellectual and Developmental Disability*, 33(3), 239-46. <https://doi.org/10.1080/13668250802291606>
- Gervais, M.-J. & Chagnon, F. (2010). *Evidence based management in child welfare services: a process evaluation*. Montreal.
- Goldbart, J., Chadwick, D. & Buell, S. (2014). Speech and language therapists' approaches to communication intervention with children and adults with profound and multiple learning disability. *International Journal of Language & Communication Disorders*, 49(6), 687-701. <https://doi.org/10.1111/1460-6984.12098>
- Goldner, E. M., Jenkins, E. K. & Fischer, B. (2014). A narrative review of recent developments in knowledge translation and implications for mental health care providers. *The Canadian Journal of Psychiatry*, 59, 160-169. <https://doi.org/10.1177/070674371405900308>

- Greenhalgh, T. & Wieringa, S. (2011). Is it time to drop the 'knowledge translation' metaphor? A critical literature review. *Journal of the Royal Society of Medicine*, 104(12), 501-509. <https://doi.org/10.1258/jrsm.2011.110285>
- Greenway, R., Mccollow, M., Hudson, R. F., Peck, C. & Davis, C. A. (2013). Autonomy and accountability: Teacher perspectives on evidence-based practice and decision-making for students with intellectual and developmental disabilities. *Education and Training in Autism and Developmental Disabilities*, 48, 456-468. Retrieved from: <https://eric.ed.gov/?id=EJ1016435>
- Helderman, J.-K., De Kruijf, J., Verheij, J. & Thiel, S. van (2014). *Dike-Reeve of the health care polder. A political-sociological analysis of the realisation of the National Health Care Institute against a backdrop of a changing policy agenda and changing political-administrative and societal relations*. Radboud University, Institute of Management Research.
- Hodes, M. W., Meppelder, H. M., Schuengel, C. & Kef, S. (2014). Tailoring a video-feedback intervention for sensitive discipline to parents with intellectual disabilities: A process evaluation. *Attachment & human development*, 16(4), 387-401. <https://doi.org/10.1080/14616734.2014.912490>
- Kaiser, A. P. & Mcintyre, L. L. (2010). Editorial: introduction to special section on evidence-based practices for persons with intellectual and developmental disabilities. *American journal on intellectual and developmental disabilities*, 115(5), 357-363. <https://doi.org/10.1352/1944-7558-115-5.357>
- Karamitri, I., Talias, M. A. & Bellali, T. (2015). Knowledge management practices in healthcare settings: a systematic review. *The International journal of health planning and management*, 32(1), 4-18. <https://doi.org/10.1002/hpm.2303>
- Kim, R. & Dymond, S. K. (2010). Special education teachers' perceptions of benefits, barriers, and components of community-based vocational instruction. *Journal of Intellectual and Developmental Disability*, 48(5), 313-29. <https://doi.org/10.1352/1934-9556-48.5.313>
- Klinger, E., Cherni, H. & Joseph, P.A. (2014). Impact of contextual additional stimuli on the performance in a virtual activity of daily living (vADL) among patients with brain injury and controls. *International Journal on Disability and Human Development*, 13(3), 377-382. <https://doi.org/10.1515/ijdh-2014-0331>
- Langone, J., Langone, C. A. & Mclaughlin, P. J. (2000). Analyzing special educators' views on community-based instruction for students with mental retardation and developmental disabilities: Implications for teacher education. *Journal of Developmental and Physical Disabilities*, 12(1), 17-34. Retrieved from: <https://link.springer.com/article/10.1023/A:1009452009831>



- Lennox, N. G., Brolan, C. E., Dean, J., Ware, R. S., Boyle, F. M., Gomez, M. T., Van Dooren, K. & Bain, C. (2013). General practitioners' views on perceived and actual gains, benefits and barriers associated with the implementation of an Australian health assessment for people with intellectual disability. *Journal of Intellectual Disability Research*, 57(10), 913-922. <https://doi.org/10.1111/j.1365-2788.2012.01586.x>
- Liberati A., Altman D. G., Tetzlaff J., Mulrow C., Gøtzche P. C., Ioannidis, J.P., Clarke, M., Devereaux, P.J., Kleijnen, J. and Moher, D. (2009). The PRISMA statement for reporting systematic reviews and meta-analyses of studies that evaluate healthcare interventions: explanation and elaboration. *Annals of Internal Medicine* 151, W65-W94. <https://doi.org/10.7326/0003-4819-151-4-200908180-00136>
- Maccini, P. & Gagnon, J. C. (2002). Perceptions and application of NCTM standards by special and general education teachers. *Exceptional Children*, 68(3), 325-344. <https://doi.org/10.1177/001440290206800303>
- Mansell, J., Beadle-Brown, J., Ashman, B. & Ockendon, J. (2005). *Person-centred active support: a multi-media training resource for staff to enable participation, inclusion and choice for people with learning disabilities*. Brighton: Pavilion.
- Mitton, C., Adair, C. E., McKenzie, E., Patten, S. B. & Perry, B. W. (2007). Knowledge transfer and exchange: review and synthesis of the literature. *The Milbank Quarterly*, 85(4), 729-768. <https://doi.org/10.1111/j.1468-0009.2007.00506.x>
- Moni, K. B., Jobling, A., Van Kraayenoord, C. E., Elkins, J., Miller, R. & Koppenhaver, D. (2007). Teachers' knowledge, attitudes and the implementation of practices around the teaching of writing in inclusive middle years' classrooms: No quick fix. *Educational and Child Psychology*, 24(3), 18-36.
- Morelli, D. L., Pati, S., Butler, A., Blum, N. J., Gerdes, M., Pinto-Martin, J. & Guevara, J. P. (2014). Challenges to implementation of developmental screening in urban primary care: a mixed methods study. *BMC Pediatrics*, 14(1), 16. Retrieved from: <https://link.springer.com/article/10.1186/1471-2431-14-16>
- Muhr, T. (2005) *Atlas. ti: The knowledge workbench* (Version 5.0. 66). London: Scolari. Sage Publications Software.
- Naaldenberg, J., Banks, R., Lennox, N., Ouellette-Kunz, H., Meijer, M. & Schroyenstein Lantman-De Valk, H. van (2015). Health inequity in people with intellectual disabilities: from evidence to action applying an appreciative inquiry approach. *Journal of Applied Research in Intellectual Disabilities*, 28(1), 3-11. <https://doi.org/10.1111/jar.12130>
- Nicolini, D., Powell, J., Conville, P. & Martinez-Solano, L. (2008). Managing knowledge in the healthcare sector. A review. *International Journal of Management Reviews*, 10(3), 245-263. <https://doi.org/10.1111/j.1468-2370.2007.00219.x>

- Ouelette-Kuntz, H., Brown, H., Baur, L., Davis, R., Emerson, E., Kerr, M., Meijer, M., O'Hara, D., Proulx, R., Perry, J. (2010). Using a knowledge translation lens to develop international collaborations to improve the health of individuals with intellectual disabilities. *Journal of Policy and Practice in Intellectual Disabilities*, 7(4), 278-282 <https://doi.org/10.1111/j.1741-1130.2010.00277.x>
- Pace, R., Pluye, P., Bartlett, G., Macaulay, A. C., Salsberg, J., Jagosh, J. & Seller, R. (2012). Testing the reliability and efficiency of the pilot Mixed Methods Appraisal Tool (MMAT) for systematic mixed studies review. *International journal of nursing studies*, 49(1), 47-53. <https://doi.org/10.1016/j.ijnurstu.2011.07.002>
- Parahoo, K., Barr, O. & Mccaughan, E. (2000). Research utilization and attitudes towards research among learning disability nurses in Northern Ireland. *Journal of advanced nursing*, 31(3), 607-13. <https://doi.org/10.1046/j.1365-2648.2000.01316.x>
- Pentland, D., Forsyth, K., Maciver, D., Walsh, M., Murray, R., Irvine, L. & Sikora, S. (2011). Key characteristics of knowledge transfer and exchange in healthcare: integrative literature review. *Journal of advanced nursing*, 67(7), 1408-1425. <https://doi.org/10.1111/j.1365-2648.2011.05631.x>
- Pluye, P., Robert, E., Cargo, M., Bartlett, G., O'Cathain, A., Griffiths, F., Boardman, F., Gagnon, M. & Rousseau, M. (2011). *Proposal: A mixed methods appraisal tool for systematic mixed studies reviews*. Montréal: McGill University, 1-8. Available at: <http://mixedmethodsappraisaltoolpublic.pbworks.com>
- Reinders, H. S. & Schalock, R. L. (2014). How organizations can enhance the quality of life of their clients and assess their results: the concept of QOL enhancement. *American journal on intellectual and developmental disabilities*, 119(4), 291-302. <https://doi.org/10.1352/1944-7558-119.4.291>
- Robertson, J., Hatton, C., Baines, S. & Emerson, E. (2015). Systematic reviews of the health or health care of people with intellectual disabilities: a systematic review to identify gaps in the evidence base. *Journal of Applied Research in Intellectual Disabilities*, 28(6), 455-523. <https://doi.org/10.1111/jar.12149>
- Roulstone, S. (2011). Evidence, expertise, and patient preference in speech-language pathology. *International journal of speech-language pathology*, 13(1), 43-48. <https://doi.org/10.3109/17549507.2010.491130>
- Sackett, D. L., Rosenberg, W. M., Gray, J. M., Haynes, R. B. & Richardson, W. S. (1996). Evidence based medicine: what it is and what it isn't. *British Medical Journal Publishing Group* 312(7023), 71-72. <https://doi.org/10.1136/bmj.312.7023.71>
- Schalock, R. L., Verdugo, M. A., Bonham, G. S., Fantova, F. & Van Loon, J. (2008). Enhancing personal outcomes: Organizational strategies, guidelines, and

examples. *Journal of Policy and Practice in Intellectual Disabilities*, 5(4), 276-285. <https://doi.org/10.1111/j.1741-1130.2007.00135.x>

Schalock, R. L., Verdugo, M. A. & Gomez, L. E. (2011). Evidence-based practices in the field of intellectual and developmental disabilities: An international consensus approach. *Evaluation and Program Planning*, 34(3), 273-282.

<https://doi.org/10.1016/j.evalprogplan.2010.10.004>

Slevin, E., Truesdale-Kennedy, M., Mcconkey, R., Barr, O. & Taggart, L. (2008). Community learning disability teams: developments, composition and good practice: a review of the literature. *Journal of Intellectual Disabilities*, 12(1), 59-79. <https://doi.org/10.1177/1744629507083583>

Smulders, E., Enkelaar, L., Schoon, Y., Geurts, A. C., Schroyen Lantman-De Valk, H. van & Weerdesteyn, V. (2013). Falls prevention in persons with intellectual disabilities: development, implementation, and process evaluation of a tailored multifactorial fall risk assessment and intervention strategy. *Research in Developmental Disabilities*, 34(9), 2788-2798.

<http://dx.doi.org/10.1016/j.ridd.2013.05.041>

Thomas, D.R. (2006). A General Inductive Approach for Analyzing Qualitative Evaluation Data. *American Journal of Evaluation*, 27(2), 237-246.

<https://doi.org/10.1177/1098214005283748>

Timmons, V. (2013). IASSIDD: Are we practicing knowledge translation effectively? *Journal of Policy & Practice in Intellectual Disabilities*, 10(2), 99-101.

<https://doi.org/10.1111/jppi.12036>

Totsika, V., Toogood, S., Hastings, R. P. & Nash, S. (2008). Interactive training for active support: perspectives from staff. *Journal of Intellectual and Developmental Disability*, 33(3), 225-238. <http://dx.doi.org/10.1080/13668250802283348>

Van Loon, J. H., Bonham, G. S., Peterson, D. D., Schalock, R. L., Claes, C. & Decramer, A. E. (2013). The use of evidence-based outcomes in systems and organizations providing services and supports to persons with intellectual disability. *Evaluation and Program Planning*, 36(1), 80-87.

<https://doi.org/10.1016/j.evalprogplan.2012.08.002>

Verbrugge, C.J.J.M & Embregts, P.J.C.M. (2013). *Een opleiding ervaringsdeskundigheid voor mensen met een verstandelijke beperking*. Tilburg, Tilburg University.

Vlaskamp, C., Hiemstra, S. & Wiersma, L. (2007). Becoming aware of what you know or need to know: gathering client and context characteristics in day services for persons with profound intellectual and multiple disabilities. *Journal of Policy and Practice in Intellectual Disabilities*, 4(2), 97-103. <https://doi.org/10.1111/j.1741-1130.2007.00106.x>

Weggeman, M. (2007). *Leidinggeven aan professionals. Niet doen*. Schiedam: Scriptum.

West, P. (2004). *Applied health research: A briefing paper on knowledge transfer, dissemination and utilization*. Canada: Continuous Innovation.

World Health Organisation (2006). *Bridging the "Know-Do" gap meeting on knowledge translation in global health*. Geneva: WHO.

Wood, S., Gangadharan, S., Tyrer, F., Gumber, R., Devapriam, J., Hiremath, A. & Bhaumik, S. (2014). Successes and challenges in the implementation of care pathways in an intellectual disability service: health professionals' experiences. *Journal of Policy & Practice in Intellectual Disabilities*, 11(1), 1-7.  
<https://doi.org/10.1111/jppi.12063>



**CHAPTER 3**

**3**

# Motives and strategies of CEOs for stimulating sharing and application of knowledge in the care and support for people with intellectual disabilities

This chapter has been published as:

Kersten, M., Taminiau, E., Weggeman, M. and Embregts, P. (2022).

Motives and strategies of CEOs for stimulating sharing and application of knowledge in the care and support for people with intellectual

disabilities. *Journal of Knowledge Management* 26(11), 114-141. <https://doi.org/10.1108/JKM-06-2021-0463>

## Abstract

*Purpose:* Within intellectual disability care organizations (IDCOs), it is vital that professionals share and apply knowledge to improve the quality of care for their service users. Given that Chief Executive Officers (CEOs) play a pivotal role in enabling these processes, this paper aims to investigate both the underlying motives and strategies behind CEOs' organizational knowledge leadership and their contribution to improving these knowledge processes.

*Design/methodology/approach:* In this exploratory qualitative study, 11 CEOs from IDCOs in the Netherlands who are actively involved in knowledge management within their organizations were interviewed. An inductive thematic analysis was conducted.

*Findings:* CEOs' motives for stimulating knowledge processes among professionals in IDCOs arise from the internal (e.g., the CEOs themselves) and external (e.g., policy) contexts. This study also identified four strategies adopted by CEOs to stimulate sharing and application of knowledge: providing organizational conditions for effective knowledge processes; focused attention on talent development; acknowledgement and deployment of knowledge holders; and knowledge-driven participation in collaborative partnerships. These strategies are used in combination and have been shown to reinforce one another.

*Practice implications:* An overview of strategies for stimulating knowledge processes is now available.

*Originality/value:* The results display the leadership of CEOs in knowledge strategies. Insights into their perceptions and values are provided while elaborating on their motives to take this role.



## Introduction

Just as with general healthcare, the sharing and application of knowledge are vital processes in improving the quality of care in intellectual disability care organizations (IDCOs), which provide care and support to people with intellectual disabilities (Greenhalgh *et al.* 2004; Grol *et al.* 2007). However, the specific nature of IDCOs, namely the fact that they are multidisciplinary and underpinned by different knowledge bases, raises a number of challenges when seeking to improve these knowledge processes (Farrington *et al.* 2015; Kersten *et al.* 2018). In light of this, we conducted an exploratory qualitative study among eleven CEOs from IDCOs in the Netherlands who are actively involved in knowledge management within their organizations. By presenting the motives and strategies of these CEOs for stimulating the sharing and application of knowledge by professionals in IDCOs, this paper sheds light upon how organizational knowledge leadership enables the improvement of these knowledge processes.

We will, therefore, start by presenting the context, that is, the key characteristics of this field of care: a heterogeneous client population, a broad range of knowledge holders, the nature of their knowledge and the systems in which this knowledge is processed. Intellectual disability care (IDC) provides mainstream and specialized services to people whose disabilities range from mild to profound (World Health Organization, 2011; Public Health England, 2016; Kroneman *et al.* 2016). Given that interventions used for the general population are usually not suitable, this means that care and support must be customized to a variety of target groups, such as persons with profound intellectual and multiple disabilities (Vlaskamp *et al.* 2007) or parents with intellectual disabilities (Hodes *et al.* 2014).

The lifelong and life-wide character of IDC means that it not only involves multiple professional disciplines but also members of the service user's informal network, for example, in the development, execution and evaluation of the service user's support plans, to which they all contribute their own areas of knowledge (Herps *et al.*, 2013). Knowledge processes in IDC, therefore, include evidence-based knowledge, alongside professional knowledge and the experiential knowledge of service users and their relatives (Embregts 2017). The types of knowledge stemming from these different sources vary in terms of their properties, and this, in turn, has consequences for their use in knowledge processes (Farrington *et al.* 2015; Robertson *et al.* 2015; Zorginstituut Nederland, 2016). A key property in this respect is the nature of knowledge, i.e. whether it is codifiable and "explicit" or non-codifiable and "implicit" or "tacit" (Polanyi and Sen 2009). While explicit knowledge

is recorded and takes the form of “know that” knowledge such as facts, policies and protocols, implicit knowledge takes the form of “know how” knowledge, which is present in the minds of certain groups and individuals.

Evidence-based knowledge has an explicit character (e.g., an evidence-based guideline), but this holds to a far lesser extent for professional and experiential knowledge (e.g., practice-based methods). Explicit knowledge is relatively easy to exchange within and between organizations, but is only available to a limited extent in IDC (Farrington *et al.*, 2015). Professional and experiential knowledge mainly take the form of implicit or tacit knowledge, such as individual experiences in caring for and supporting the service user, present or past. Situated in a specific context and limited to particular individuals and groups, this knowledge is harder to articulate and exchange (Farrington *et al.*, 2015). Moreover, the multidisciplinary character of IDC poses additional challenges, such as difficulties in bringing together professionals from different disciplines at the same time and place (Smulders *et al.*, 2013) and the fragmentation of knowledge that is distributed across a large number of locations and sources (Nicolini *et al.*, 2008).

Duryan *et al.* (2012, 2014) show that IDCOs can be perceived as complex systems. In the aforementioned description of knowledge holders, a system at the micro level in which knowledge is processed can already be identified. This micro-level system includes the multidisciplinary team and the network of the service user. At the macro level, the IDCO is part of a larger health-care system consisting of the national government, the health-care authority, health insurers, patients and other providers (World Health Organization, 2011; Public Health England, 2016; Kroneman *et al.* 2016). In-between these levels, at the meso or organizational level (the IDCO), the system involves several subsystems, including location, professional groups, communities of practice and collaborative partnerships of IDCOs. Characteristics of the mesosystem, such as properties associated with the various knowledge sources and the organizational context in which knowledge is shared and applied, are also key factors in stimulating successful quality improvement (Kaplan *et al.* 2010) and innovation (Greenhalgh *et al.* 2004). However, insight into the impact of the organizational context on knowledge processes within long-term care organizations is limited (Cammer *et al.* 2013; Kersten *et al.* 2018). In their systematic review Kersten *et al.* (2018) identify three main clusters of organizational factors that enable or disable the stimulation of knowledge processes in IDC:

- (1) factors related to the tools and processes used to implement a method;
- (2) factors related to people working in IDCOs (professionals, management); and

(3) material and immaterial factors related to the organizational context, such as office arrangements and team size.

Overall analyses suggest that management has a key role to play by exerting its influence to guide and shape these factors.

In general health care, top management (CEOs) fulfils a particularly crucial role in enhancing innovations and quality improvement that involve knowledge processing. This can take the form of support at the highest level of management, personal commitment and employee motivation (Greenhalgh *et al.*, 2004, Kaplan *et al.*, 2010, Karamitri *et al.* 2015). Effective leadership, which expresses itself through behavior such as advocating change and articulating a vision, requires underlying skills, values, personality traits and roles – all aspects which have not been the focus of a great deal of research (Yukl, 2012). An exploratory study by Larson *et al.* (2012) did establish patterns of motivation and attitudes among CEOs in a broad spectrum of high-performing organizations, including the need to drive continuous evolution and strong focus on learning. Nieboer and Strating (2012) found a significant correlation between commitment to quality improvement among CEOs of Dutch long-term care organizations and transformational leadership: the ability to change the status quo and existing rule structures by establishing “new orders” and ways of doing things (Avolio and Gardner 2005).

In an exploratory study, Lakshman (2009) found preliminary empirical evidence for the pivotal role that senior-level executive leaders across a broad spectrum of organizations play in knowledge management, which, in turn, enhances organizational performance. Given that the perceptions of these CEOs on knowledge sharing appears to be instrumental in this process, Lakshman recommends further investigation into the role of leaders in information and knowledge management, including their perceptions. With regard to improving organizational performance in general, the “framework for leading the transformation to performance”, developed by Latham (2013a, 2013b), points toward the interaction of forces and facilitators, approaches, behaviors, culture and the characteristics of individual leaders. To the best of our knowledge, the first study dedicated to examining leadership and management practice within IDC was recently published. The results of this Delphi study (Deveau *et al.*, 2019) show that senior managers in IDCs both associate short-term reactive decisions with long-term strategic decisions and include staff in the decision-making process. The authors recommend further exploring the strategic decisions of senior management using different research methods that focus on aspects like contact with staff via visiting the services; this potentially influences both leadership and management practices and culture-building. Finally, Ayatollahi and Zeraatkar (2020) point

to the key role of CEOs of health-care organizations in successfully implementing knowledge management by improving the sharing of knowledge and encouraging employees to accept a knowledge-sharing culture.

With regard to the policy of CEOs, the term “knowledge management” refers to measures aimed at locating, retrieving, sharing, adapting and using knowledge to promote organizations’ objectives (Karamitri *et al.*, 2015). Knowledge management encompasses different strategies, i.e. descriptions of how the organization will realize its targets (Weggeman 2007). Knowledge management strategies in the business sector include training programs, communication technologies, process mapping and communities of practice (Kothari *et al.*, 2011). According to Nieboer and Strating (2012), organizations aiming to strengthen an innovative culture need to ensure that their human resource practices are aligned with their innovation strategies and approach to knowledge management.

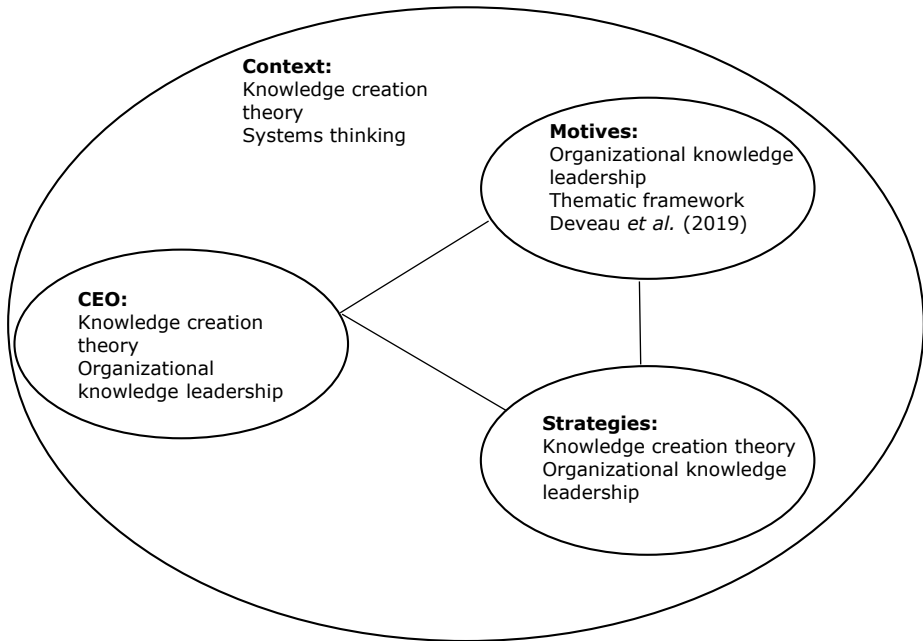
To the best of our knowledge, there is a lack of insight into the strategies used by CEOs in IDC when it comes to managing knowledge in their organizations, as well as into their motives for deploying these strategies. The research questions underpinning this exploratory, qualitative study are:

- r RQ1: What are the motives of Dutch CEOs with respect to stimulating the sharing and application of knowledge in the care and support for people with intellectual disabilities?
- r RQ2: What are the strategies employed by Dutch CEOs to stimulate the sharing and application of knowledge in the care and support for people with intellectual disabilities?
- r RQ3: Which enabling/disabling factors influence the execution of strategies employed by Dutch CEOs to stimulate the sharing and application of knowledge in the care and support for people with intellectual disabilities?

The motives and strategies themselves will be addressed in this article, while another article will focus on the enabling and disabling factors (Kersten *et al.* 2022). This paper is structured as follows: first, the theoretical framework is presented. The following section delineates the method deployed in the study as well as the study setting. Next, the main results on CEOs’ motives and strategies are presented. In the following section the results of the study are discussed and the findings are compared with previous research. Also, the theoretical and practical implications as well as the limitations of the study are presented. In the final section a conclusion is provided and avenues for future research are suggested.

## Theoretical background

Figure 1 Theoretical framework



### Knowledge, knowledge sharing and knowledge hiding

In this article, we define knowledge as the ability of professionals to perform their tasks, which derives from information, experience, skills and attitude (Weggeman, 2007). In other words, knowledge encompasses explicit knowledge (information) as well as tacit knowledge (experience, skills and attitude). We, thereby, acknowledge the importance of the latter in IDC, with its limited explicit body of knowledge. Knowledge sharing at an individual level is imperative to processing knowledge at all other organizational levels. This process, defined by Ipe (2003) as the act of making knowledge available to others within the organization, involves the process of converting knowledge held by an individual into a form that other individuals can understand, absorb and use, which thus demands a conscious action on behalf of the knowledge holder.

In their theory of knowledge creation, Nonaka *et al.* (2000) point to the four mechanisms applied in this conversion to accommodate to the specific nature of the

knowledge: Socialization (t->t), Externalization (t->e), Combination (e->e) and Internalization (e->t). They refer to this process of sharing either explicit (e) or tacit (t) knowledge as the SECI model. These authors show that the conversion of knowledge involves a spiral of knowledge creation, which expands both within and across organizations. Given that professional and experiential knowledge in IDC primarily concerns implicit knowledge, the mechanisms of socialization and externalization are of major importance when seeking to share knowledge in this specific field of care.

Notwithstanding the nature of the knowledge (tacit and explicit knowledge and value of knowledge), the sharing of knowledge is also influenced by both the motivation (internal power and reciprocity; external relationship with recipient and rewards for sharing) and opportunities (purposive and relational learning channels) to share knowledge as well as the culture of the work environment. These four main factors appear to be interconnected, thus influencing each other in a nonlinear fashion (Ipe, 2003). The alignment of CEOs' strategies in IDC with these factors warrants investigation. Wang and Noe's (2010) review demonstrates that these factors developed further into individual, interpersonal and team characteristics; perceptions related to knowledge sharing; and organizational context. However, these authors suggest the need for further research into, among other things, environmental factors related to the organizational context: culture/climate, leadership characteristics and context (online, face-to-face). Interestingly, they themselves address the reasons for sharing or not sharing knowledge, such as impression management and attribution, power and social costs.

While not sharing knowledge does not appear to be an intentional behavior but rather stems from mistakes, accidents or ignorance, knowledge hiding does involve intentional behavior. The latter is a separate construct created by Connelly *et al.* (2012), who define it as an intentional attempt to withhold or conceal knowledge that has been requested by another person (p. 65). In their bibliometric analysis of knowledge hiding in business organizations, Di Vaio *et al.* (2021) underscore its potentially detrimental effect on relationships between teams, creativity and strategic performance, as well as point toward the influence of leadership on sharing and hiding knowledge. Although the antecedents and consequences of knowledge hiding have been researched in business settings (e.g., Caputo *et al.* 2021; Chatterjee *et al.* 2021; Zhang *et al.*, 2021), there remains a relative dearth of insights on knowledge hiding in non-profit organizations generally and IDCs specifically.

### **Context, systems thinking**

Since the process of knowledge sharing is influenced by the environment in which it takes place, closer examination of its content is critical. To this end, the construct “context” proves to be helpful. Scholock *et al.* (2020) define context as “a concept that integrates the totality of circumstances that comprise the milieu of human life and human functioning” and demonstrate its applicability in a multilevel model – that is, in the primary process, at both the organizational and the systems level. In their aforementioned knowledge-creation theory, Nonaka *et al.* (2000) state that a shared context is imperative to knowledge sharing at an organizational level. This shared context (“Ba”) consists of physical space (e.g., the office), virtual space (email) and mental space (shared ideas). Konno and Schillaci (2021) recently re-examined knowledge-creation theory in order to assess its value to innovation management in the era of Society 5.0 (“super smart society”). They purport that social innovation in contemporary society requires the exchange of intellectual capital beyond the boundaries of organizations. To this end, they propose open innovation enabled by key players’ (enterprises, public sector, academics, user community) application of the SECI model. While all key players internally design their own means through which to apply the SECI model, they must all acknowledge a common purpose, which serves as Sharing “Ba” (open place, dynamic context). Consequently, internal and external systems are connected. Konno and Schillaci (2021) put forward living labs, innovation centers and future venues as examples of such intellectual capital open ecosystems.

To gain a better understanding of the context of knowledge processes, we have followed the recommendation of Best and Holmes (2010) to apply the perspective of systems thinking. In contrast to linear thinking, which focuses on the components themselves, systems thinking involves focusing on the relationships between system components (Monat and Gannon, 2015). Within a systems-thinking approach, the organization is perceived as part of a larger system that is shaped by culture, structures, priorities and capacities. Given that changes to one part of the system can influence other parts of the system, the system is dynamic and constantly changing (Best and Holmes, 2010). In line with Duryan *et al.* (2012, 2014), we perceive IDCs to be complex systems characterized by three levels. IDC operates at the macrolevel, IDCs at the mesolevel, and the primary process via which professionals care for and support persons with intellectual disabilities at the microlevel. As the focus of this study is on IDCs, following Greenhalgh *et al.* (2004) we conceptualize all of the stakeholders within the organization as well as organizational aspects as belonging to the internal context, while stakeholders and

phenomena (e.g., the labor market) at the macro level are perceived as belonging to the external context.

Within the field of health care, systems thinking has proven to be valuable in terms of health-promoting practices (Naaldenberg *et al.*, 2009), supporting decision-making in IDC (Duryan *et al.*, 2014) and advancing evidence-based practice (Augustsson *et al.*, 2019). While reflecting on systems thinking in education, Gibbs *et al.* (2021) underline the necessity to shift the focus away from the intervention itself toward the specific context in which it is applied, including leadership, the delivery system, landscape, and cultural and political norms, before identifying the other requirements in the system. In accordance with Best and Holmes (2010), we investigate the nature of evidence and knowledge, leadership, networks and communications within the organizational context.

### **Leadership**

In line with our focus on the role of CEOs in knowledge management, leadership proved to be a key component of our theoretical framework. Within theory on knowledge creation (Nonaka *et al.*, 2000), the important role played by senior management in organizational knowledge creation is described in terms of four tasks:

- (1) providing a knowledge vision;
- (2) developing and promoting knowledge assets (inputs, outputs, and as moderators of the knowledge creation process);
- (3) creating a shared context in the form of unifying physical space (e.g. the office), virtual space (email) and mental space (shared ideas); and
- (4) promoting the continuous spiral of knowledge creation.

Besides the key role played by senior management, these authors also acknowledge the crucial role played by middle management.

With respect to the role of leaders in knowledge management, Lakhsman (2007) developed a grounded theory of organizational knowledge leadership consisting of the following components relating to organizational performance and leadership perceptions:

- 1) leaders' realization of the significance of knowledge management;
- 2) leaders' realization of the importance of customer-focused knowledge management;
- 3) leaders' effective use of technology and people in establishing knowledge networks;
- 4) leaders providing opportunities for all employees to obtain information from internal and external customers by using information networks; and
- 5) leaders' personal participation in the process of sharing information via day-to-day activities and dedicated information networks.



According to Lakhsman (2007), personal participation by CEOs in knowledge management might constitute the crucial link between knowledge management and leadership. To this end, he introduced the notion of “organizational knowledge leadership”. Finally, in order to attune to the role of CEOs in the context of non-profit organizations, the thematic framework presented by Deveau *et al.* (2019) appears to be useful. This framework posits that there are two sources of opportunities and challenges for senior managers in IDC:

1. intra-organizational: understanding and influencing staff members’ work experiences, culture and practice;
2. extra-organizational: government policy, service commissioners, care quality commission and advocates.

## Method

### Study setting

This exploratory study was conducted among 11 CEOs of IDCOs in the Netherlands, as this country provides a context that has recently witnessed major changes in the care system. Moreover, the relatively small size of this system allows for in-depth insight into both the key players and the interaction between the macro and the organizational levels. Most of the 142,000 residents of the Netherlands who have intellectual disabilities receive support from one of approximately 170 specialized service organizations (Vereniging Gehandicaptenzorg Nederland, 2019). The working area of most of these organizations is restricted to a specific region, and a few operate throughout the entire country. Their size ranges from under 100 to over 10,000 service users and staff. Regardless of size, all of these organizations have several locations, scattered over a smaller or larger area. Most organizations provide services to persons whose disabilities range from mild to profound, so the nature and amount of support provided ranges from several hours a week to 24-7 staffed residential care customized to specific target groups. Almost all IDCOs in the Netherlands belong to the Dutch sector organization VGN (<https://www.vgn.nl/leden>), which represents their interests in national policy discussions across a broad spectrum of themes such as quality, governance, financing and knowledge (<https://www.vgn.nl/themas>). Despite this unified representation, IDCOs compete for the provision of services, particularly at the local and regional levels. This competition has increased due to a major change in the Dutch care system. Prior to 2015, the central government was in charge of access to care and support for all long-term care users, whereas now it is the local municipality which finances care and support for people who

require low-level care, while the central government does the same for those who require high-level long-term care (Kroneman *et al.*, 2016).

### **Study design and sample**

A qualitative interview study was conducted, which facilitates obtaining rich information and deeper insight into phenomena, therefore reflecting our aim of studying knowledge management among CEOs within the context of the organizations they run. The CEOs of Dutch IDCs pursue their own knowledge policy, to which they attach varying degrees of priority. Data were, therefore, collected through individual in-depth, semi-structured interviews with the CEOs of a number of these organizations. Respondents were recruited in three stages. In the first stage, we drew up a list of CEOs who were known to be actively involved in the development and application of knowledge management in their own organization, as this would enable us to gain insight into their organizational knowledge leadership. Also, they would be able to provide first-hand background information. The criterion of active involvement in knowledge management was based on the work of a national group of experts on knowledge processes and on our own knowledge of the field of IDC in the Netherlands. Using publicly available information, in the second stage we further narrowed down our selection to organizations that had an earmarked budget for activities that center on sharing and application of knowledge and which participated in collaborative relationships (e.g., with other care organizations or knowledge institutes). The criterion of participating in collaborative relationships follows a recommendation of Best and Holmes (2010) that networks should be included when studying knowledge transfer. Based on this selection of organizations, in the third stage a purposive sampling strategy (Etikan *et al.*, 2016) was used to ensure variety in the background of the CEOs recruited and the characteristics of the organizations they manage. In line with Van der Scheer (2013) and using publicly available demographic and professional information on the CEOs, we sampled respondents based on educational background (both general and specific to IDC), gender and length of time working as CEO in the current organization. For organizational characteristics we also used publicly available information for our sampling strategy, taking into account the size of the organization the CEO manages; the organization's geographical location; the period for which a knowledge management strategy had been formulated; and whether or not professionals work in autonomous teams.

In an iterative process the researchers analyzed data, recruited participants and conducted interviews, thereby enabling purposive sampling based on data gathered from the interviews that had already been conducted. The sample size was guided by data

saturation (Guest *et al.*, 2006). After interviewing 11 CEOs, the research team (MK, EF, MW and PE) concluded that no additional information relevant to the sample had emerged since intermediate analyses showed that interviewees had not mentioned new motives or strategies. The key characteristics of the sample are described in Table 1.

**Table 1 Sample Characteristics (n=11)**

CEOs		Organizations	
Variable	Spread	Variable	Spread
Gender	6 (male); 5 female	Size in service users	1 (<1,000); 6 (1,000-3,000); 4 (>3.000)
Age	2 (< 55 ); 5 (55-59); 4 (>59)	Size in employees	2 (<1,000); 4 (1,000-2,000); 2 (2,000-3,000); 3 (>3,000)
Highest educational level	2 (university of applied sciences); 8 (university); 1 (PhD)	Corporation	4 (yes); 7 (no)
Field of education	9 (care-related); 2 (non-care-related)	Autonomous teams	6-7 (Yes); 3-4 (No)
Fields of work experience	2 (IDC only); 5 (IDC and other care sectors); 3 (university of applied sciences); 1 (business); 1 (education); 1 (public administration)	Region	3 (north); 5 (central); 3 (south)
Number of years in current position	5 (<5); 1 (5-10); 5 (>10)	No. years of formal knowledge policy	3 (<5); 6 (>5); 2 (no formal knowledge policy)

Note: IDC = intellectual disability care

**Data collection**

After ethical approval was granted by the Ethics Review Board of Tilburg University (EC-2017.80), recruitment of respondents began. The researchers sent an information and consent letter to all thirteen CEOs who were invited to participate in this study. Eleven agreed to participate and signed the informed consent form. The other two CEOs indicated that participation did not fit in with their priorities. The first author (MK) conducted all of the semi-structured interviews between February and August 2018 at a location chosen by the interviewee: their workplace or another convenient location (e.g., a hotel lobby). Average duration of the interviews was 93 minutes (range: 78-101 minutes). The individual interviews were audio-recorded and transcribed verbatim. The full transcripts were sent to the interviewees, all of whom approved the data as presented. At this stage, the background data on the CEO and the organization that had previously been gathered from the publicly available information were checked and supplemented by the CEO where necessary.

As the aim of this study was to investigate the motives and strategies of CEOs in stimulating knowledge processes among professionals in their organizations, the first part of the interview guide (Table A1, Appendix) was based on insights about knowledge management. The goal was to establish a dialogue with the participants, using the interview guide to ensure that the main topics were discussed while remaining open to any other relevant issues that participants might raise. As such, attention was paid to each CEO's perception of knowledge (Weggeman, 2007) and to possible differences in professionals' processing of explicit and implicit knowledge (Nonaka *et al.* 2000). Following Greenhalgh *et al.* (2004), the researchers also collected information about the professional background and motives of the CEOs. They were asked extensively about their motives and strategies, as well as the underlying reasons for these strategies.

### **Analysis**

Aiming to benefit from the insights obtained at each consecutive phase of data collection, data were collected and analyzed in an iterative process. An inductive, thematic approach (Braun and Clarke, 2006) was taken for the analysis of the data. First, the interview transcripts were uploaded to ATLAS.ti (Muhr 2005), a software package that supports the coding process. After familiarizing themselves with all of the transcripts, two researchers (MK and EF) independently coded the first two interviews using a bottom-up approach. The codes were then discussed in an iterative process until consensus was reached (Bowden 1996). The other interviews were coded by the first author (MK), while the second author (EF) coded 20% (Kratochwill *et al.*, 2010) of each of these interviews to ensure reliability. Again, these codes were jointly discussed until consensus was reached. All of the codes were then checked by the second author (EF) for clarity and possible overlap, resulting in adjustments to some of the codes following a discussion between the first and second authors. The first author (MK) drew up an initial proposal for clustering the codes into categories using an inductive approach. All of the authors (MK, EF, MW and PE) discussed the clustering in an iterative process until consensus was reached. The clusters and subclusters were based on bottom-up emerging themes such as identification of areas of concern (motives) and acknowledgement and deployment of knowledge holders (strategies). At the next stage of the bottom-up analysis, the authors outlined internal and external context as the relevant framework for analyzing the motives that emerged from the data provided by the CEOs.

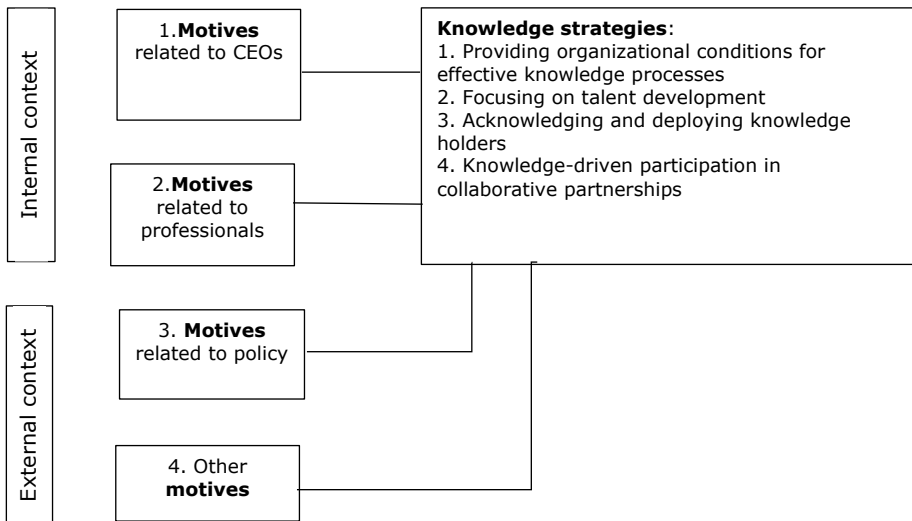
The final categorization was conducted in two stages. At the first stage, the first author (MK) analyzed all of the data separately for each respondent, and at the second

stage this author performed an overall analysis of the data . At both stages the second author (EF) was involved in the categorization, and where differences arose they were discussed until consensus was reached. A description was then provided for all of the themes, and a final check involving all of the authors was conducted.

## Results

### Motives

In analyzing what motivated CEOs to stimulate professionals in their organization to share and apply knowledge, motives related to both the internal (the organization) and the external context (the sociopolitical environment) were identified. The motives related to the internal context were the CEOs themselves and the professionals in their organization; the motives related to the external context were policy and other motives (e.g., the labor market, membership in collaborative partnerships). Figure 2 visualizes an overview of the results: the categories of motives and knowledge strategies. Overviews of categories of motives for stimulating professionals’ sharing and application of knowledge are presented in Table 2 (motives in the internal context) and Table 3 (motives in the external context).



**Figure 2** *Motives and strategies to stimulate the sharing and application of knowledge*

**Table 2 Categories of motives in the internal context for stimulating professionals' sharing and application of knowledge**

<b>1. MOTIVES RELATED TO CEOs</b>		<b>2. MOTIVES RELATED TO PROFESSIONALS</b>
<p>1.1 BACKGROUND AND PERCEPTIONS OF CEOs</p> <ul style="list-style-type: none"> <li>• <i>Personal variables</i>: personal characteristics, personal and professional background (having a family member with an intellectual disability or a former job in education)</li> <li>• <i>Motivations</i></li> <li>• <i>Perceptions of knowledge</i>: definition of knowledge; availability of implicit and explicit knowledge; importance of scientific knowledge†; function of knowledge (contributes to quality)</li> <li>• <i>Perceptions of knowledge sharing</i>: on learning (conditions); design and conditions of knowledge sharing (dialogue); importance of knowledge sharing; sharing knowledge with the outside world (open source)</li> <li>• <i>Perceptions of collaboration</i>: on multidisciplinary collaboration within and between organizations</li> <li>• <i>Other perceptions</i>: on the role of knowledge in care development; the relationship between knowledge and professionalism (professional behavior is based on knowledge); managerial control (facilitating bottom-up development)</li> </ul>	<p>1.2 CEOs TASK PERFORMANCE</p> <ul style="list-style-type: none"> <li>• <i>Identifying areas of concern</i>: innovation and implementation of knowledge*†; absence of a knowledge culture*; knowledge sharing*†; level of equivalence of knowledge sources*†</li> <li>• <i>Strategic planning role</i> (specialization on complex care needs of clients)</li> <li>• <i>Initiating role</i> (company trainings)</li> <li>• <i>Responsibility for quality</i> (signals that quality improvement is required)</li> <li>• <i>Role as employer</i> (avoiding staff lay-offs after budget cuts)</li> </ul>	<p>2.1. BASIC KNOWLEDGE AND COMPETENCIES</p> <ul style="list-style-type: none"> <li>• <i>Required knowledge base and competencies</i>*†</li> <li>• <i>Required motivation, attitude, readiness for action</i>*†</li> </ul> <p>2.2 SPECIFIC KNOWLEDGE AND COMPETENCIES</p> <ul style="list-style-type: none"> <li>• <i>Required knowledge about complex care needs of clients (with challenging behaviors)</i>*†</li> </ul> <p>2.3 EDUCATION AND TRAINING</p> <ul style="list-style-type: none"> <li>• <i>Aligning the design of learning with professionals' needs</i>*†</li> </ul>

Notes: Examples given in parenthesis; \* = cluster contains codes identifying areas of concern; † = cluster contains codes on challenges

*Motives related to the CEOs themselves (1)* The first group of motives concerns CEOs' background, their perceptions of knowledge, and how they perform their task. First, analysis indicates that the background, drives and perceptions of CEOs (1.1) are a major component of their motivation to improve the knowledge processes in their organizations. Several CEOs

referred to personal variables: their own personality traits, such as curiosity, and their personal and/or professional background in IDC:

*[...] I started as a supply worker [filling in for other members of staff]. Yes, I did that for three years, then worked for two years at a day care center, and that got me involved in the sector. At a certain point you start responding emotionally to residents, clients and visitors at a day center. That makes you think: it's important that they should be able to live with dignity and I have the feeling that I can contribute to that. (CEO 2)*

Commitment to IDC and personal and/or professional background influence each CEO's mindset when it comes to knowledge processes in IDC. This mindset covers a broad spectrum of perceptions about knowledge, knowledge sharing, collaboration within and between organizations, the role of knowledge in the development of care, the relationship between knowledge and professionalism, and managerial control. Firstly, this is evidenced by the way CEOs explain their motives in terms of the added value of knowledge to the performance of their organization (quality of care/quality of life) and their responsibility in these knowledge processes. One CEO described knowledge as "the package an employee brings with them [to the job] and that enables them to act" (CEO 3). Another CEO said:

*I think you owe it to your clients. I really think that if you are admitted to a care organization in the Netherlands, you should be able to count on receiving state-of-the-art support, guidance, treatment, whatever. So really I think that it's a task for the care organization. (CEO 9)*

Secondly, the motives described by CEOs give insight into how they perform their task (1.2): the issues they identify as areas of concern, the strategic objectives they formulate, the initiatives they take and the responsibility they feel for delivering quality care and as employers.

The areas of concern identified by CEOs reveal a range of different motives for stimulating professionals' sharing and application of knowledge. When asked about the major challenges with respect to knowledge in his organization, one CEO answered, "It's mainly about gathering knowledge, sharing knowledge and applying knowledge" (CEO 6). In addition to these knowledge processes, CEOs also referred to the challenges presented by the organizational culture. The absence of a knowledge culture was mentioned in several interviews. For example, "The culture is not always knowledge-driven. So you really need to make a deliberate effort to form a clear picture of what people know now and what they

actually need to know to do their job well” (CEO 1). Another CEO pointed out the inequivalence of knowledge sources in his organization:

*I also want to mention equality and how valuable it is. In many care organizations there is no equality: the doctor or the psychologist or the psychiatrist is always a cut above the rest. And that’s why those processes always run so badly. I really think it’s a theme within our organization: how come people focus on their position and their power instead of equality and open dialogue? (CEO 2)*

Next, the aims that CEOs formulate for their strategy and initiatives also reveal motives for improving knowledge processes. In several cases, they relate developing a knowledge strategy to the overall business strategy of the organization, as the following quote shows: “Ultimately [it’s about] the motivation behind the insight, that there is an explicit choice to continue with the hardest problems and in different areas also the search: so is it going well enough?” (CEO 4). This CEO thus explains that specialization in complex care needs involves a constant search of whether the organization provides quality care to its clients by using state-of-the-art knowledge.

Other CEOs explained their own leading role in determining the vision and strategy of their organization, in terms of playing an initiating role (by starting a business training program, setting up a network, explaining and introducing a method). Finally, CEOs mentioned their responsibility for the quality of care as a motive for stimulating the sharing and application of knowledge: “Based on signs that things are not going well or are lacking in our healthcare practice. But whether that is a reluctance to act ...? So there are often reasons why I say: we should do that [adopt a certain strategy]” (CEO 8).

*Motives related to professionals (2)* A second group of motives identified in the internal context is *motives related to professionals*. In the first place, the CEOs mentioned motives related to professionals lacking the required knowledge base and competencies, motivation, attitude, and readiness to take action (2.1). They recalled how professionals are expected to change in line with the current perspectives on IDC, for instance by taking on the new role of empowering service users instead of simply taking care of them, and the effect this has on how professionals should approach their job:

*The most important motive is self-responsibility. Look, if you want to give control to clients, then you should give more control to the employee. And while that may have been agreed verbally, it hasn’t yet become a reality. Having done that program for a couple of years, now it should be time to say: the employee has control. Because it’s*



*in their relationship with the client [that empowerment needs to happen]. And they should be given all the space they need to implement it and every opportunity for personal development. (CEO 11)*

Besides professionals lacking basic knowledge and competencies, CEOs mentioned their lack of specialized knowledge and competencies about the complex care needs of particular clients (2.2), such as persons with profound intellectual and multiple disabilities and/or challenging behaviors, possibly resulting in inadequate provision of professional support and increased risk of incidents. As illustrated by the next quote, respondents perceive the role of professionals in achieving quality of care as being key and therefore as a legitimization of their approach to knowledge management:

*Then, of course, your start by explaining your vision of why knowledge management is on the agenda, which also involves hiring people and spending about eighty percent of your money on that. They then get to work, with what you hope is knowledge in the broadest sense of the word, good skills, attitude and abilities. And that is proving to be a challenge at the moment. (CEO 1)*

Another CEO also stated that awareness of the added value of professionals motivated the organization to improve the knowledge processes in order to enhance professionalism within the organization itself: "That people [within the organization] wonder: where do we stand when it comes to knowledge, when it comes to the added value an organization brings to what our people are doing?" (CEO 10).

Finally, their motives concern education and training (2.3): ways in which their organization is able to design learning to suit the needs of its professionals and thus share the organizational body of knowledge with them. According to one CEO, the big question is: "Do we have the means at our disposal to make sure that people who do not read well, who do not absorb knowledge well, and who have difficulty learning are still able to make it on their own?" (CEO 2).

*Motives related to policy (3)* In addition to categories of motives arising from the internal context, we also identified categories that arise from the external context of CEOs' care organizations. In this socio-political context, a first group of motives relates to policy (3). First, the respondents state that their knowledge strategies are stimulated by the national long-term care policy in the Netherlands (3.1.), which is currently focused on diminishing involuntary care and stimulating the social inclusion of people with intellectual disabilities.

For example, “This could also be about changes in the law and regulations, so if there is a new Care and Coercion Act we need to develop knowledge in response to those changes, so you could say it’s a matter of regulation and compliance” (CEO 8). Second, they mention the policies of other IDCOs (3.2), which in some cases come about as a result of national policy. A few CEOs pointed to the change in the national IDC system and how other IDCOs then responded by deciding to specialize in care for a target group of clients. These policy decisions influenced their overall business strategy to also focus on specific groups of clients:

*But what if everyone said “we’re here to help the most difficult target group” and actually were, then those clients would be served everywhere, and they wouldn’t have to come to us from all over the country. So it also has to do with the policy choices made by other organizations. (CEO 4)*

**Table 3 Categories of motives in the external context for stimulating professionals’ sharing and application of knowledge**

3. MOTIVES RELATED TO POLICY	4. OTHER MOTIVES
3.1 NATIONAL POLICY ON DISABILITY <ul style="list-style-type: none"> <li>• <i>Focus on involuntary care*</i></li> <li>• <i>Focus on inclusion*†</i></li> <li>• <i>Laws and regulations</i></li> </ul>	4.1 LABOR MARKET SHORTAGE*† (quality of care threatened by lack of qualified professionals)
3.2 POLICY OF OTHER ORGANIZATIONS PROVIDING CARE AND SUPPORT FOR PERSONS WITH INTELLECTUAL DISABILITIES <ul style="list-style-type: none"> <li>• <i>Policy decisions on client target group</i></li> <li>• <i>Autonomy of knowledge policy*†</i></li> </ul>	4.2 INSUFFICIENT EDUCATIONAL PROVISION (lack of state-of-the-art knowledge on IDC)
	4.3 PARTICIPATION IN COLLABORATIVE PARTNERSHIPS* (eye-opener to CEO)
	4.4 NEGATIVE PUBLIC IMAGE OF ORGANIZATION (caused by incidents)

Notes: Examples given in parenthesis; \* = cluster contains codes identifying areas of concern; † = cluster contains codes on challenges

*Other motives (4)* Several other motives related to the external context were identified. The most frequently mentioned factor was the labor market shortage (4.1), which motivated several CEOs to improve and explicate their knowledge processes with the aim of making knowledge a “unique selling point” to attract incoming professionals:

*So we make a conscious choice to free up money to spend on our employees, and of course there’s a commercial side to that, but it also makes us an attractive employer because you know you’re not going to be sent in to deal with a difficult target group empty-handed. So there’s definitely a labor market aspect to it too. (CEO 7)*

Another motive is found in the insufficient educational offerings for people entering the care profession (4.2): CEOs often see this as insufficient, resulting in a lack of relevant knowledge among their employees. This has led them to develop training activities within the organization: “[...] there is very little knowledge within educational institutions about current knowledge and expertise present in care organizations” (CEO 5).

Participation in collaborative partnerships (4.3) has been another factor motivating CEOs to improve the knowledge processes in their organizations. One CEO became increasingly aware that her organization did not meet the evidence-based knowledge criteria set by the academic collaborative center her organization is affiliated with:

*Often it's also about bridging the gap between what exists on paper and whether it is being used in reality. That can require a much greater effort than we realized when we started. But for me it's a constant wake-up call to share these things and to make sure that professionals are able and willing to put them into practice. (CEO 11)*

### Strategies

Four strategies were identified among the CEOs to deliver on their aim of stimulating the sharing and application of knowledge:

- (1) providing organizational conditions for effective knowledge processes;
- (2) focused attention on talent development;
- (3) acknowledgement and deployment of knowledge holders; and
- (4) knowledge-driven participation in collaborative partnerships.

Table A2 (Appendix) provides an overview of these knowledge strategies and their various categories/subcategories, which differ in size. A selection of these are discussed below, accompanied by numbers that refer to the table. Our focus here is on the main categories and on those typical for the context of IDCs, like explication of tacit knowledge and application of experiential knowledge, heterogeneity of service users and spread of locations in a smaller or larger area.

#### *Providing organizational conditions for effective knowledge processes (1)*

In focusing on *explication and standardization of methods* (1.2), CEOs aim to create transferable and organizational knowledge. To this end, for example, CEOs assigned psychologists the task of formulating care pathways in which the knowledge and methods they used in dealing with specific target groups are shared with direct care staff. In another case, a CEO initiated research with the aim of explicating a specific care method. Hearing

professionals describe the mechanisms of a method as “doing the usual” triggered the CEO to take action: “Together with another organization with much the same working method, we have commissioned a number of university researchers to provide a description of what ‘doing the usual’ involves” (CEO 9).

CEOs also mentioned pursuing standardization, i.e. using the same methods, care pathways and underlying attitude at all of the organization’s locations instead of employing a variety of methods depending on personal and local preferences. This is a way to stimulate professionalism and quality of care:

*[...] if you think you should be or become a more professional organization, how do you do that? Well, eighty percent of our work is done by people. So if you are supporting clients with issues on the autism spectrum in city A, we also have people with the same issues in city B. How do I make sure that the staff in city B have a similar view on supporting them as the staff in city A? And we have over four hundred locations.* (CEO 10)

Facilitating the availability of knowledge within the organization (1.4) is a strategy employed by the CEOs of many organizations, using both online [Information Technology, (IT)] and offline resources. Online data and explicit knowledge are shared. To this end, one organization has introduced an integrated digital knowledge platform containing digital client files, links to an online library, a digital learning system, and communities. The platform is accessible 24/7 to all employees on their mobile phones. In this and other organizations, a conscious effort is made to use language that all direct support staff can understand.

To facilitate the sharing and therefore the availability of various kinds of knowledge (tacit and explicit, personal and organizational), CEOs called on the organization to set up face-to-face (thematic) meetings, task groups, knowledge networks, conferences and working visits. In some organizations the CEO has appointed an internal knowledge coordinator to handle a range of activities: updating explicit knowledge, consulting on and supporting the implementation of new policies, collecting questions from staff and sharing knowledge on certain themes with staff. In addition, knowledge holders have been made easier to find, e.g. through digital communities:

*Well, people were either very reluctant to act or very convinced of their own abilities. And on different themes [...] we have a number of specialists. On medication security, for example. That is something we’ve researched extensively. The two employees who did that research managed to organize a meeting on short notice to*

*tell people about their findings. And they were surprised by the number of people who participated. There was clearly a real thirst for that knowledge. (CEO 5)*

CEOs also act in line with personal *guiding principles for sharing/not sharing knowledge externally* (1.6). One such principle is that only knowledge that is evidence-based can be shared. The interviews with some CEOs reflected the national context in terms of not sharing knowledge, whereas in a free market raising its external profile through knowledge can give a care organization a competitive edge. Plus, in contributing to the national and indeed international aim of achieving greater inclusion of people with intellectual disabilities, sharing knowledge is also perceived as a duty toward society.

#### *Focused attention on talent development (2)*

The CEOs also spoke about *designing learning to ensure its compatibility with practice* (2.2). They see this as a necessity due to the learning style of their employees, most of whom have secondary vocational level education. Practice-oriented learning, learning from incidents, and reflection appear to be commonly used techniques. In one organization, for instance, it is part of the policy to include senior staff members in the team involved with on-the-job coaching.

Besides aligning the design of learning with the needs of employees, the CEOs also aim to influence attitudes toward learning by actively *motivating staff to acquire new knowledge* (2.3). The CEOs mentioned that their organizations do this by means of content-based leadership to strengthen the sense of responsibility, by updating the job classification system, and by utilizing intrinsic or extrinsic motivation. This starts at the earliest stages, when new staff are recruited:

*These days you're looking for people with a positive basic attitude, people you want to invest a lot in, rather than students from higher professional education who are actually thinking: I just want to find the nicest job as fast as possible. So you really need to keep your eyes peeled when you're selecting candidates. (CEO 1)*

CEOs also focused on *knowledge level and knowledge exchange when making management decisions* (2.5), thus avoiding risks to quality of care due to the arbitrariness of individual professionals (as the quote by CEO 10 on standardization likewise shows). To this end, the knowledge requirement is determined by the organization's policy and directed by the multidisciplinary team, the psychologist or the manager, with the aim of ensuring client safety (e.g., from sexual harassment or aggression). One example of how to enhance

knowledge exchange is a mobility policy: moving team members around to allow fresh input and enable them to keep an open mind. A CEO explains why they take this approach:

*You want stability in the teams, but you don't simply want to create a kind of status quo – a "this is how we do things" attitude – where there is no longer any interaction. So if you want to retain what we call the sense of wonder, you need to facilitate it effectively. And with that in mind, having a change in a team once a year is very healthy. (CEO 4)*

Lastly, CEOs aim to influence the *organizational culture*, to become *more knowledge-driven* (2.6), by using social innovation. For example, the lean method is used to improve collaboration within the organization, e.g., in the primary process between the staff, the service user and their relative(s).

#### *Acknowledgement and deployment of knowledge holders (3)*

The third strategy aims to acknowledge relevant sources of knowledge, to make it clear where knowledge is located and how this knowledge can be used. Most of the CEOs emphasized the importance of acknowledging *the key role of psychologists in knowledge transfer* (3.1), for instance, by assigning a psychologist to each client as a responsible health practitioner who monitors whether the care process is being carried out properly and in line with the latest insights. As previously mentioned, CEOs described psychologists as being in charge of developing care pathways. They also mentioned designating *persons with intellectual disabilities as knowledge holders* (3.2), for example, by having them fulfil the role of experiential expert in an educational context:

*Both Regional Training Centers [for lower vocational education] and universities of applied sciences [for higher professional education] organize guest classes, usually in the first year when students are still a blank slate and have yet to choose their specialization or their internship [...] And then our clients come along to tell them what the intellectual disabilities sector entails. And they do it so well. (CEO 11)*

Another category entails *appointing researchers in the organization* (3.3), aiming to establish a stronger focus on theoretical components of providing care and support and getting more professionals involved in research projects.

Several CEOs focused on *co-creative collaboration between knowledge holders* (3.4), a process that includes professionals, persons with intellectual disabilities, their families, and sometimes also researchers. Equivalence among knowledge sources is another guiding

principle mentioned. Although this is a difficult balance to achieve, one CEO recalled a good practice based on co-creative use of knowledge care provision for a person with challenging behavior. In this case, the parents provided valuable insights into the client and his life story, offering suggestions on how best to support him. The practice team supported the client very intensively:

*[They] talked a lot about these things with [the client's] mother. And that gave rise to something really wonderful. They have a psychologist over there. [...] We managed to raise him up from a very low point and into a very good support practice where all three of them are equally important. And it's like together they have been elevated to a higher level. (CEO 2)*

#### *Knowledge-driven participation in collaborative partnerships (4)*

Several categories can be distinguished for the knowledge partnerships the CEOs' organizations participate in and the aims of those partnerships. Nearly all CEOs reported *collaborating with other care organizations* (4.1). Some of these networks center on innovation in care (e.g., promoting e-health), others focus on aspects of healthcare (sexuality, palliative care) or on specific target groups (like persons with challenging behavior or profound and multiple intellectual disabilities). These networks provide opportunities for all kinds of professionals to connect and broaden their outlook, for example, by presenting good practices and openly sharing knowledge about complex cases.

In their efforts to create knowledge (e.g., by explicating and evaluating care pathways or methods), most CEOs indicated that their organizations were *engaged with universities and universities of applied sciences* (4.2). Through such collaborations with knowledge institutes, CEOs hoped to facilitate the transfer of evidence-based knowledge directly to professionals in their organizations.

Finally, many of the CEOs referred to *collaboration with educational institutions* (4.3), where reciprocity is an important principle. As one CEO put it, "Lower vocational education can learn things that will benefit the content of their curriculum and the healthcare organization can learn from educational aspects" (CEO 8). CEOs also mentioned other areas that benefit from collaboration, such as recruiting future professionals, educating their own staff and service users, and learning about innovation.

## Discussion

### Reflection on the main findings

In our study, we investigated the motives and the strategies of CEOs from Dutch IDCOs

who aim to improve and innovate the care and support they provide for persons with intellectual disabilities by sharing and applying knowledge. With respect to the first research question, that is, their motives for engaging in knowledge management, we found that these center primarily on the internal context (aspects related to the CEOs themselves and the care professionals within their organization) as opposed to the external context (like the socio-political environment). We discerned many separate motives in the internal and external contexts (Tables 2 and 3), yet in reality, these motives interplay and accumulate within the multilevel system. For example, insufficient educational provision in IDC (macrolevel) is related to CEOs' responsibility for quality and the challenge of providing professionals with the required knowledge base and competencies in IDCs (mesolevel).

The majority of motives for stimulating knowledge processes appeared to be related to the CEOs themselves, most notably their personal and professional background, how they perceive knowledge processes and how they perform their task, which involves identifying areas of concern (e.g., about the knowledge of professionals and the labor market). These motives urge CEOs to adopt a leadership role with regard to knowledge: articulating a vision, analyzing and interpreting the internal and external context of their organization, and advocating change.

With regard to the second research question, which concerns strategies, we found that CEOs adopted four strategies in response to these motives:

- (1) providing organizational conditions for effective knowledge processes;
- (2) focusing attention on talent development;
- (3) acknowledging and deploying knowledge holders; and
- (4) knowledge-driven participation in collaborative partnerships.

Out of these four strategies, the third is the most remarkable. Above all, this strategy reflects the specific character of IDC, including the recent empowerment of people with intellectual disabilities and the application of their experience-based knowledge.

Our study also revealed that these strategies within the same organizational context are used in combination and that this approach enables them to complement and reinforce one another. For instance, a care pathway developed in one organization (*providing organizational conditions for effective knowledge processes*) was subsequently validated by external researchers (*knowledge-driven participation in collaborative partnerships*) and became part of the organizational curriculum (*focused attention on talent development*).

To what extent are our findings transferable to other countries with other payer arrangements around IDC? Organizational issues (e.g., standardization of knowledge in all locations) demand much attention both in the Netherlands, where most IDC is provided



through general and specialized IDCs, and in other countries where mainstream organizations provide community care to their citizens with intellectual disabilities. Also in the Netherlands, as well as in other countries, the lack of an explicit body of knowledge and bringing together knowledge from different sources are challenging. We therefore presume the presented strategies are also valuable for IDC in other countries.

Finally, it is worth reflecting on the relationship between motives and strategies. An additional overall, bottom-up analysis shows that they involve three themes throughout the internal and external contexts:

- (1) improving both the quality and number of professionals;
- (2) improving knowledge sharing and application; and
- (3) increasing the equivalence of knowledge sources. These three encompass all of the motives and strategies established in this study. However, it is not advisable to perceive the relationship between motives and strategies as linear and causal: rather, motives and strategies should be seen as part of an iterative process, in which they interact with one another.

### **Comparison of the findings with previous research**

When it comes to the motives of CEOs to improve the knowledge processes within their organizations, it is evident that their own perceptions of knowledge are of paramount importance. In conjunction with their active involvement in knowledge management within their organizations, this is indicative of what Lakshman (2009) refers to as “organizational knowledge leadership”. We were able to describe CEOs’ beliefs, values and roles in greater depth. In doing so, we explicated their added value to health-care organizations, as recently requested by Issel (2020). The internal orientation of the CEOs’ motives is consistent with the fact that the clients of non-profit organizations are part of the internal context, unlike those of for-profit organizations, who are part of the external context. The CEOs therefore demonstrate what Lakshman (2009) calls “customer-focused knowledge management”, which is visible in their strategies (table A2). This table also shows that many strategies involve “knowledge management using socio-cognitive and technological networks”, which according to Lakshman (2009) are integral to creating opportunities for all employees to obtain information from customers.

Our results indicate that the CEOs involved in our study are committed to quality improvement, which according to Nieboer and Strating (2012) correlates significantly with transformational leadership. The CEOs also fulfil the role of agents connecting the internal and external worlds of the organization, an aspect pointed out by Van der Scheer (2013).

Like the framework of Deveau *et al.* (2019) indicates, they indeed respond to both intra- and extra-organizational issues. In many cases, the obstacles to knowledge processes appear to be related to the specific context of IDC, such as the tacit character of most of the knowledge as well as the organizations being dispersed across many locations (Nicolini *et al.* 2008; Farrington *et al.* 2015).

The four strategy clusters identified with regard to stimulating professionals' sharing and application of knowledge cover the total scope of knowledge management as defined by Karamitri *et al.* (2015): locating, retrieving, sharing, adapting and using knowledge to promote the organizations' objectives. Most of these categories target the sharing of knowledge, while the *application of knowledge developed within the organization* ("innovations") is only mentioned as a separate category by a few CEOs. This is another process worth enhancing by means of a concerted effort. With respect to not sharing knowledge, this wasn't conceived as a deliberate policy, therefore we found no indication of knowledge hiding (Conelly *et al.* 2012).

To process both explicit and implicit knowledge, a combination of IT-based, socially based and HR-driven tools was deployed, as is the case in the broader health-care sector (Nicolini *et al.* 2008). This enabled us to offer valuable insights into the various ways in which the SECI process described (Nonaka *et al.* 2000; Konno and Schillaci, 2021) is actually facilitated within IDCs, including the exchange of intellectual capital within collaborative partnerships. For example, the strong emphasis on on-the-job learning is conditional on socialization. While CEOs aim to create a shared context, they also demonstrate active involvement in developing and promoting knowledge assets, fostering the continuous spiral of knowledge creation and providing a knowledge vision. The CEOs in this study, therefore, appear to fulfil all of the top-management leadership roles described by Nonaka *et al.* (2000). From an overall viewpoint, our results are aligned with the framework for leading transformation to performance (Latham 2013a, 2013b): we established that the forces, facilitators, approaches, behavior, culture and individual leader characteristics all interact.

### **Theoretical implications**

- Focusing on the specific context within all levels of the system is critical toward examining knowledge processes as well as the interventions for enhancing them. Both systems thinking (Monat and Gannon, 2015) and extended knowledge creation theory (Kono and Schillaci, 2021) have demonstrated their value in assessing this context.

- The theory of organizational knowledge leadership (Lakshman, 2009) proves to be valuable for comprehending the contribution of CEOs to stimulating knowledge processes.
- The “framework for leading the transformation to performance” (Latham, 2013a, 2013b), which identifies key components and points toward their interaction, provides a valuable integrative framework for future research.

### **Practical implications**

- Long-term health-care organizations that are seeking to improve their knowledge processes must respond to a challenging context involving multiple disciplines, knowledge sources and complex systems. This study presents these organizations with an overview of the available strategies, which reflect customer-focused knowledge management and can both serve as a source of inspiration and be adapted to fit specific organizational contexts.
- This study indicates that using complementary strategies enhances their effect, so we recommend that organizations design and implement a coherent set of strategies.
- While improving the quality of care necessitates a combination of evidence-based, practice-based and experience-based knowledge, it is important to ensure that all knowledge holders (including persons with intellectual disabilities and their relatives) are acknowledged and deployed, with a view to enhancing their co-creative collaboration.
- The personal participation of CEOs in (customer-focused) knowledge management is likely to enhance its impact and, in turn, contribute to improved organizational performance.

### **Limitations**

To the best of our knowledge, this is the first study to focus specifically on the motives and strategies of CEOs in stimulating the sharing and application of knowledge in IDC. This exploratory study has harnessed the power of a qualitative methodology to provide in-depth insights into the background of these motives and strategies and how they are related. Despite our efforts to apply a purposive sampling strategy to ensure a variety in perspectives, selection bias may have been a limitation, albeit one which is justified by the use of purposive sampling.

**Conclusions and future perspective of the research**

In this article, we reported on the motives and strategies for stimulating the sharing and application of knowledge in the care and support for people with intellectual disabilities. In so doing, the impact of organizational knowledge leadership became visible. Despite facing challenging contexts, the CEOs who participated in this exploratory study nevertheless put considerable effort into both applying sociocognitive and technological networks and customer-focused knowledge management. The latter was primarily evident in the strategy “Acknowledgement and deployment of knowledge holders”, which appeared to include persons with intellectual disabilities as knowledge holders, the application of their experience-based knowledge, and co-creative collaboration between knowledge holders. In another article (Kersten *et al.* 2022), we have addressed the contextual factors that influence the execution of these strategies. We recommend follow-up research involving more CEOs, other fields of care and other countries using knowledge creation theory, systems thinking, the theory on organizational knowledge leadership and the framework for leading transformation to performance. Building on our qualitative study, a survey could provide more insights into why certain strategies are adopted over others as well as which organizational and CEO-related motives are important.

## References

- Augustsson, H., Churruca, K. and Braithwaite, J. (2019). Re-energising the way we manage change in healthcare: the case for soft systems methodology and its application to evidence-based practice. *BMC Health Service Research*, Vol. 19 No. 1, pp.1-11. <https://doi.org/10.1186/s12913-019-4508-0>
- Avolio, B. J. and Gardner, W. L. (2005). Authentic leadership development: Getting to the root of positive forms of leadership. *The Leadership Quarterly*, Vol. 16 No. 3, pp. 315-338. <https://doi.org/10.1016/j.leaqua.2005.03.001>
- Ayatollahi, H. and Zeraatkar, K. (2020). Factors influencing the success of knowledge management process in health care organisations: a literature review. *Health Information & Libraries Journal*, Vol. 37 No. 2, pp. 98-117. <https://doi.org/10.1111/hir.12285>
- Best, A. and Holmes, B. (2010). Systems thinking, knowledge and action: towards better models and methods. *Evidence & Policy: A Journal of Research, Debate and Practice*, Vol. 6 No 2, pp. 145-159. <https://doi.org/10.1332/174426410X502284>
- Bowden, J. (1996), Phenomenographic research: some methodological issues, in Dall'Alba, G. and Hasselgren, B. (Eds), *Reflections on Phenomenography: Toward a Methodology?*, Gothenburg Studies in Educational Sciences No. 109, Acta Universitatis Gothoburgensis.
- Braun, V. and Clarke, V. (2006), Using thematic analysis in psychology, *Qualitative Research in Psychology*, Vol. 3 No. 2, pp. 77-101. Retrieved from: <https://biotap.utk.edu/wp-content/uploads/2019/10/Using-thematic-analysis-in-psychology-1.pdf.pdf>
- Cammer, A., Morgan, D., Stewart, N., McGilton, K., Rycroft-Malone, J., Dopson, S. and Estabrooks, C. (2013). The hidden complexity of long-term care: how context mediates knowledge translation and use of best practices. *The Gerontologist* Vol. 54 No. 6, pp. 1013-1023. <https://doi.org/10.1093/geront/gnt068>
- Caputo, F., Magni, D., Papa, A. and Corsi, C. (2021). Knowledge hiding in socioeconomic settings: Matching organizational and environmental antecedents. *Journal of Business Research*, Vol. 135, pp. 19-27. <https://doi.org/10.1016/j.jbusres.2021.06.012>
- Chatterjee, S., Chaudhuri, R., Thrassou, A. and Vrontis, D. (2021). Antecedents and consequences of knowledge hiding: The moderating role of knowledge hidiers and knowledge seekers in organizations. *Journal of Business Research*, Vol. 128, pp. 303-313. <https://doi.org/10.1016/j.jbusres.2021.02.033>

- Conelly, C.E., Zweig, D., Webster, J. and Trougakos, J.P. (2012). Knowledge hiding in organizations. *Journal of organizational behaviour* Vol. 33 No. 1, pp. 64–88. <https://doi.org/10.1002/job.737>
- Deveau, R., N. Gore and McGill, P. (2019). Senior manager decision-making and interactions with frontline staff in intellectual disability organisations: A Delphi study. *Health & social care in the community*. Vol. 28 No. 1, pp. 81-90. <https://doi.org/10.1111/hsc.12842>
- Di Vaio, A., Hasan, S., Palladino, R., Profita, F, and Mejri, I. (2021). Understanding knowledge hiding in business organizations: A bibliometric analysis of research trends, 1988–2020. *Journal of Business Research*, Vol. 134, pp. 560-573. <https://doi.org/10.1016/j.jbusres.2021.05.040>
- Duryan, M., Nikolik, D., van Merode, G. and Curfs, L. (2012). System dynamics modeling for intellectual disability care: A case study. *Journal of Policy and Practice in Intellectual Disabilities* Vol. 9 No. 2, pp. 112–119. <https://doi.org/10.1111/j.1741-1130.2012.00342.x>
- Duryan, M., Nikolik, D., van Merode, G. and Curfs, L.M. (2014). Using cognitive mapping and qualitative system dynamics to support decision making in intellectual disability care. *Journal of Policy and Practice in Intellectual Disabilities* Vol. 11 No. 4, pp. 245–254. <https://doi.org/10.1111/jppi.12095>
- Embregts, P. (2017). Kennisontwikkeling en kennisdeling in gelijkwaardige verbinding tussen praktijk en wetenschap. *Nederlands Tijdschrift voor de Zorg aan Mensen met Verstandelijke Beperkingen* Vol. 43 No.3, pp. 219-226. Retrieved from: [https://www.ntzonline.nl/art/50-4446\\_Kennisontwikkeling-en-kennisdeling-in-gelijkwaardige-verbinding-tussen-praktijk-en-wetenschap](https://www.ntzonline.nl/art/50-4446_Kennisontwikkeling-en-kennisdeling-in-gelijkwaardige-verbinding-tussen-praktijk-en-wetenschap)
- Etikan, I., Abubakar Musa, S. and Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics* Vol. 5 No. 1, pp. 1-4. <https://doi.org/10.11648/j.ajtas.20160501.11>
- Farrington, C., Clare, I.C.H., Holland, A.J., Barrett, M. and Oborn, E. (2015). Knowledge exchange and integrated services: experiences from an integrated community intellectual (learning) disability service for adults. *Journal of Intellectual Disability Research* Vol. 59 No.3, pp. 238-247. <https://doi.org/10.1111/jir.12131>
- Fluren, M., Wiefferink, K. & Paulussen, T. (2004). Determinants of innovation within health care organizations. *International journal for quality in health care*, Vol. 16 No. 2, pp. 107-123. <https://doi.org/10.1093/intqhc/mzh030>

- Gibbs, E., Jones, C., Atkinson, J., Attfield, I., Bronwin, R., Hinton, R., Potter, A. and Savage, L. (2021). Scaling and 'systems thinking' in education: reflections from UK aid professionals. *Compare. Journal of Comparative and International Education*, Vol. 51 No.1, pp. 137-156. <https://doi.org/10.1080/03057925.2020.1784552>
- Greenhalgh, T., Robert, G., MacFarlane, F., Bate, P. and Kyriakidou, O. (2004). Diffusion of innovations in service organizations: systematic review and recommendations. *The Milbank Quarterly* Vol. 82 No. 4, pp. 581-629. <https://doi.org/10.1111/j.0887-378X.2004.00325.x>
- Grol, R. P., Bosch, M.C., Hulcher, M.E.J.L., Eccles, M. and Wensing, M. (2007). Planning and studying improvement in patient care: the use of theoretical perspectives. *The Milbank quarterly* Vol. 85 No.1, pp. 93-138. <https://doi.org/10.1111/j.1468-0009.2007.00478.x>
- Guest, G., Bunce, A. and Johnson, L. (2006). How many interviews are enough? An experiment with data saturation and variability. *Field methods* Vol. 18 No.1, pp. 59-82. <https://doi.org/10.1177/1525822X05279903>
- Herps, M., Buntinx, W.H.E. and Curfs, L.M.G. (2013). Individual support planning: perceptions and expectations of people with intellectual disabilities in the Netherlands. *Journal of Intellectual Disability Research* 57(11), 1027-1036. <https://doi.org/10.1111/j.1365-2788.2012.01598.x>
- Hodes M. W., Meppelder, H. M., Schuengel, C. and Kef, S. (2014). Tailoring a video-feedback intervention for sensitive discipline to parents with intellectual disabilities: a process evaluation. *Attachment & Human Development* Vol. 16 No. 4, pp. 387-401. <https://doi.org/10.1080/14616734.2014.912490>
- Ipe, M. (2003). Knowledge Sharing in Organizations: A Conceptual Framework. *Human Resource Development Review* Vol. 2 No. 4, pp. 337-359. <https://doi.org/10.1177/1534484303257985>
- Issel, M. L. (2020). Value Added of Management to Health Care Organizations, Editorial in: *Health Care Management Review* Vol. 4 No. 2, p. 95. <https://doi.org/10.1097/HMR.0000000000000280>
- Kaplan, H. C., Brady, P. W., Dritz, M. C., Hooper, D. K. W., Linam, M. Froehle, C.M. and Margolis, P. (2010). The influence of context on quality improvement success in health care: a systematic review of the literature. *The Milbank Quarterly* Vol. 88 No. 4, pp. 500-559 <https://doi.org/10.1111/j.1468-0009.2010.00611.x>

- Karamitri, I., Talias, M. A. and Bellali, T. (2017). Knowledge management practices in healthcare settings: a systematic review. *The International journal of health planning and management* Vol. 32 No.1, pp. 4-18. <https://doi.org/10.1002/hpm.2303>
- Kersten, M.C.O., Taminiau, E.F., Schuurman, M.I.M., M.C.D.P. Weggeman and Embregts, P.J.C.M. (2018). How to improve sharing and application of knowledge in care and support for people with intellectual disabilities? A systematic review. *Journal of Intellectual Disability Research* Vol. 62 No. 6, pp. 496-520. <https://doi.org/10.1111/jir.12491>
- Kersten, M.C.O., Taminiau, E.F., Weggeman, M.C.D.P. & Embregts, P.J.C.M. (2022). Contextual factors influencing strategies to stimulating the sharing and application of knowledge in the care and support for people with intellectual disabilities. *Knowledge and Process Management*, Vol. 29 No. 3, pp. 242-254. <https://doi.org/10.1002/kpm.1700>
- Konno, N. and Schillaci, C.E. (2021), Intellectual capital in Society 5.0 by the lens of the knowledge creation theory. *Journal of Intellectual Capital*, Vol. 22 No. 3, pp. 478-505. <https://doi.org/10.1108/JIC-02-2020-0060>
- Kothari, A., Hovanec, N., Hastie, R. and Sibbald, S. (2011). Lessons from the business sector for successful knowledge management in health care: a systematic review. *BMC health services research* Vol. 11 No. 1, p. 173. <https://doi.org/10.1186/1472-6963-11-173>
- Kratochwill, T. R., Hitchcock, J., Horner, R. H., Levin, J. R., Odom, S. L., Rindskopf, D. M. and Shadish, W.R. (2010). Single-case designs technical documentation. *What Works Clearinghouse*, available at: <https://files.eric.ed.gov/fulltext/ED510743.pdf>
- Kroneman M., Boerma W., van den Berg M., Groenewegen P., de Jong J. and Ginneken, E. van (2016). The Netherlands: health system review. *Health Systems in Transition*, Vol. 18 No. 2, pp. 1-239.
- Lakshman, C. (2007), Organizational knowledge leadership: a grounded theory approach, *Leadership & Organization Development Journal* Vol. 28 No. 1, pp. 51-75. <https://doi.org/10.1108/01437730710718245>
- Lakshman, C. (2009). Organizational knowledge leadership: An empirical examination of knowledge management by top executive leaders. *Leadership & Organization Development Journal* Vol. 30 No. 4, pp. 338-364. <https://doi.org/10.1108/01437730910961676>
- Larson, M., Latham, J.R., Appleby, C.A. and Harshman, C.L. (2012). CEO Attitudes and Motivations: Are They Different for High-Performing Organizations? *Quality*



*Management Journal* Vol. 19 No. 4, pp. 55-69.

<https://doi.org/10.1080/10686967.2012.11918083>

- Latham, J. R. (2013a.) A framework for leading the transformation to performance excellence part I: CEO perspectives on forces, facilitators, and strategic leadership systems. *Quality Management Journal*, Vol. 20 No. 2, pp. 12-32.  
<https://doi.org/10.1080/10686967.2013.11918095>
- Latham, J. R. (2013b.) A framework for leading the transformation to performance excellence part II: CEO perspectives on leadership behaviors, individual leader characteristics, and organizational culture. *Quality Management Journal*, Vol. 20 No. 3, pp. 19-40. <https://doi.org/10.1080/10686967.2013.11918354>
- Monat, J.P. and Gannon, T.F. (2015). What is Systems Thinking? A Review of Selected Literature Plus Recommendations. *American Journal of Systems Science* Vol. 4 No. 1, pp. 11-26. <https://doi.org/10.5923/j.ajss.20150401.02>
- Muhr, T. (2005). *Atlas. Ti: The knowledge workbench* (Version 5.0. 66). London: Scolaris, Sage Publications Software.
- Naaldenberg, J., Vaandrager, L., Koelen, M. Wagemakers, A., Saan, M. and Hoog, K. de (2009). Elaborating on systems thinking in health promotion practice. *Global health promotion* Vol. 16 No. 1, pp. 39-47. <https://doi.org/10.1177/1757975908100749>
- Nicolini, D., Powell, J. Conville, P. and Martinex-Solano, L. (2008). Managing knowledge in the healthcare sector. A review. *International Journal of Management Reviews*, Vol. 10 No. 3, pp. 245-263. <https://doi.org/10.1111/j.1468-2370.2007.00219.x>
- Nieboer, A. P. and Strating, M. M. (2012). Innovative culture in long-term care settings: the influence of organizational characteristics. *Health care management review*, Vol. 37 No. 2, pp. 165-174. <https://doi.org/10.1097/HMR.0b013e318222416b>
- Nonaka, I., Toyama, R. and Konno, N. (2000). SECI, *Ba* and leadership: a unified model of dynamic knowledge creation. *Long range planning*, Vol. 33 No. 1, pp. 5-34.  
[https://doi.org/10.1016/S0024-6301\(99\)00115-6](https://doi.org/10.1016/S0024-6301(99)00115-6)
- Polanyi, M. and Sen, A. (2009). *The tacit dimension*. University of Chicago press.
- Public Health England (2016). *Learning disability observatory. People with learning disabilities in England 2015: main report*. Public Health England (PHE).
- Robertson J., Hatton C., Baines S. and Emerson, E. (2015). Systematic reviews of the health or health care of people with intellectual disabilities: a systematic review to identify gaps in the evidence base. *Journal of Applied Research in Intellectual Disabilities*, Vol. 28 No. 6, pp. 455-523. <https://doi.org/10.1111/jar.12149>

- Schalock R.L., Luckasson R. and Shogren, K.A. (2020). Going beyond Environment to Context: Leveraging the Power of Context to Produce Change. *International Journal of Environmental Research and Public Health* Vol. 17 No. 6, p. 1885. <https://doi.org/10.3390/ijerph17061885>
- Smulders, E., L. Enkelaar, Y. Schoon, A. C. Geurts, H. van Schrojenstein Lantman-de Valk and Weerdesteyn, V. (2013). Falls prevention in persons with intellectual disabilities: development, implementation, and process evaluation of a tailored multifactorial fall risk assessment and intervention strategy. *Research in Developmental Disabilities*, Vol. 34 No. 9, pp. 2788-2798. <https://doi.org/10.1016/j.ridd.2013.05.041>
- Van der Scheer, W. W. (2013). *Onder Zorgbestuurders: Omgaan met bestuurlijke ambigüiteit in de zorg*. Available at: <http://hdl.handle.net/1765/41436>
- Vereniging Gehandicaptenzorg Nederland (2019). *De gehandicaptenzorg in kerngetallen*. Available at: <https://www.vgn.nl/feiten-en-cijfers-de-gehandicaptenzorg>
- Vlaskamp C., Hiemstra, S. and Wiersma, L. (2007). Becoming aware of what you know or need to know: gathering client and context characteristics in day services for persons with profound intellectual and multiple disabilities. *Journal of Policy and Practice in Intellectual Disabilities* Vol. 4 No. 2, pp. 97-103. <https://doi.org/10.1111/j.1741-1130.2007.00106.x>
- Wang, S. and Noe, R. A. (2010). Knowledge sharing: A review and directions for future research. *Human Resource Management Review* Vol. 20 No. 2, pp. 115-131 <https://doi.org/10.1016/j.hrmr.2009.10.001>
- Weggeman, M. (2007). *Leidinggeven aan professionals. Niet doen! Over kenniswerkers, vakmanschap en innovatie*. Scriptum, Schiedam.
- World Health Organization (2011). *World report on disability*. World Health Organization (WHO).
- Yukl, G. (2012). Effective leadership behavior: What we know and what questions need more attention. *Academy of Management Perspectives*, Vol. 26 No. 4, pp. 66-85. ISBN-13: 978-1-285-42679-2
- Zhang, X., Liu, Y., Tarba, S. Y., and Del Giudice, M. (2020). The micro-foundations of strategic ambidexterity: Chinese cross-border M&As, Mid-View thinking and integration management. *International Business Review*, Vol. 29 No. 6, p. 101710. <https://doi.org/10.1016/j.ibusrev.2020.101710>
- Zorginstituut Nederland (2016). *Passend onderzoek effectiviteit Langdurige Zorg*. Diemen, Zorginstituut Nederland. Retrieved from:

<https://www.zorginstituutnederland.nl/publicaties/rapport/2016/12/12/passend-onderzoek-effectiviteit-langdurige-zorg>

### Further reading

- Baxter, P. and Jack, S. (2008), Qualitative case study methodology: study design and implementation for novice researchers, *The Qualitative Report* Vol. 13 No. 4, pp. 544-559.
- Best, A., Trochim, W.K., Haggerty, J., Moor, G. and Norman, C.D. (2008), Systems thinking for knowledge integration: new models for policy-research collaboration, in McKee, L., Ferlie, E. and Hyde, P. (Eds), *Organizing and Reorganizing. Organizational Behaviour in Health Care*, Palgrave Macmillan, London, [https://doi.org/10.1057/9780230583207\\_12](https://doi.org/10.1057/9780230583207_12).
- Zach, L. (2006), "Using a multiple-case studies design to investigate the information-seeking behavior of arts administrators", *Library Trends*, Vol. 55 No. 1, pp. 4-21, <https://doi.org/10.1353/lib.2006.0055>.

## Appendix

**Table 1 Interview topics, related interview questions and sources**

Interview topics	Questions posed to the interviewees
Part A Motivation and thinking frame of interviewee	<ul style="list-style-type: none"> <li>• Why do you work as CEO in the care and support for people with intellectual disabilities? <i>Naaldenberg et al. (2009)</i></li> <li>• What is your vision on the sharing and application of knowledge? <i>Naaldenberg et al. (2009), Best and Holmes (2010), Greenhalgh et al. (2004), Weggeman (2007), Nonaka et al. (2000)</i></li> <li>• What do you see as the biggest challenges to the sharing and application of knowledge in ICD? And what do you see as the biggest challenges to quality of care and quality of life? <i>Fleuren et al. (2004), Greenhalgh et al. (2004), Weggeman (2007), Nonaka et al. (2000)</i></li> </ul>
Part B Knowledge policy of organization	<ul style="list-style-type: none"> <li>• What is the policy of your organization on the sharing and application of knowledge? <i>Fleuren et al. (2004), Greenhalgh et al. (2004), Nonaka et al. (2000)</i></li> <li>• What partnership(s) does your organization share knowledge in? <i>Based on Naaldenberg et al. (2009), Best and Holmes (2010)</i></li> <li>• What are the key elements of your organization's knowledge policy? <i>Weggeman (2007)</i></li> <li>• Which person or department of your organization is responsible for the knowledge policy?</li> </ul>
Part C Background of this knowledge policy	<ul style="list-style-type: none"> <li>• Which characteristics of your organization influence the chosen knowledge policy? To what extent (large degree – small degree - not)? <i>Kersten et al. (2018), Fleuren et al. (2004), Greenhalgh et al. (2004)</i></li> <li>• Characteristics of the organization</li> <li>• Characteristics of the professionals</li> <li>• Characteristics of the management</li> <li>• Characteristics of the administrative staff</li> <li>• Characteristics of the team</li> <li>• Do other characteristics play a role?</li> <li>• Was there a specific motive? If yes, which one? To what extent (large degree or small degree) did this motivation play a role? <i>Kersten et al. (2014), Fleuren et al. (2004), Greenhalgh et al. (2004)</i></li> <li>• Can you describe the socio-political environment of your organization? Did this environment play a role in determining the policy toward the sharing and application of knowledge? To what extent (large degree or small degree) did this environment play a role? <i>Naaldenberg et al. (2009), Fleuren et al. (2004), Greenhalgh et al. (2004)</i></li> <li>• Was there a specific motive? If yes, which one? To what extent (large degree or small degree) did this motive play a role? <i>Naaldenberg et al. (2009), Fleuren et al. (2004), Greenhalgh et al. (2004)</i></li> </ul>
Part D Questions about the system that influence the sharing and application of knowledge in the Dutch organizations providing care and support for people with ID	<ul style="list-style-type: none"> <li>• Which stakeholders do you consider play a role in the sharing and application of knowledge in the Dutch organizations providing care and support for people with ID? <i>Naaldenberg et al. (2009)</i></li> </ul>

**Table 2 Overview of knowledge strategies to enhance the sharing and application of knowledge**

<b>1. Providing organizational conditions for effective knowledge processes</b>	
<i>1.1 Determining the focus of knowledge management<sup>1</sup></i>	1.1.1 Conducting analyses to identify available and necessary knowledge <sup>a</sup> 1.1.2 Applying guiding principles <sup>a</sup>
<i>1.2 Explicating and standardizing methods<sup>a,b</sup></i>	
<i>1.3 Validating and further developing knowledge</i>	
<i>1.4 Facilitating availability of knowledge within the organization<sup>c</sup></i>	1.4.1 Making knowledge readily understandable and digitally accessible <sup>c</sup> 1.4.2 Facilitating face-to-face meetings <sup>c</sup> 1.4.3 Appointing an internal knowledge coordinator <sup>b,c</sup> 1.4.4 Making knowledge holders easier to find <sup>c</sup>
<i>1.5 Facilitating external sharing of knowledge</i>	1.5.1 Physically, e.g. through conferences <sup>c</sup> 1.5.2 Digitally, through platforms and magazines <sup>c</sup>
<i>1.6 Guiding principles for sharing/not sharing knowledge externally</i>	1.6.1 Principle of reciprocity 1.6.2 External profiling 1.6.3 Contributing to knowledge expansion/development 1.6.4 Duty toward society 1.6.5 Only when the knowledge is evidence-based 1.6.6 Not sharing knowledge shouldn't be a deliberate policy
<i>1.7 Applying knowledge developed within the organization<sup>a,b</sup></i>	
<b>2. Focused attention on talent development</b>	
<i>2.1 Designing learning to ensure compatibility with professional practice</i>	2.1.1 Practice-oriented learning <sup>b</sup> (on-the-job) 2.1.2 Learning from incidents 2.1.3 Bottom-up knowledge development <sup>b</sup> 2.1.4 Knowledge development through audits 2.1.5 Connecting with teams in line with their questions on knowledge 2.1.6 Reflection <sup>b</sup> 2.1.7 Coaching teams <sup>b</sup>
<i>2.2 Aligning educational content/curriculum with professional practice<sup>a</sup></i>	2.2.1 Curriculum for specific target group(s) <sup>a</sup> 2.2.2 Curriculum for new staff 2.2.3 Curriculum for unqualified staff
<i>2.3 Motivating staff to acquire knowledge</i>	2.3.1 Introducing content-based leadership to promote sense of responsibility <sup>b</sup> 2.3.2 Addressing intrinsic or extrinsic motivation 2.3.3 Updating the job classification system <sup>b</sup>
<i>2.4 Facilitating learning and development<sup>a</sup></i>	2.4.1 For professionals <sup>b</sup> 2.4.2 For clients <sup>a</sup>
<i>2.5 Guidance in line with knowledge level and knowledge exchange<sup>b</sup></i>	
<i>2.6 Promoting a knowledge culture<sup>a</sup></i>	2.6.1 Focus on knowledge sharing <sup>b</sup> 2.6.2 Focus on co-creative cooperation within the organization <sup>a</sup>
<i>2.7 Organizational preconditions</i>	2.7.1 Structuring education 2.7.2 Budget

## 2.7.3 Key principles for learning and development

**3. Acknowledgement and deployment of knowledge holders**

- 3.1 Key role for psychologists as knowledge holders in knowledge transfer<sup>a</sup>
- 3.2 People with intellectual disabilities as knowledge holders<sup>a</sup>
- 3.3 Researchers as knowledge holders
- 3.4 Co-creative cooperation between knowledge holders<sup>a,b</sup>
- 3.5 Guiding principle: equality among types of knowledge<sup>a</sup>

**4. Knowledge-driven participation in collaborative partnerships**

- 4.1 Cooperation with other care organizations<sup>a,c</sup>
  - 4.1.1 Focused on care/care innovation<sup>c</sup>
  - 4.1.2 Focused on healthcare matters<sup>b,c</sup>
  - 4.1.3 Focused on specific target groups<sup>a,c</sup>
- 4.2 Cooperation with knowledge institutes<sup>a,c</sup>
  - 4.2.1 Focused on examining your own practice/care programs/methods<sup>a,b,c</sup>
  - 4.2.2 Directed toward knowledge development
  - 4.2.3 Multiple alliances (need for focus if too many)
  - 4.2.4 Choice of partnership
- 4.3 Collaboration with educational institutions<sup>a,c</sup>
  - 4.3.1 Reciprocity between care organization and educational organization<sup>c</sup>
  - 4.3.2 Establishing contacts with disability care<sup>a</sup>
  - 4.3.3 Facilitating basic and continued education of professionals and clients<sup>a</sup>
  - 4.3.4 Facilitating innovation of care<sup>c</sup>
- 4.4 Preconditions for successful cooperation

---

Notes: <sup>a</sup> = customer-focused knowledge management; <sup>b</sup> = strategy exclusively or jointly aimed at promoting knowledge application; <sup>c</sup> = knowledge management using sociocognitive and technological network



**CHAPTER 4**





# Contextual factors related to the execution of knowledge strategies in intellectual disabilities organizations

This chapter has been published as:

Kersten, M., Taminiau, E., Weggeman, M. and Embregts, P. (2022). Contextual factors related to the execution of knowledge strategies in intellectual disabilities organizations. *Knowledge and Process Management* 29, 242–254. <https://do.org/10.1002/kpm.1700>

## Abstract

The sharing and application of knowledge in intellectual disabilities care are vital and challenging. Therefore, organizations providing care and support for people with intellectual disabilities use strategies to stimulate these processes. To optimize these strategies we investigated the contextual factors that influence their execution. We conducted individual, in-depth, semi-structured interviews with eleven CEOs of organizations providing care for people with intellectual disabilities in the Netherlands. A thematic data analysis was conducted in which a deductive approach was followed by a bottom-up clustering. We thus identified factors related to both the internal and the external context. The internal context involves persons within the organization and the organizational structures. The external context involves the organization's socio-political environment and collaborative partnerships. We concluded that the execution of strategies to improve the sharing and application of knowledge is influenced by contextual factors which appear to be interconnected. These contextual factors point to the key role played by care professionals.

## Introduction

For organizations aiming to optimize the quality of care and support for people with intellectual disabilities knowledge is an asset (Bigby and Beadle-Brown 2018; Reinders and Schalock 2014; Schalock et al., 2008). However, processing knowledge in this field of care is challenging. Due to the lifelong and life-wide character of intellectual disability care (IDC), professionals from multiple disciplines (e.g., direct support staff, psychologists, medics, and paramedics) are involved in these processes, together with the relatives of service users (Smulders et al., 2013). In IDC, three types of knowledge are vital: evidence-based knowledge (scientist and science-practitioners), practice-based knowledge (care professionals), and experiential knowledge (service users and their relatives). This adds to the complexity of creating and sharing knowledge (Embregts 2017). By far, the most knowledge within IDC is not only experiential and practice-based, but also tacit in character, and these factors complicate knowledge exchange (Farrington et al., 2015). In addition to knowledge about the diverse range of service users and the content of the care and support provided, both professionals and their organizations need to know about the legislation that governs care and support, both in general and with specific reference to people with intellectual disabilities. The explicit, evidence-based knowledge base is relatively small (Robertson et al., 2015; Zorginstituut Nederland 2016), since interventions for the general population are often unsuitable for people with intellectual disabilities and need to be customized for use in an IDCO context (Hodes et al., 2014; Vlaskamp et al., 2007).

Another challenge faced by professionals in IDC (and their counterparts in other fields of healthcare) is the information paradox. Although ICT facilitates the availability of a wide array of knowledge sources, the overabundance of information and the decrease in its sustainability undermines the ability to find the knowledge needed (Nicolini et al., 2008). Since the necessity of bridging the know-do gap has been acknowledged (World Health Organization, 2006), finding ways to improve the sharing and application of knowledge in IDC has become a growing field of interest, in science (e.g., Ouelette-Kuntz et al. 2010; Timmons 2013), in policy (e.g., Ministerie van Volksgezondheid, Welzijn en Sport 2019; Zorginstituut Nederland, 2016) and in practice (e.g., Farrington et al., 2015; Gervais and Chagnon 2010; Wood et al. 2014). In the Netherlands, improving the knowledge infrastructure in long-term care has become a major priority. To this end, the academic centers collaborating on care for people with intellectual disabilities, the Dutch Ministry of Health, the National Centre of Expertise for Long-term Care in the Netherlands (Vilans) and the Dutch Association of Healthcare Providers for People with Disabilities (Dutch abbreviation: VGN) recently joined forces in a coalition on knowledge. The aim of this initiative is to improve coordination and cooperation with regard to the knowledge

agenda, knowledge acquisition and knowledge sharing in the sector (<https://www.tilburguniversity.edu/nl/onderzoek/instituten-en-researchgroepen/tranzo/academischewerkplaatsen/awlvb/nieuws/kenniscoalitie>). In the United Kingdom, the National Institute for Health Research Delivery and Organisation Programme launched a study on research utilization and knowledge mobilization by healthcare managers, with a view to informing their agenda and their own strategic thinking. The report of this scoping review by Crilly et al. (2012) points to the importance of social, political and cultural elements of knowledge mobilization. It concludes that, in addition to ICT-based knowledge management, the organization's core competences (e.g., ability to learn) need to be addressed.

With respect to sharing tacit and explicit knowledge, Nonaka et al. (2000) distinguish four SECI mechanisms: Socialization (sharing tacit knowledge), Externalization (explicating tacit knowledge), Combination (sharing explicit knowledge), and Internalization (internalizing explicit knowledge). Of these SECI mechanisms in intellectual disability care organizations (IDCOs), Socialization and Externalization are of major importance (Kersten et al., 2022). Socialization requires the attendance of all knowledge holders involved at the same time and place during, for example, multi-disciplinary meetings in the primary process and in communities of practice within the organization; this requirement proves challenging to organize in practice (Smulders et al., 2013). Likewise, externalization requires all knowledge holders to put considerable effort into explicating and storing their tacit knowledge, for example, in individual clients' support plans and (paper and/or electronic) care records, in methods and care pathways and at an organizational level (Kersten et al., 2022). To a lesser extent, Combination and Internalization are involved at an organizational or system level in drafting protocols, multidisciplinary guidelines and e-learning, as well as in applications at an individual level. The latter process relies on the storage, distribution and updating of these documents and learning materials using an ICT system (Farrington et al. 2015; Wood et al. 2014). Although the provision of general practice care for persons with intellectual disabilities requires the exchange of explicit and tacit health information by professionals, relatives and service users, many barriers to these processes have been identified, not least in record keeping and sharing between organizations that use different ICT systems and in dealing with health illiteracy (Mastenbroek et al., 2014).

Within all healthcare organizations, including IDCOs, several contextual factors have been found to influence the success of knowledge processes. Recent reviews of the factors influencing knowledge management inside disability care (Kersten et al., 2018) and outside (Ayatollahi and Zeraatkar (2019) point to the enabling/disabling role of the organizational context (e.g., culture, information technology and structure) and the key role of management in particular. Qian et al. (2017) found contextual factors, such as

lack of leadership support, while investigating implementation of the evidence-based intervention Active Support in small community residential settings for people with intellectual disabilities.

The concept 'context' is used by the American Association on Intellectual and Developmental Disabilities system (AAIDD, Schalock et al., 2010) to describe factors influencing human functioning. According to AAIDD this concerns: "the interrelated conditions within which people live their everyday lives and includes environmental factors that make up the physical, social, and attitudinal environments within which people live and conduct their lives and personal factors that include characteristics of a person such as gender, age, race, and motivation" (p. 218). In this view, the functioning of persons with intellectual disabilities is influenced by the interaction between their own personal characteristics (e.g., level of adaptive behavior and skills), their context (e.g., living in group homes and working in sheltered workshops) and their support system (e.g., support workers, relatives). Shogren et al. (2014) demonstrate the applicability of the concept context at the level of the microsystem (i.e., individual), the mesosystem (i.e., organization) and the macrosystem (i.e., system). The concept of context therefore provides an integrative framework for describing personal and environmental factors. These factors include characteristics that cannot be changed, as well as factors that can be manipulated to enhance functioning.

At the organizational level, Nonaka et al. (2000) describe the vital role that a *shared* context plays in knowledge processing in general. This shared context consists of physical space (e.g., the office), virtual space (e.g., email), and mental space (e.g., shared ideas), that is, environmental factors. Furthermore, these authors elaborate on the key role that top management plays in knowledge processes. In addition to creating a shared context, the role of top management also consists of providing a knowledge vision, developing and promoting knowledge assets, and promoting the continuous spiral of knowledge creation. These aspects reflect their leadership on knowledge processing. In examining organizational knowledge leadership in general, Lakshman (2009) found that the perceptions of CEOs are instrumental in the knowledge management of their organization, for example by realizing customer-focused knowledge management. Ayatollahi and Zeraatkar (2019) point to the key role that leaders play in knowledge management by "encouraging employees to accept a knowledge sharing culture" (p. 12). Yukl (2012) describes various kinds of behavior that leaders in general use to influence the performance of a team, work unit, or organization: these include monitoring, problem solving, supporting, developing, advocating change, facilitating collective learning, networking, and external monitoring.

In the field of IDC, little is known about the role played by top management in knowledge processes in general. A recent Delphi study conducted by Deveau et al.

(2019) explored the broader work and activities of senior managers (including CEOs) in organizations that provide social care in community settings for people with intellectual disabilities. While studying senior management decision-making and interactions with frontline staff, they found evidence of both short-term reactive decisions and long-term strategic decisions, and concluded that these need to become more integrated if organizational performance is to be improved. In order to understand senior management activities, a framework was established which showed two sources of demand and opportunity: an intra-organizational source focused on understanding and influencing informal staff practices, experiences, and cultures, and an extra-organizational source focused on compliance with legal and regulatory demands. Furthermore, several studies focusing at the implementation of the intervention Active Support in supported accommodation services (Bigby et al., 2020a, Bigby et al., 2020b, Quan et al., 2017), provide insights in the stimulating role of senior leaders. For example by shared prioritization of practice and Active Support and by strong management support for practice leadership. The current paper focuses on the contextual factors that influence the execution of knowledge strategies by CEO's.

Previously a literature review (Kersten et al., 2018) was conducted with the aim of identifying starting points for ways to improve the sharing and application of knowledge in care and support for people with intellectual disabilities. The focus was on the enabling and disabling factors in the internal context of the organization. These organizational factors were categorized into three main clusters:

- 1) intervention characteristics (factors related to the tools and processes used to implement the method);
- 2) people (factors at both individual and group level);
- 3) organizational context (material factors such as office arrangements, IT systems, resources, time, and structures, and immaterial factors such as training, staffing levels, and team size).

In our current study, we used this model as a primary framework for organizing the data retrieved on the internal context of IDCOs. Since external factors are not included in this model, we also used a framework developed in the broader field of healthcare by Fleuren et al. (2004), which provides insight into the determinants of innovations (such as an evidence-based practice) within healthcare organizations. This framework, which was based on the innovation theory of Rogers (2003) among others, encompasses characteristics of the socio-political context of a care organization such as regulations and legislation. The theoretical framework of Fleuren et al. (2004), which focuses on the individual level of the care professional, is consistent with the more elaborate model used by Greenhalgh et al. (2004) to examine the organizational level. The conceptual model of Greenhalgh et al. (2004), which focuses on determinants of

innovation, also encompasses the external (interorganizational) context, including the impact of environmental variables (e.g., stability), policy incentives and mandates, and interorganizational norms and networking.

## Methods

### Study setting

In the Netherlands, approximately 170 service organizations provide support to most of the 142.000 residents with intellectual disabilities. While the smallest organizations comprise fewer than 100 service users and staff, the largest organization totals over 10.000 service users and staff. Mostly their working area concerns a specific region in which several locations are scattered, which complicates knowledge sharing. The disabilities of their clients ranges from mild to profound and therefore they offer a broad spectre of services (e.g., from supported living to 24-hour staffed residential care) provided by professionals from multiple disciplines such as direct care staff, psychologists, medics and paramedics. In terms of knowledge management, several dedicated departments are often involved (e.g., with focus on talent development and expertise), as well as dedicated staff and top and middle management. In a qualitative study, we identified four main strategies used by CEOs in IDCOs to stimulate knowledge processes: (1) providing organizational conditions for effective knowledge processes (e.g., standardization and explication, facilitating external sharing of knowledge); (2) focused attention on talent development (e.g., facilitating learning and development); (3) the acknowledgement and deployment of knowledge holders (e.g., the key role of psychologists in knowledge transfer); and (4) knowledge-driven participation in collaborative partnerships (e.g., engaging with universities of applied sciences) (Kersten et al., 2022).

All CEOs of Dutch IDCOs pursue their own knowledge policy. In order to explore this policy and its execution extensively, we collected data through individual in-depth, semi-structured interviews. All of the participating CEOs met the following inclusion criteria: (1) active involvement in the development and application of knowledge management in their organization; (2) managing an organization with an earmarked budget for knowledge management; and (3) participating in cooperative relationships (e.g., with knowledge institutes, educational institutions, and/or other care organizations). To obtain as diverse a sample as possible, we used a purposive sampling strategy based on the demographic and professional background of the CEOs (i.e., gender, educational background, and length of time working at the current care organization) and the characteristics of the organizations they manage (i.e., size in terms of clients, employees, locations, and regional presence). With respect to all these characteristics we used publicly available information. A national group of experts on

knowledge processes assisted the researchers in the selection process. Data saturation guided the sample size (Guest et al. 2006).

### **Participants**

The sample consisted of eleven CEOs (6 male, 5 female) with a mix of educational backgrounds (9 care-related, 2 non-care related). Half had worked at their current organization for over 10 years, the other half for 5 years or less. They managed care organizations with a mix of experience in executing a knowledge policy (3 <5 years; 6 >5 years; 2 no formal knowledge policy), spread in the whole country and providing services to people with intellectual disabilities ranging from mild to profound. The size of these organizations ranges from less than 1.000 service users and employees to more than 3.000 of both.

Following approval by the Ethical Review Board of Tilburg University (EC-2017.80), thirteen CEOs were contacted by email. Eleven CEOs agreed to participate and provided written informed consent. All semi-structured interviews with the CEOs were conducted by the first author (MK) between February and August 2018.

The CEOs were asked to illuminate their perceptions about factors enabling or disabling their knowledge strategies. The questions were primarily based on a previous systematic literature review of barriers to and facilitators of knowledge sharing and application in IDC (Kersten et al., 2018). A number of questions were based on literature on determinants of innovation (Fleuren et al., 2004, Greenhalgh et al., 2004) and literature on systems thinking (Best and Holmes 2010; Naaldenberg et al., 2009). The latter authors recommend system thinking to get a better understanding of knowledge-to-action processes.

We first asked the respondents whether they considered the factors identified in our previous literature review to be enabling or disabling for their knowledge management strategies, and probed them for further clarification. Next, in an open question, we asked them to name any other factors that they considered to be relevant.

### **Analysis**

To support the coding process, the interview transcripts were uploaded to the software package ATLAS.ti (Muhr 2005). Two of the authors (MK and ET) independently coded the first two interviews and then discussed their coding until consensus was reached (Bowden, 1996); the other interviews were coded by the first author (MK). The second author (ET) coded 20% (Kratochwill et al. 2010) of each of these interviews to ensure reliability. Again, these two authors discussed the codes used until consensus was reached. The second author (ET) also checked all of the codes with respect to clarity and possible overlap.



At the first stage of the thematic data analysis, a deductive approach was used to apply the above-mentioned model of enabling and disabling factors of knowledge sharing and application to structure the factors related to the internal/organizational context. With regard to the external context, we followed Fleuren et al. (2004) and Greenhalgh et al. (2004), and identified factors related to external mandates (i.e., existing rules, regulations, and legislation) and interorganizational networks. Next, relevant codes from the first part of the interview which contained information on analysis of the motives and strategies but had not yet been included were added to these categories. This was followed by a bottom-up clustering of all the other codes that described enabling and disabling factors. All clustering and labelling was performed by the first author (MK), with the second author (ET) reviewing both processes. Disagreements were resolved by discussion between MK and ET. Throughout the analysis, the findings were also discussed with MW and PE.

## Results

With respect to the internal context, we identified factors related to (1) *persons* (at individual and team level) and (2) *the organizational context* (both material and immaterial aspects) that influenced the CEOs' strategies for stimulating knowledge processes within their organizations. Regarding the external context, we made a distinction between (3) *the socio-political environment* and (4) *collaborative partnerships*. Figure 1 shows a graphic representation of the clusters of the factors influencing the execution of the knowledge strategies. An overview of the content of these clusters is provided in table 1 and 2; key insights are presented below (the numbers given to these factors refer to this table).

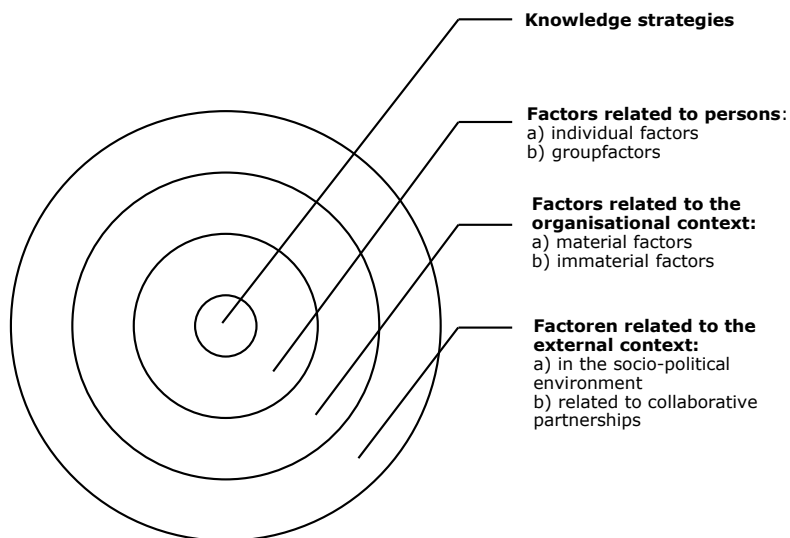
### Internal context: factors related to persons (1)

#### *Factors at an individual level*

At an individual level, the CEOs identified the characteristics of a variety of employees and clients as relevant factors. Firstly, they mentioned client cooperation with the implementation of good practices (e.g. phasing out psychotropics) and the severity of their clients' disabilities (and the implications for care) as factors that influence their strategies. One CEO explained that the need for knowledge increases when professionals are dealing with clients who have complex care needs:

*If you realize that what you are doing or what you have to offer isn't working, then there is a need to do things differently. [...] I need to do more and what can help me? And that's when the need for knowledge increases. (CEO 4)*

With respect to direct support staff (1.1.2), the CEOs mentioned receptivity to knowledge, motivation, level of learning and reading skills, knowledge and competencies, and self-esteem as factors that enable the sharing and application of knowledge, whereas lack of these same factors disable these processes.



**Figure 1 Contextual factors related to knowledge strategies**

Many CEOs specified the educational level of their direct support staff as a disabling factor with implications for the organization: “People who enter the profession from vocational education are not the most proficient readers” (CEO 3). Another CEO stated “[Bearing this in mind] you have to think very carefully about presenting your knowledge in as practical a way as possible so that they will apply it in their daily practice” (CEO 9).

Digital learning using apps was one example given of how organizations are attuning to the learning style of incoming direct support staff and their 21<sup>st</sup> century skills (e.g., use of social media). The CEOs also pointed out the differences in motivation between incoming direct support staff and existing staff, and went on to draw attention to the influence of the ageing workforce on attitudes to learning: “How do you persuade people who have been working for an organization for a long time to continue to actively develop?” (CEO 8).

On a related topic, another CEO explained why implementing the organization’s vision of promoting the inclusion of persons with intellectual disabilities in the community calls for an appropriate attitude and knowledge base from direct support staff, as well as a major change in approach:

Table 1 Contextual factors influencing the execution of knowledge strategies in intellectual disabilities organizations (internal context)

1. FACTORS RELATED TO PERSONS		2. FACTORS RELATED TO THE ORGANIZATIONAL CONTEXT	
<b>1.1 Individual factors</b>		<b>2.1 Material factors</b>	
1.1.1 CLIENTS	<ul style="list-style-type: none"> <li>• Cooperation with implementation</li> <li>• Severity of the problems</li> </ul>	1.1.1.6 OTHERS	2.1.1 OFFICE ARRANGEMENTS AND ICT SYSTEM *
1.1.2 DIRECT SUPPORT STAFF AND NEW EMPLOYEES *	<p>Knowledge-related personal characteristics of direct support staff:</p> <ul style="list-style-type: none"> <li>• Receptivity to knowledge</li> <li>• Motivation *</li> <li>• Ability to learn and read</li> <li>• Knowledge and competencies</li> <li>• Leadership *</li> <li>• Self-esteem/professional pride</li> </ul> <p>Knowledge-related personal characteristics of the new employees:</p> <ul style="list-style-type: none"> <li>• Background/motivation/competencies</li> <li>• Reading skills</li> </ul> <p>Learning style of staff and new employees</p>	<ul style="list-style-type: none"> <li>• Administrative Staff: facilitating the planning of meetings and rooms *</li> <li>• IT Staff: availability</li> <li>• Knowledge specialist: availability</li> </ul>	<ul style="list-style-type: none"> <li>• Availability of knowledge storage, sharing and learning (e-learning) *</li> <li>• User-friendly</li> <li>• Content is up to date</li> <li>• Incentive for learning</li> </ul>
1.1.3 PSYCHOLOGISTS	<p>Knowledge-related personal characteristics:</p> <ul style="list-style-type: none"> <li>• Motivation and competences</li> </ul> <p>Roles:</p> <ul style="list-style-type: none"> <li>◦ Keeping up to date with literature</li> <li>◦ Knowledge carrier</li> <li>◦ Professional leadership</li> </ul>	<b>1.2 Group factors</b>	2.1.2 SIZE OF ORGANIZATION *
1.1.4 MANAGEMENT *	<p>Knowledge-related personal characteristics:</p> <ul style="list-style-type: none"> <li>• Professional background: having sufficient knowledge, management skills</li> </ul>	1.2.1 TEAMS OF PROFESSIONALS *	2.1.3 STRUCTURE OF ORGANIZATION *
		<ul style="list-style-type: none"> <li>• Functioning and composition of team</li> <li>• Attitude: support, eagerness</li> <li>• Managing teams: the position of senior staff</li> </ul>	<ul style="list-style-type: none"> <li>• Small number of locations</li> <li>• Integrated services within organization</li> <li>• Integration of regional operations</li> <li>• Positioning of knowledge i.e. through organization of specializations</li> <li>• Specific departmental responsibility for knowledge policy</li> <li>• Limited geographical spread</li> <li>• Short distance from universities</li> <li>• Available facilities for sharing knowledge</li> </ul>
		1.2.2 MANAGEMENT TEAM	2.1.4 OTHERS
		<ul style="list-style-type: none"> <li>• Having and conveying a collective vision regarding knowledge</li> <li>• CEO promotes the collective vision in Management Team</li> </ul>	<ul style="list-style-type: none"> <li>• Stability of the organization</li> <li>• Enough time *</li> <li>• Enough scope for knowledge development</li> <li>• Workload is in balance (no understaffing)</li> <li>• Available budget *</li> </ul>
		1.2.3 SUPERVISORY BOARD	
		<ul style="list-style-type: none"> <li>• Support</li> </ul>	
		1.2.4 RELATIVES	
		<ul style="list-style-type: none"> <li>• Motivation</li> <li>• Accessibility of knowledge</li> </ul>	
			<b>2.2 Immaterial factors</b>
			2.2.1 POLICY

- 
- Practice leadership
  - Receptivity to knowledge
  - Roles:
    - Creating a learning environment (stimulating)
    - Creating conditions (facilitating)
    - Showing commitment through exemplary behavior (role model)
    - Motivating
    - Coaching
    - Prioritizing educational activities
    - Lack of penalizing and rewarding
  - 1.1.5 CEO
    - Roles:
      - Setting preconditions (e.g. generating support, creating conditions)
      - Stimulating/empowering (e.g. exemplary behavior, monitoring)
      - Professionally: researcher/developer/teacher
      - Networker: interface/influencer
- 
- Vision regarding learning
  - Corporate policy
  - Internal communication policy
  - Knowledge policy is the responsibility of board and management
  - 2.2.2 CULTURE \*
    - Presence of knowledge culture \*
    - Professional pride
    - Self-awareness
    - Open
    - Demand-driven use of knowledge
    - Open team culture
    - Not a purely practice-oriented team culture
  - 2.2.3 OTHER
    - Availability of knowledge resources \*
    - Availability of training \*
    - Availability staff \*
    - Image (positive)
- 

Explanatory note: \* These headings are taken from Kersten et al. (2018)

*Being able to participate in society is the real goal that clients have. And if you bring that into focus, then providing care is a means to facilitate participation. Yet there are still a lot of employees who say that providing care is the goal. I respect that, because that's where we've come from. But care is not the goal, the goal is participation. And then care, and the knowledge associated with care, is in fact a means to facilitate participation. (CEO 7)*

Next, we established the factors in relation to psychologists (1.1.3). As with direct support staff, these factors encompass personal characteristics related to knowledge, such as motivation and competencies. The CEOs also pointed out the key position that psychologists hold in enabling knowledge processes: keeping up to date with scientific literature, being a knowledge carrier, and demonstrating practice leadership. One CEO recalled their reasons for appointing a senior psychologist rather than a junior psychologist:

*[...] because at a certain point you need a senior to work on a different positioning and a training climate for those developmental psychologists. Sometimes it's really important to have a very good professional who can help develop a group or something else. A person like that can be vital. (CEO 5)*

Along with direct support staff and psychologists, the CEOs mentioned managers (1.1.4), specifying their receptivity to knowledge, their possession of knowledge, and their commitment, as factors that enable knowledge processes. They also mentioned specific managerial competencies, such as management skills and practical leadership, and summed up the enabling role of management as creating a stimulating learning environment, facilitating workplace learning, showing commitment through exemplary behavior, and motivating and coaching their employees. However, their role can also be disabling, as demonstrated by the next quote, which describes a middle management proposal that undermined an organization's strategy:

*Let's get the staff composition and numbers in order first, and make sure we have sufficient staffing levels before we address the issue with training and the like. And like I said: that's like giving your cattle no grass – it means they produce less. Yes, that was the [middle management's] first reflex and it wasn't helpful. (CEO 6)*

Furthermore, the CEOs referred extensively to their own commitment and active involvement (1.1.5) as an enabling factor. They described fulfilling a major enabling role in the execution of their knowledge strategies. Within this overall enabling role, four aspects

could be distinguished: setting preconditions, stimulating, professional, and networking. The first specific role, setting preconditions, covers the CEOs creating a support framework within the organization, e.g. among management. In their own view, this is key to successful knowledge management. One CEO pointed out the importance of consistently communicating your vision:

*[You need to] share a vision with a number of people in your organization, stick to it, and then share it with your employees time and again. But you shouldn't think you need widespread support before you initiate a development like that. (CEO 10)*

In talking about stimulating their employees as an enabling role, the CEOs reported using exemplary behavior and monitoring, for instance by attending conferences, participating in walkarounds, and encouraging staff to learn from incidents and successes. One CEO explained how she fulfilled this role in a change project in order to obtain and maintain the commitment of the employees:

*What was good enough a few years ago is no longer good enough because the world has changed. Showing that and making sure people understand it is very important. And what I've also done is celebrate and be proud of all the steps along the way. So, you have to do it together, because you can't just say: we have to achieve this one thing. Dividing it into small steps gives you something to celebrate every time, and you can mark those successes. (CEO 5)*

Only a few CEOs reported taking on a professional role as a researcher, developer, or teacher in line with their professional background. For instance, one CEO, alongside managing his organization, was also actively involved in research. A fourth specific role, only mentioned by female CEOs, involved networking and acting as an interface by sharing knowledge from the outside world within their own organization:

*But when it comes to innovation or ideas, or bringing things in from outside, I am sensitive to that, so that's what I do. I also see it at other companies, but, well, it should be happening more. And has to do with your personality. I am curious by nature. (CEO 8)*

Finally, with regard to auxiliary services, most of the participating CEOs did not see support by administrative staff (1.1.6) as playing a role in enabling knowledge sharing. However, the availability of IT staff (1.1.6) and availability of a knowledge specialist, appointing a knowledge specialist (such as a trainer, a strategic advisor, or a policymaker), or having

knowledge policy explicitly covered within the organization's board or management (2.2.1) were all mentioned as enabling factors.

#### *Factors at group level*

Factors at group level were identified with respect to teams of professionals (1.2.1), management teams (1.2.2), the supervisory board (1.2.3), and relatives (1.2.4). As to the teams of professionals, their functioning and composition were mentioned as enabling or disabling the sharing and application of knowledge. With respect to a team's composition, the introduction of a senior support worker was perceived as enabling: "We have built that coaching role into our team. So you could say it's a feature of our team and that's how you get to learn in practice" (CEO 2). Another CEO specifically mentioned the functional variety among teams in her organization:

*[...] and at first-hand I've experienced a huge diversity in the level at which teams function, but also in how they function. For example, the degree to which they are adaptive to outside knowledge varies from team to team. And that means we always have to look at how we can align ourselves to a particular team. (CEO 9)*

According to the CEOs, having an attitude of reflection, wonder, and eagerness in a team of professionals is an enabling factor.

In terms of the management team, having and conveying a collective vision on knowledge is mentioned as an enabling factor. One CEO also described support from the supervisory board as enabling:

*At one point I thought, I really want to have a heavyweight in this subject on my Supervisory Board. Because I thought, I know a lot about this but I want to hear what a member of the Supervisory Board thinks. (CEO 3)*

Lastly in this section, CEOs mention relatives as a motivator for knowledge sharing and an enabling factor in terms of being able to learn from them about their child with intellectual disabilities. But although this experiential knowledge is a very rich knowledge source, the organization's difficulties in accessing this knowledge turns out to be a disabling factor:

*There is also a lot of experiential knowledge to be gained from parents. In fact, in this line of work you should also see knowledge in the network as a partnership for how things can be done in healthcare. Yet incredibly little use is made of it. And it's often organized at an individual level, so of course you don't see a lot of organized*

*knowledge among relatives and it's often with one client, only one client, n=1, and not at the level of a department or a group of like-minded professionals. (CEO 8)*

### **Internal context: factors related to the organizational context (2)**

#### *Material factors*

The CEOs highlighted a broad spectrum of material factors. Firstly, they recognized the enabling and disabling potential of aspects of the office arrangements and IT system (2.1.1). The availability of an intranet for knowledge storage, knowledge sharing, and (e-)learning is seen as enabling the knowledge processes of professionals. To this end, a variety of resources are used: digital learning communities, e-learning, knowledge databases, electronic client files, and online tools to support training and development. In addition to the availability of these resources, the participants also stated the importance of specific characteristics. If applications are not user friendly or their content is out of date, they can end up being an obstacle to the sharing and application of knowledge. However, if they are user friendly or provide an incentive to learning, applications can facilitate these processes, as in the following example:

*And we have [...] found a system that not only allows you to report the incident, but also gives you the tools to analyze multiple incidents of the same kind, so it really prompts you to devise and implement improvements. That makes it a much more appealing system than simply saying 'I've reported it.' [...] Now we can make sure people can do something about it themselves. (CEO 11)*

Secondly, the size (2.1.2), structure (2.1.3) and stability (2.1.4) of the organization appear to influence knowledge processing. The CEOs indicated that working for a larger organization can be enabling because the availability of a larger budget offers greater opportunities for knowledge management. However, the complex structure and geographical spread of larger organizations also appear to disable knowledge processes, as illustrated by the next quote:

*Traditionally, organization X is an organization for assisted living, with 180 to 190 locations. And people primarily identify with the location where they work, which is good. Look, if you are working on a large site where there are forty groups, it's easier to say 'You know what? Let's do a little exchange with the neighbors.' So physically it's just a bit more difficult to organize. (CEO 9)*



Several CEOs recalled how a change in the organizational structure improved knowledge sharing, for example by positioning knowledge through specialization or integrating operations at regional level. Another CEO pointed out the importance of managing these processes:

*[...] there has been a lot of talk about professionals being able to do this themselves, driven by customer demand. In practice, however, that doesn't happen. So although it sounds backward, hierarchy and management turn out to be a very important mechanism – albeit a very old-fashioned mechanism – for exchanging knowledge more easily. (CEO 7)*

Another enabling factor identified was making a specific department responsible for knowledge policy (e.g. the clinical department or the department concerned with talent development). However, this entails a further step as one CEO explained, as it would actually involve connecting departments.

Stability within the organization is mentioned as an enabling factor, meaning continuity of direct support staff, minimal deployment of temporary workers, and lack of conflicts. Turbulence is regarded as disabling, as in the case of a reorganization that causes experts to leave.

Thirdly, the CEOs pointed to the availability of time (2.1.4) and budget (2.1.4). An education budget in line with the collective labor agreement was cited as being an enabling factor.

Lack of time, however, was mentioned as a major disabling factor. This appears to be related to funding from healthcare insurers, absenteeism, heavy workloads, and a shortage on the labor market, all of which have considerable consequences for knowledge processes, as one CEO described in the following quote:

*Well, we have had to conclude, as I said, that some of our employees do not yet have basic training. Though often they have acquired other competencies. And we still attach importance to the fact that everyone is trained, fully trained. So that requires people to make themselves available and get things started. But if your team is short-staffed, then that gives you a good reason to say 'Well, I'll wait for a bit,' and until now we have approached this on a voluntary basis. So the tight labour market doesn't make it easy for people to find room to do that. (CEO 9)*

*Immaterial factors*

In addition to these material factors, the CEOs also mentioned immaterial factors that influence the sharing and application of knowledge in their organizations. Both the availability of knowledge resources, such as literature and e-learning (2.2.3), and availability of suitably designed training (2.2.3) were perceived as enabling. Staff shortages (2.2.3) not only disable educational activities by discouraging attendance, as mentioned above, but also affect mobility policy. "And at the same time that is complicated by the current labor market because for some components you are happy to have anyone at all. So there's no point trying to encourage people to move around the organization" (CEO 4).

As to policy (2.2.1), the CEOs regarded a corporate vision on learning and a corporate policy on knowledge as enabling. One CEO illustrated how the lack of an internal communication policy appeared to hold back knowledge sharing: "I mean, it's about sharing knowledge. And 'sharing' is a communication verb, right? So if you don't realize how important communication is, you will never share anything" (CEO 11).

All of the CEOs mentioned the culture within an organization (2.2.2) as influencing the sharing and application of knowledge. One CEO defined his view of a knowledge culture as "receptivity to knowledge, openness to knowledge, discussion with each other. Curiosity, that is the culture we are building" (CEO 3). The presence of a knowledge culture appeared to be enabling, whereas its absence was perceived as disabling. However, CEOs found it difficult to say whether or not they had a knowledge culture that encompassed their whole organization: e.g. while the better educated professionals in an organization inspire each other with reference to evidence-based knowledge from outside, direct support staff are reluctant to implement that knowledge and tend to stick to practice-based knowledge.

Several CEOs elaborated on yet another aspect of culture: power relations and the level of openness to knowledge that comes from outsiders. These power relations manifest themselves between professionals from different educational backgrounds or between the various divisions of an organization: "Then knowledge is used as power, as an aspect of prestige, and not as a force that connects you" (CEO 6). Moreover, the level of openness to new knowledge ("not invented here"), reactivity, and a supply-driven use of knowledge appear to be disabling. According to one CEO, "[...] the cultural shift from supply-oriented [knowledge] to demand is, I think, a big change for organization X" (CEO 7).

**External context: factors related to the socio-political environment (3)**

The participants also described factors in the socio-political environment of IDCs as influencing their strategies for stimulating the sharing and application of knowledge. As to

central government policy (3.1), the CEOs acknowledged the enabling role of research grant programs. However, one CEO perceived lack of national direction as a disabling factor: "Within disability care, I see no control over the creation, innovation, and dissemination of knowledge. There is no control" (CEO 3).

The role played by other IDCOs (3.3) was also seen as disabling because of their reluctance to apply shared knowledge:

*It is not automatically the case that something that works well in one organization will be adopted by others too. That's what I have found. I don't have an opinion about it, but that's what I see [...] I see it in my own organization, I see it between organizations. You can't count on that happening.* (CEO 10)

**Table 2 Contextual factors influencing the execution of knowledge strategies in intellectual disabilities organizations (external context)**

3. FACTORS RELATED TO THE SOCIO-POLITICAL ENVIRONMENT	4. FACTORS RELATED TO COLLABORATIVE PARTNERSHIPS **
<p>3.1 NATIONAL POLICY **</p> <ul style="list-style-type: none"> <li>• Laws and regulations **</li> <li>• Level of the rates</li> <li>• National quality framework and grant programs **</li> </ul> <p>3.2 ROLE OF BRANCH</p> <ul style="list-style-type: none"> <li>• Presence of national direction</li> <li>• Increased interest in knowledge</li> </ul> <p>3.3 ROLE OF PROFESSIONAL GROUPS:</p> <ul style="list-style-type: none"> <li>• Absence of conflicts between schools of thought within special education</li> <li>• Presence of a professional association</li> <li>• Presence of ownership</li> </ul> <p>3.4 OTHERS</p> <ul style="list-style-type: none"> <li>• Role of other organizations providing care and support (e.g. open to knowledge)</li> <li>• Role of vocational education (no gap of knowledge)</li> <li>• Strong explicit knowledge base</li> <li>• Culture in the field of care and support (appreciation of knowledge)</li> <li>• Ample labour market</li> </ul>	<p>4.1 POLICY ON ENGAGING IN COLLABORATIONS</p> <ul style="list-style-type: none"> <li>• Presence of a policy</li> <li>• Small amount of collaborative partners</li> </ul> <p>4.2 OTHERS</p> <ul style="list-style-type: none"> <li>• Policy of the collaborative partnership focuses on knowledge sharing</li> <li>• Culture of the collaborative partnership focuses on knowledge sharing</li> </ul>

\*\* These headings are distracted from Fleuren et al. (2004) and Greenhalgh et al. (2004)

Furthermore, CEOs attributed a disabling role to the level of vocational education (3.4) and professional associations (3.3):

*If there's one thing a professional uses to protect their own position it's knowledge. So that's what you use to stand up for your group. We use the term "support staff." I mean, how general can you be? Nor do we have a professional association for support staff within disability care. So the real knowledge professionals are the behavioral scientists, the developmental psychologists. There is knowledge among the intellectual disability physicians. But that's pretty thin. (CEO 9)*

Another disabling factor mentioned by the CEOs is the limited explicit knowledge base in IDC, especially with regard to evidence-based knowledge (3.4): "I think that much of the knowledge about treatment and coaching methods is not very well validated. There is not much evidence available in our sector. That makes things difficult" (CEO 2). While the culture (3.4) is perceived by some CEOs to be enabling, according to another it is disabling due to the "not invented here" syndrome which "seems even more persistent in healthcare than in other sectors" (CEO 10). Lastly, the CEOs named the tight labor market (3.4) as a factor that hinders the sharing and application of knowledge because "the number of fully qualified and ready available staff is really not enough to do all work"(CEO 9).

#### **External context: factors related to collaborative partnerships (4)**

With respect to engaging in collaborative partnerships, the participating CEOs described factors related to policy and to culture, both within their own organization (4.1) and within a collaborative partnership itself (4.2). For example, lack of an organization-wide knowledge policy on reasons to engage in specific collaborative partnership(s) was cited as disabling by one CEO:

*Until a year and a half or two years ago, it was more or less accidental whether we participated in an academic collaborative partnership: either there were contacts, the goal seemed similar to our target group, or we were invited, sometimes by colleagues, to become a member. And yes, we attended meetings when it suited us –quite useful actually – we had discussions, someone was part of an administrative consortium. But none of this was anchored in a real knowledge agenda. (CEO 7)*

Another CEO, explaining her organization's preference for engaging in partnerships with only one other organization, emphasized the enabling factor:

*You know, the simple fact that two parties are involved ensures that you're not only looking for a solution within your own context but that you also have to understand what the other party's context is like. And doing something like that with the two of us works well, you know, it's manageable. (CEO 9)*

The policy of collaborative partnerships (4.2) was also perceived as enabling or disabling. For instance, an academic collaborative partnership with the aim of improving the sharing of knowledge by introducing learning communities and connecting to postgraduate education was considered to be enabling. However, in another partnership, a CEO (CEO 5) perceived the policy of shared IT services as an obstacle to organizational development and local profiling.

As to the culture of collaborative partnerships (4.2), the CEOs described different experiences of transparency (or the lack of it) in knowledge sharing. Whereas CEOs were positive about the general willingness to share knowledge, one CEO pointed out that this does not apply to sharing knowledge on difficulties or incidents: "Maybe [we] aren't ready to open up and say, 'Look, we find this difficult or complicated.' In those situations, people are still more likely to cover things up. Successes are easier to share than vulnerabilities, insecurities and inadequacies" (CEO 4).

## Discussion

When processing knowledge, organizations that provide care and support for people with intellectual disabilities, like other healthcare organizations, have developed ways to bridge the "know-do gap" in order to improve their quality of care. In this article, we have explored the influence of contextual factors on the execution of knowledge strategies to stimulate knowledge processes in IDCs.

Qualitative analysis resulted in four clusters of contextual factors: two related to the internal context of care organizations (persons and the organizational context) and two to their external context (the socio-political environment and collaborative partnerships).

Our findings indicate that the organizational factors enabling or disabling the sharing and application of knowledge by professionals retrieved in a previously conducted systematic review (Kersten et al., 2018) also appear to influence the execution of the *strategies* designed to stimulate these processes. These factors are identical (see the factors marked with \* in Table 1) and relate to individuals and groups and to material and immaterial aspects. However, only a few CEOs mentioned "factors related to administrative

staff”; in most cases they called this factor irrelevant. In addition, the CEOs identified factors related to the external context, which is consistent with the reviews of Fleuren et al. (2004) and Greenhalgh et al. (2004), which also identified factors related to the socio-political environment and interorganizational networks (the factors marked with \*\* in Table 2).

As the other headings and subheadings in Table 1 and 2 show, this study has identified additional factors to those in the three above-mentioned reviews, offering both a wider range and greater specificity. This is especially true with respect to the category “direct support staff”, who play a key role in care and support, and hence in the sharing and application of knowledge (Kersten et al., 2022). The CEOs in this study specified the role of new employees and identified additional knowledge-related personal characteristics of both direct support staff and new employees and their respective learning styles. Some of the additional factors related to the internal context appear to be similar to the determinants of innovation in general healthcare established by Greenhalgh et al. (2004), including adopter characteristics such as learning style, motivation, and skills and system antecedents for innovation (e.g. pre-existing knowledge/skills base and leadership and vision). We found that the majority of the factors identified related to the internal context. Whether CEOs do in fact perceive the influence of the external context on the execution of their organizations’ knowledge strategies to be less important is a subject worth exploring further.

The CEOs in this study emphasized their own active role in the execution of the strategies, and categorized this role as setting preconditions, stimulating, professional, and networking. This role is consistent with the role of top management in knowledge processes described by Nonaka et al. (2000), in the implementation of Active Support (Bigby et al., 2020a, 2020b; Qian et al., 2017), the leadership behavior presented by Yukl (2012) and the study by Deveau et al. (2019) on senior management decision-making.

The overall analyses of our results point to similarities and connections between personal and environmental-contextual factors. For instance, knowledge-related personal characteristics such as receptivity to knowledge, which are mentioned with regard to direct support staff, psychologists, and management, are coherent with the presence or absence of a knowledge culture within the organization, as well as the knowledge-sharing culture (or the lack of one) in the socio-political environment. We also observe cohesion between the knowledge and competencies of direct support staff and new employees, the availability of suitably designed training within the organization, and the role of vocational education in the socio-political environment. Finally, the shortage of staff within the organization is contingent on a tight labor market in the wider socio-political environment.

With respect to the terminology used in this paper, we asked ourselves whether it would be suitable to refer to the retrieved factors as “determinants”, a term used to indicate a determining relationship between the object (the factor) and the subject. A number of previous studies use this term, e.g. for factors that facilitate or impede actual change (Fleuren et al., 2004, p. 108); that produce (or fail to produce) the outcome of interest in a particular context (Greenhalgh et al., 2004, p. 615); or that prevent or enable improvements (Flottorp et al., 2013, p. 2).

Although these authors also make it clear that a simple causal relationship is unlikely in these cases, we wanted to avoid this association altogether and therefore considered “factors” to be preferable to “determinants.” Hence in our study “contextual factors” has been adopted as a more suitable term, including as it does both factors within the organization (the internal context) and in its environment (the external context), which is in line with the AAIDD definition of context (Schalock et al., 2010). Moreover, this definition was shown applicable at the levels of the micro- meso and macrosystem (Shogren et al., 2014). This is relevant since these systems interact. However, each specific context will demand a specific mix of enabling factors.

Furthermore, our results with respect to the properties of the factors we have established are also consistent with Shogren et al. (2014). As mentioned in the introduction, these include both variables that are not mutable (e.g., age and learning style) and variables that can be manipulated (e.g., competencies and policies). Awareness of the nature of these factors is essential when designing and executing strategies to optimize knowledge processes. Given the key role that professionals fulfil in providing care and support for persons with intellectual disabilities, their role with respect to knowledge processes needs further examination in future research. If organizations are to improve their strategies for stimulating the sharing and application of knowledge, it is crucial to learn more about the professionals’ own perspective. Research focused on incoming professionals is particularly recommended. From the perspective of talent development, they would appear to offer more opportunities for change than existing employees, whose ways of working are more deeply embedded in existing practices.

Although this study provides insights into the contextual factors that influence the execution of strategies for stimulating the sharing and application of knowledge in care and support for persons with intellectual disabilities, the findings cannot easily be generalized. However, we do not perceive this as a limitation, in light of the qualitative exploratory nature of the study. A purposive sampling strategy was applied in order to include as many different perspectives as possible. Although the validity of data based on individual

interviews may be jeopardized by the participants' desire to give socially desirable answers, precautions were taken to avoid this, most notably by emphasizing the confidential nature of the interviews to the CEOs. We have no indications that our study has been unduly influenced by this tendency.

### **Implications for practice**

For organizations providing care and support for people with intellectual disabilities and aiming to achieve quality improvement and innovations, the sharing and application of knowledge are vital but challenging processes. Therefore, strategies are used by CEOs to stimulate these knowledge processes. An overview of the contextual factors that influence the execution of these strategies is now available. These factors, despite their sensitizing nature, are intended to be used by all actors involved in improving knowledge processes, from CEOs and middle management to knowledge specialists and policymakers. This study provides key ingredients for optimizing these knowledge processes.

### **Conclusion**

To our knowledge, this is the first study which identified contextual factors influencing the execution of strategies of CEOs to stimulate the sharing and application of knowledge by professionals. It became clear that both the internal (organizational) and external (socio-political) context play an en/disabling role. Within the internal context, the role of care professionals seems to be a key factor, while in the external context the role of professional groups and a tight labor market are disabling factors. Furthermore, factors relating to the internal and external context appear to be interconnected.



## References

- Ayatollahi, H. & Zeraatkar, K. (2020). Factors influencing the success of knowledge management process in health care organizations: A literature review. *Health Information & Libraries Journal* 37(2), 98-117. <https://doi.org/10.1111/hir.12285>
- Best, A. & Holmes, B. (2010). Systems thinking, knowledge and action: towards better models and methods. *Evidence & Policy: A Journal of Research, Debate and Practice* 6(2), 145-159. <https://doi.org/10.1332/174426410X502284>
- Bigby, C. & Beadle-Brown, J. (2018). Improving Quality of Life Outcomes in Supported Accommodation for People with Intellectual Disability: What Makes a Difference? *Journal of Applied Research in Intellectual Disabilities* 31, e182-e200. <https://doi.org/10.1111/jar.12291>
- Bigby, C. Bould, E., Iacono T. & Beadle-Brown, J. (2020a). Predicting good Active Support for people with intellectual disabilities in supported accommodation services: Key messages for providers, consumers and regulators. *Journal of Intellectual & Developmental Disability* 45(3), 279-289. <https://doi.org/10.3109/13668250.2019.1685479>
- Bigby, C., Bould, E. Iacono, T. & Beadle-Brown, J. (2020b). Quality of practice in supported accommodation services for people with intellectual disabilities: What matters at the organisational level. *Journal of Intellectual & Developmental Disability*, 45(3), 290-302. <https://doi.org/10.3109/13668250.2019.1671965>
- Bowden, J. (1996). Phenomenographic research: Some methodological issues. In G. Dall'Alba & B. Hasselgren (Eds.), *Reflections on phenomenography: Toward a methodology? (Gothenburg Studies in Educational Sciences No. 109)*. Acta Universitatis Gothoburgensis.
- Crilly T., Jashapara A., Trenholm S., Peckham A., Currie G. & Ferlie E. (2012). *Research utilization and knowledge mobilization by health care managers: synthesizing evidence and theory using perspectives of organizational form, resource based view and critical theory. Final report*. NIHR Service Delivery and Organisation programme.
- Deveau, R., N. Gore & McGill, P. (2019). Senior manager decision-making and interactions with frontline staff in intellectual disability organisations: A Delphi study. *Health & social care in the community* 28(1), 81-90. <https://doi.org/10.1111/hsc.12842>
- Embregts, P. J. C. M. (2017). Kennisontwikkeling en kennisdeling in gelijkwaardige verbinding tussen praktijk en wetenschap. *Nederlands Tijdschrift voor de Zorg aan Mensen met Verstandelijke Beperkingen* 43(3), 219-226. Retrieved from:

[https://www.ntzonline.nl/art/50-4446\\_Kennisontwikkeling-en-kennisdeling-in-gelijkwaardige-verbinding-tussen-praktijk-en-wetenschap](https://www.ntzonline.nl/art/50-4446_Kennisontwikkeling-en-kennisdeling-in-gelijkwaardige-verbinding-tussen-praktijk-en-wetenschap)

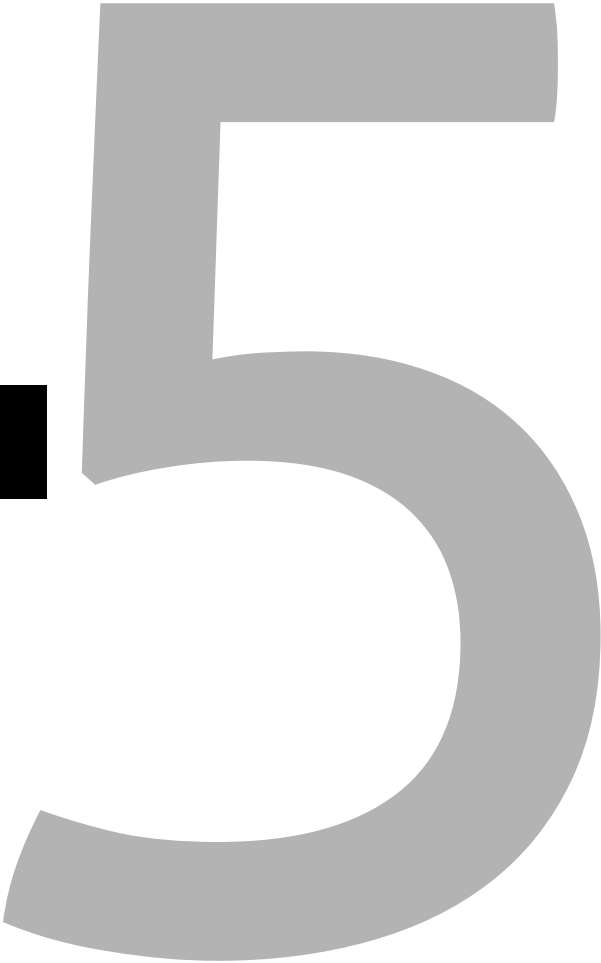
- Farrington, C., Clare, I.C.H., Holland, A.J., Barrett, M. & Oborn, E. (2015). Knowledge exchange and integrated services: experiences from an integrated community intellectual (learning) disability service for adults. *Journal of Intellectual Disability Research* 59(3), 238-247. <https://doi.org/10.1111/jir.12131>
- Fleuren, M., K. Wiefferink & Paulussen, T. (2004). Determinants of innovation within health care organizations. *International journal for quality in health care* 16(2), 107-123. <http://doi.org/10.1093/intqhc/mzh030>
- Flottorp, S. A., Oxman, A.D., Krause, J., Musila, N. R., Wensing, M., Godycki-Cwirko, M., Baker, R. & Eccles, M. P. (2013). A checklist for identifying determinants of practice: a systematic review and synthesis of frameworks and taxonomies of factors that prevent or enable improvements in healthcare professional practice. *Implementation Science* 8(1), 35. <https://doi.org/10.1186/1748-5908-8-35>
- Gervais M.-J. & Chagnon F. (2010). *Evidence based management in child welfare services: a process evaluation*. Montreal.
- Greenhalgh, T., Robert, G., MacFarlane, F., Bate, P. & Kyriakidou, O. (2004). Diffusion of innovations in service organizations: systematic review and recommendations. *The Milbank Quarterly* 82(4), 581-629. <https://doi.org/10.1111/j.0887-378X.2004.00325.x>
- Guest, G., Bunce, A. & Johnson, L. (2006). How many interviews are enough? An experiment with data saturation and variability. *Field methods* 18(1): 59-82. <https://doi.org/10.1177/1525822X05279903>
- Hodes M. W., Meppelder H. M., Schuengel C. & Kef S. (2014). Tailoring a video-feedback intervention for sensitive discipline to parents with intellectual disabilities: a process evaluation. *Attachment & Human Development* 16(4), 387-401. <https://doi.org/10.1080/14616734.2014.912490>
- Kersten, M.C.O., Taminiau, E.F., Schuurman, M.I.M., Weggeman, M.C.D.P. & Embregts, P.J.C.M. (2018). How to improve sharing and application of knowledge in care and support for people with intellectual disabilities? A systematic review. *Journal of Intellectual Disability Research*, 62(6), 496-520. <https://doi.org/10.1111/jir.12491>
- Kersten, M., Taminiau, E., Weggeman, M. & Embregts, P. (2022). Motives and strategies for stimulating the sharing and application of knowledge in care and support for people with intellectual disabilities. *Journal of Knowledge Management*, 26(11), 114-141. <https://doi.org/10.1108/JKM-06-2021-0463>

- Kratochwill, T. R., Hitchcock, J., Horner, R. H., Levin, J. R., Odom, S. L., Rindskopf, D. M. & Shadish, W. R. (2010). Single-case designs technical documentation. *What Works Clearinghouse*: Retrieved from <https://files.eric.ed.gov/fulltext/ED510743.pdf>
- Lakshman, C. (2009). Organizational knowledge leadership: An empirical examination of knowledge management by top executive leaders. *Leadership & Organization Development Journal* 30(4), 338-364. <http://doi.org/10.1108/01437730910961676>
- Mastebroek, M., Naaldenberg, J., Lagro-Janssen, A.L. & Van Schrojenstein Lantman de Valk, H. (2014). Health information exchange in general practice care for people with intellectual disabilities. *Research in Developmental Disabilities* 35, 1978-1987. <https://doi.org/10.1016/j.ridd.2014.04.029>
- Ministerie van Volksgezondheid, Welzijn en Sport (2019). *Kamerbrief Beter weten: versterken professioneel handelen in de langdurige zorg*. Den Haag: Ministerie van Volksgezondheid, Welzijn en Sport (VWS).
- Muhr, T. (2005). *Atlas.ti: The knowledge workbench* (Version 5.0. 66). Scolari, Sage Publications Software.
- Naaldenberg, J., Vaandrager, L., Koelen, M. Wagemakers, A., Saan, M. & de Hoog, K. (2009). Elaborating on systems thinking in health promotion practice. *Global health promotion* 16(1), 39-47. <https://doi.org/10.1177/1757975908100749>
- Nicolini D., Powell J., Conville P. & Martinez-Solano L. (2008). Managing knowledge in the healthcare sector. A review. *International Journal of Management Reviews* 10(3), 245-63. <https://doi.org/10.1111/j.1468-2370.2007.00219.x>
- Nonaka, I., Toyama, R. & Konno, N. (2000). SECI, *Ba* and leadership: a unified model of dynamic knowledge creation. *Long range planning* 33(1), 5-34. [https://doi.org/10.1016/S0024-6301\(99\)00115-6](https://doi.org/10.1016/S0024-6301(99)00115-6)
- Ouelette-Kuntz H., Brown H., Baur L., Davis R., Emerson E., Kerr M. et al. (2010). Using a knowledge translation lens to develop international collaborations to improve the health of individuals with intellectual disabilities. *Journal of Policy and Practice in Intellectual Disabilities* 7(4), 278-82. <https://doi.org/10.1111/j.1741-1130.2010.00277.x>
- Qian, X, Ticha, R. & Stancliffe, R. (2017). Contextual factors associated with implementing active support in community group homes in the United States: A qualitative investigation. *Journal of Policy and Practice in Intellectual Disabilities* 14(4), 332-340. <https://doi.org/10.1111/jppi.12204>
- Reinders H. S. & Schalock R. L. (2014). How organizations can enhance the quality of life of their clients and assess their results: the concept of QOL enhancement. *American*

- Journal on Intellectual and Developmental Disabilities* 119(4), 291–302.  
<https://doi.org/10.1352/1944-7558-119.4.291>
- Robertson J., Hatton C., Baines S. & Emerson E. (2015). Systematic reviews of the health or health care of people with intellectual disabilities: a systematic review to identify gaps in the evidence base. *Journal of Applied Research in Intellectual Disabilities* 28(6), 455–523. <https://doi.org/10.1111/jar.12149>
- Rogers, E. M. (2003). *Diffusion of innovations*. (5<sup>th</sup> ed.). Free Press.
- Schalock, R. L., Borthwick-Duffy, S., Bradley, V., Buntinx, W. H. E., Coulter, D. L., Craig, E. P. M., . . . Yeager, M. H. (2010). *Intellectual disability: Definition, classification, and systems of support* (11th ed.). Washington, DC: American Association on Intellectual and Developmental Disabilities.
- Schalock R. L., Verdugo M. A., Bonham G. S., Fantova F. & Van Loon J. (2008). Enhancing personal outcomes: organizational strategies, guidelines, and examples. *Journal of Policy and Practice in Intellectual Disabilities* 5(4), 276–85.  
<https://doi.org/10.1111/j.1741-1130.2007.00135.x>
- Shogren, K. A., Luckasson, R. and Schalock, R.L. (2014). The definition of “context” and its application in the field of intellectual disability. *Journal of Policy and Practice in Intellectual Disabilities* 11(2), 109–116. <https://doi.org/10.1111/jppi.12077>
- Smulders E., Enkelaar L., Schoon Y., Geurts A. C., Van Schroyensteyn Lantman-De Valk H. & Weerdesteyn, V. (2013). Falls prevention in persons with intellectual disabilities: development, implementation, and process evaluation of a tailored multifactorial fall risk assessment and intervention strategy. *Research in Developmental Disabilities* 34(9), 2788–98. <https://doi.org/10.1016/j.ridd.2013.05.041>
- Timmons V. (2013). IASSIDD: are we practicing knowledge translation effectively? *Journal of Policy and Practice in Intellectual Disabilities* 10, 99–101.  
<https://doi.org/10.1111/jppi.12036>
- Vlaskamp C., Hiemstra S. & Wiersma L. (2007). Becoming aware of what you know or need to know: gathering client and context characteristics in day services for persons with profound intellectual and multiple disabilities. *Journal of Policy and Practice in Intellectual Disabilities* 4(2), 97–103. <https://doi.org/10.1111/j.1741-1130.2007.00106.x>
- Wood, S., Gangadharan, S., Tyrer, F., Gumber, R., Devapriam, J., Hiremath, A. & Bhaumik, S. (2014). Successes and challenges in the implementation of care pathways in an intellectual disability service: health professionals' experiences. *Journal of Policy & Practice in Intellectual Disabilities*, 11(1), 1-7. <https://doi.org/10.1111/jppi.12063>

- World Health Organisation (2006). *Bridging the "Know-Do" gap meeting on knowledge translation in global health*. Geneva: World Health Organization.
- Yukl, G. (2012). Effective leadership behavior: What we know and what questions need more attention. *Academy of Management Perspectives* 26(4), 66-85. ISBN-13: 978-1-285-42679-2.
- Zorginstituut Nederland (2016). *Passend onderzoek effectiviteit Langdurige Zorg*. Zorginstituut Nederland (ZIN). Retrieved from:  
<https://www.zorginstituutnederland.nl/publicaties/rapport/2016/12/12/passend-onderzoek-effectiviteit-langdurige-zorg>

**CHAPTER 5**



# Incoming professionals' perspectives on the application of new knowledge in care organisations for people with intellectual disabilities: A concept mapping study

This chapter has been published as:

M.C.O. Kersten, N. Frielink, M.C.D.P Weggeman and P.J.C.M. Embregts (2023). Incoming professionals' perspectives on the application of new knowledge in care organisations for people with intellectual disabilities: A concept mapping study. *International Journal of Developmental Disabilities*, <https://doi.org/10.1080/20473869.2023.2216033>

## Abstract

### *Objectives*

Within care organisations for people with intellectual disabilities, numerous strategies are employed to stimulate the application of new knowledge, and professionals play a key role in this process. Consequently, gaining insight into professionals' perspectives on how to encourage the application of new knowledge is vital, especially in the case of incoming professionals. They have a stronger need for new knowledge due to having acquired only a limited knowledge base about intellectual disabilities in their education. Therefore, this study focused on the incoming professionals' perspectives on factors stimulating application of new knowledge within the care and support for people with intellectual disabilities.

### *Methods*

A concept mapping study was conducted with incoming support staff, psychologists, and intellectual disabilities physicians. Data collection included brainstorming, pile sorting and rating to create three concept maps, which were interpreted by experts.

### *Results*

Overall, the participants generated 234 statements. Incoming support staff primarily expressed their preference for experiential and work-based learning and described their role as being knowledge receivers. Incoming psychologists and physicians expressed their ownership of knowledge in requesting opportunities to develop themselves.

### *Conclusion*

To enhance incoming professionals' application of new knowledge, care organisations for people with intellectual disabilities can encourage professionals in manifold ways, ranging from providing (in)formal learning opportunities and accessible sites to creating a learning culture.



## Introduction

To optimise the quality of life of people with intellectual disabilities, knowledge is vital for professionals working for this population (Cobigo *et al.* 2014, Schepens *et al.* 2019), such as support staff, psychologists and Intellectual Disabilities physicians (ID physicians). The application of knowledge refers to how professionals utilize their information, experience, skills, and attitudes when performing their tasks (Weggeman 2007). In addition to utilizing their prior knowledge, professionals also engage in the development of new knowledge through their daily work practices, as well as acquiring new knowledge through various means like training and coaching. Professionals working with individuals with intellectual disabilities – including support staff, psychologists, and ID physicians – must possess a broad range of knowledge across multiple domains to effectively provide lifelong and life-wide care and support.

This knowledge should encompass legislation related to care and support, as well as the core domains of quality of life. These domains include physical well-being, which necessitates knowledge about health issues, and social participation, which requires awareness of opportunities for participation within the local community, among other areas, such as emotional well-being, educational and vocational support (Herps *et al.* 2016, Schalock *et al.* 2008). This knowledge comprises multiple sources: evidence-based practices, professional expertise, and the experiential expertise of service users and their relatives (Embregts 2017). To ensure that care and support are grounded on these knowledge sources, it is recommended to engage various disciplines, including support staff, psychologists, and (para)medics, as well as service users and their families, in the planning and provision of individual support and planning (Herps *et al.* 2016). By integrating these knowledge sources, professionals can develop new knowledge through on-the-job learning, training, or coaching.

To stay up-to-date and deliver high-quality care, professionals need to integrate new knowledge into their daily work practices and regularly update their knowledge (Augustsson *et al.* 2019, Greenhalgh *et al.* 2004). Simply relying on existing knowledge is no longer adequate in the long-term care sector due to factors such as increased complexity of service users, research and innovation, and changing contexts such as longer home stays and greater collaboration with service users and their relatives (Van Dijk *et al.* 2021). Regarding the acquisition and application of new knowledge, research within the field of healthcare in general (e.g. Birken and Currie 2021, Karamitri *et al.* 2015, Pentland *et al.* 2011) has underscored the key role played by professionals themselves, such as the presence of skills

and motivation. Moreover, this research has demonstrated the pre-conditional role of environmental factors, including its management, such as an open culture and the facilitating role of management.

Likewise, both Ramerman *et al.* (2018) and Overwijk *et al.* (2021) have demonstrated that the sharing and application of new knowledge among incumbent professionals in the Dutch care and support for people with intellectual disabilities is also influenced by both professional and environmental factors. Professional factors, such as knowledge and skills, and environmental factors, such as management decisions regarding policy, recruitment and resource allocation, both play a role in facilitating the sharing and application of knowledge. Organisations execute strategies aimed towards locating, retrieving, sharing, adapting and utilising new knowledge to promote organisational objectives (Karamitri *et al.* 2015). How Dutch care organisations for people with intellectual disabilities fulfil their important preconditional role of acquiring and applying new knowledge for professionals has been the subject of recent investigation (Kersten *et al.* 2022a). This research highlighted the existence of a broad spectrum of strategies employed by Chief Executive Officers (CEOs) to encourage the sharing and application of knowledge within care organisations for people with intellectual disabilities, with a special focus on talent development and the acknowledgment and deployment of knowledge holders. These strategies seek to enhance both basic and specific knowledge and competencies, such as the requisite knowledge about the complex care needs of service users (with behaviours that challenge). Due to both the shortcomings of vocational education and a tight labour market, care organisations for people with intellectual disabilities primarily hire persons with little knowledge of intellectual disabilities care and support. These persons include, for example, career switchers or young professionals who recently completed their vocational education (Kersten *et al.* 2022a). Therefore, as indicated in this study, incoming professionals both require additional attention and are of special interest in terms of talent development when it comes to the strategies executed by care organisations for people with intellectual disabilities in order to share and apply new knowledge. Examples of such strategies are: 'Curriculum for specific target groups, new staff and unqualified staff', 'Coaching teams' and 'Key role for psychologists as knowledge holders in knowledge transfer'.

Although numerous strategies for encouraging the sharing and application of knowledge have been carried out by CEOs, evidence-based work in long-term healthcare, including the care and support for people with intellectual disabilities, is not common practice (Burton and Chapman 2004, Kaiser and Mcintyre 2010, Nicolini *et al.* 2008). This

means a risk firstly, that the effective interventions developed by researchers are not being sufficiently applied in practice and, secondly, that the quality of practice-based knowledge used by professionals is unknown (World Health Organization 2006, Zorginstituut Nederland 2016). Hence, there is a gap between what is known and what is actually being done (Drahota *et al.* 2016), which poses a threat to the quality of care (Zorginstituut Nederland 2016). In order to bridge this gap, insights into the factors facilitating knowledge application within care organisations for people with intellectual disabilities are required, especially those from the perspective of the incoming professionals themselves. Indeed, the latter is vital because the aforementioned strategies, such as 'Curriculum for specific target groups, new staff and unqualified staff', 'Coaching teams' and 'Key role for psychologists as knowledge holders in knowledge transfer', aim to strengthen the key roles that professionals fulfil with respect to knowledge in their daily work: as users, receivers, holders and producers of knowledge (Kersten *et al.* 2022a). To ensure that incoming professionals will be sufficiently stimulated to apply new knowledge, it is important to explore whether these strategies are in accordance with these incoming professionals' perspectives.

Until now, there have only been initial insights into the perspectives of professionals themselves concerning the factors that encourage knowledge application. For example, a study examining knowledge application by administrative and support staff within Canadian long-term care homes provides information on the vital role played by organisational leaders (including clinical leaders) as well as environmental factors, such as resources and culture (Berta *et al.* 2010). In the context of intellectual disabilities care, Olsson and Gustafsson (2020), who administered a survey amongst staff supporting people with intellectual disabilities in either group homes or their own homes in Sweden, recommended that organisations should provide workplace training to enhance the skills of incoming professionals. Such workplace training would supplement the basic knowledge on intellectual disabilities that professionals acquire within their education with the specific knowledge needed to carry out their daily work. Nijs and colleagues (2022) indicated that Dutch professionals with different levels of education (support staff versus psychologists) each have their own perspectives on how to improve support for people with intellectual disabilities with behaviours that challenge. In order to accommodate their specific respective needs, it is therefore crucial to learn more about the perspectives of several groups of professionals with regard to how best to encourage the application of new knowledge. This is particularly relevant for incoming professionals such as support staff, psychologists and ID physicians as their educational knowledge base about intellectual disabilities may need updating (Olsson and Gustafson, 2020, Van Dijk *et al.* 2021). However, in some situations

the content of their educational knowledge base will be more innovative than in the organisation where they started to work. In that case, incoming professionals' need of new knowledge involves 'old' knowledge applied in their daily practices. To the best of our knowledge, there has been no prior research on incoming professionals' perspectives regarding how their organisations can facilitate the application of new knowledge in the field of intellectual disabilities. This highlights a gap in existing knowledge about how care organisations can encourage incoming professionals to apply existing/available and newly learned knowledge in their work. Therefore, in this study we investigated the perspectives of incoming support staff, psychologists, and ID physicians on the factors stimulating the application of new knowledge within the care and support for people with intellectual disabilities.

## Methods

### Study setting

In the Netherlands, most of the 142,000 citizens with intellectual disabilities receive specialised services from approximately 170 public charitable care organisations, varying from a few dozen service users and staff to over 10,000 service users and staff (Vereniging Gehandicaptenzorg Nederland 2019). While some care organisations operate nationwide, however, most operate at the regional level and have multiple locations. To address the varying needs of their service users, they offer a broad range of services, including medical and psychological treatment, care, and support in all areas of quality of life. The professionals working at these care organisations include support staff, psychologists, ID physicians, physiotherapists, dietitians, and speech and language therapists, with education levels ranging from lower vocational education to university level (38% lower level, 50% middle level, and 42% higher level) (Van Driesten and Wessels 2020).

### Study design

In order to explore the perspectives of incoming professionals regarding how their organisations could stimulate the application of new knowledge, a concept mapping study was conducted, which is a computer-assisted integrated mixed-method approach (Trochim 1989). Concept maps allow for a clearer understanding of the relationships and patterns between the statements given by the participants, making it easier to identify key themes and concepts. Through the integration of group processes and multivariate statistical analyses (Trochim and Kane 2005), this method enables researchers to elucidate a complex subject within a short space of time. Moreover, it proves expedient for integrating the tacit knowledge of different groups of professionals (van Bon-Martens *et al.* 2017). The concept

mapping procedure has already been successfully applied within healthcare research (e.g. de Boer *et al.* 2019, van Bon-Martens *et al.* 2017), including within research on intellectual disabilities care (Lokman *et al.* 2022, Nijs *et al.* 2022, Ruud *et al.* 2016).

## Participants

In total, 20 participants took part in this study. As five participants per subgroup is suggested as the minimum to produce meaningful data (Kane 2007), this number of respondents was deemed to be sufficient for the present concept mapping study. By including three key types of incoming professionals – incoming support staff, psychologists, and ID physicians – we aimed to capture a comprehensive view on care, support, and treatment of service users. These professionals represent a wide range of vocational levels required to cater to the needs of almost all service users. The participants were involved with ten care organisations for people with intellectual disabilities in the Netherlands and were all beginners in their professional field, which we define as either having only recently finished their vocational education or as having switched careers and been working within care organisations for people with intellectual disabilities for a period of six months to three years. Although the development towards professional maturity is, at least in part, dependent upon previously acquired competences and therefore differs for each person, according to experts it is common practice within care organisations for people with intellectual disabilities to consider professionals to be beginners up to three years' time.

The participants can be categorised into three groups of incoming professionals: support staff ( $n = 5$ ), psychologists ( $n = 9$ ), and ID physicians ( $n = 6$ ). All the participants had been working in the care and support for people with intellectual disabilities with complex care needs, including people with mild or severe intellectual disabilities with behaviour that challenges and people with profound intellectual and multiple disabilities, for a period of six months to three years. Therefore, we were able to include professionals that we expected would strongly require new knowledge, that is, specific knowledge related to their daily work, to supplement the generic knowledge acquired in their education. The average work experience of the participants in their current job was 0.9 years for ID physicians (range 0.5-1.8 years), 1.3 years for support staff (range 0.7-2.3 years), and 1.7 years for psychologists (range 0.6-2.8 years). Table 1 provides an overview of additional demographic characteristics of the participants.

**Table 1 Demographic characteristics of the participants, divided into incoming support staff, psychologists and ID physicians**

	<b>Incoming support staff</b> (N=5)	<b>Incoming psychologists</b> (N=9)	<b>Incoming ID physicians</b> (N=5)
Gender			
Male	3	0	2
Female	2	9	4
Age	42,0 years (range: 22-54)	28.7 years (range: 24-37)	31.6 years (range 29-35)
Years of experience in current job	1.3 (range: 0.7-2.3)	1.7 (range: 0.6-2.8)	0.9 (range: 0.5-1.8)

### Procedures

After the Ethics Review Board of Tilburg University granted ethical approval to conduct the study (RP332), the first author drew up a list of potential care organisations for people with intellectual disabilities to contact to recruit participants. In order to include a diverse sample, these organisations were selected based on their size, both in terms of employees and service users (four of them served 1,000-2,000 service users, two served 2,000-5,000, two served 5,000-7,000 and two served over 7,000 service users), their identity and geographical location (three were located in the north of the Netherlands, four in the south and four were located in the middle). After selecting these ten care organisations for people with intellectual disabilities, intermediaries (like a manager or a policymaker responsible for the knowledge strategy within the organisation) were informed about the aim of the present study and asked to cooperate. All intermediaries were willing to cooperate and contacted the managers of potential locations within their organisations to select professionals to participate in the study. The managers checked which of their employees matched our inclusion criteria. When the professionals gave consent for their contact details to be disclosed, we contacted the professionals to invite them to participate in this study. All the participants agreed to participate and provided written informed consent.

### Concept mapping procedure

In concept mapping, a participatory approach is used, which comprises five consecutive steps: (1) preparation; (2) brainstorming to gather statements; (3) prioritising and clustering of these statements; (4) statistical analysis; and (5) interpreting the concept maps (Trochim 1989).

Step 1: Preparation. In a concept mapping process, the focus sentence is key to the data generation, since the participants are requested to respond to this sentence (Trochim 1989). For the purpose of the current study, the following sentence was chosen by the research team: "In order to stimulate me and other care professionals to apply new knowledge, my organisation can...", which aimed to identify the organisational factors that influence the application of new knowledge by professionals. This focus sentence was based on insights from previous studies highlighting the conditional role of healthcare organisations (Birken and Currie, 2021, Karamitri *et al.* 2015, Kersten *et al.* 2018, Overwijk *et al.* 2021, Pentland *et al.* 2011, Ramerman *et al.* 2018). By using this focus sentence, we aimed to explore the crucial role of organisations and provide greater insight into the perspectives of incoming professionals, which has not been studied previously. Prior to the data collection, the first author conducted a pilot using this focus sentence. In individual online interviews, a representative from each group of participants was asked to (1) finish the predefined focus sentence in as many ways as possible, and (2) to evaluate this task. Since their evaluations verified the clarity and applicability of the task, the focus sentence remained unchanged.

Step 2: Brainstorming to gather statements. In the second step, the perspectives of incoming professionals on how care organisations for people with intellectual disabilities can encourage the application of newly learned knowledge were gathered. Our focus was on support staff, psychologists, and ID physicians who had been working in these organisations for a period of six months to three years. Given that face-to-face focus groups were not appropriate due to COVID-19 restrictions in the Netherlands at that juncture (April-September 2021), online focus groups were organised on MS Teams. A separate online focus group was organised for each profession, resulting in a total of 3 online focus groups. First, a researcher explained the concept mapping procedure. Next, the participants provided their perspectives on the focus sentence. One researcher supervised the focus groups without engaging in the discussion, while a second researcher wrote down the answers to the focus sentence in an MS Excel sheet. Also, the second researcher performed multiple member checks during the focus group meeting by sharing his screen and inviting the participants to provide feedback concerning both the accuracy and completeness of the way in which their answers were formulated. Duplicate statements were only included once. The focus groups were video recorded using the record function in MS Teams.

Step 3: Prioritising and clustering of statements. In the third step, the participants were invited to perform an individual task, which involved prioritising and clustering all the statements deriving from the focus group they attended. To this end, all the statements from each focus group were incorporated into the software program Groupwisdom™ (Concept Systems Incorporated 2021). Several days after the online focus groups, the incoming support staff, psychologists, and ID physicians received an e-mail containing an explanation of both tasks along with a personal link to carry out these tasks individually on their computer. The participants were asked to complete the tasks within a two-week period. After two weeks, a reminder e-mail was sent. In conducting the tasks, the participants were first invited to rate the various statements generated in their focus group on a five-point Likert-scale (ranging from 1=most important to 5=least important). Second, in the clustering task, the participants were asked to group all the statements based on the content of each statement when, according to the participants, they belonged to the same topic. The Groupwisdom™ software limits the maximum number of clusters to ten.

Step 4: Statistical analysis. Next, Groupwisdom™ combined all individually prioritised and clustered statements into a group product for each participant group. Using multidimensional scaling analysis, this program generated visual concept maps for each group of incoming professionals (see Figures 1-3). Within the analysis, statements that were frequently sorted together by the incoming professionals were located closer to each other on the map. A hierarchical cluster analysis was then applied to group similar concepts together into clusters. The optimal number of clusters was explored by two authors, considering 4-12 clusters and merging them until a sensible structure was achieved. Also, the clusters are divided over an x- and y-axis; their ends represent a different content of clusters. Finally, Groupwisdom™ calculated the average ratings given in the prioritizing task to determine the relative importance of the statements and clusters (Kane and Trochim, 2007, Trochim 1989).

Step 5: Interpreting the concept maps. Finally, in two online group discussions, five experts interpreted the three concept maps based on the focus sentence. All experts were involved in knowledge processing: a manager of a training centre in a care organisation for people with intellectual disabilities, a staff member of the care policy department of a care organisation for people with intellectual disabilities, two consultants working on learning innovations within profit and non-profit organisations and on behaviours that challenge in intellectual disabilities care, respectively, and an experienced scientific researcher



specialising in intellectual disabilities care. They collectively discussed the content of each cluster until a consensus was established, after which they then labelled them. These sessions were moderated by two of the researchers. Afterwards, all the authors discussed the labels of all clusters as well as the axes.

## Results

In total, 234 statements were gathered over the course of the three focus groups. An overview of the statements is provided in Appendix 1. Incoming support staff, psychologists, and ID physicians generated 66, 100 and 68 statements, respectively. These statements were grouped into clusters and visualised in concept maps. A map was created for each group, with Figure 1 dedicated to incoming support staff, Figure 2 to incoming psychologists, and Figure 3 to incoming ID physicians. These visual maps allow for a clearer understanding of the relationships and patterns between the statements, making it easier to identify key themes and concepts. Table 2 provides an overview of both the clusters generated by the three participant groups and their average ratings in the prioritising task. The clusters are based on how the participants individually prioritised and clustered all the statements; the labels were provided by the expert group. Below, the clusters for each concept map are presented in descending order of importance.

**Table 2 Clusters and their average rating for each respondent group**

Cluster number	Incoming support staff	Incoming psychologists	Incoming ID physicians
1	Create learning opportunities and accessible sites (4.26)	Work supervisor who provides support during the induction period (4.06)	Make time, money and staff available for knowledge sharing (3.81)
2	Appropriately organise multidisciplinary work in the care of a service user (4.56)*,**	Collaboration in a learning community (3.94)*	Stimulate professional curiosity through exchange and conversation (3.54)*,**
3	Integrate the sharing of experiences and knowledge into the daily work rhythm (4.12)*	Stimulating a broadly oriented professional development (3.29)	Targeted facilitation of professional development of ID physicians (3.29)*
4	Gaining inspiration through stories and enriching experiences (3.97)*	Stimulate knowledge sharing between psychologists and support staff (3.50)*	Open and safe climate to explore and innovate (3.80)*
5	Develop and make accessible a varied and appropriate range of training programmes (4.17)*	Professional development through formal and informal training that contributes to daily practice (3.86)*	Acquire and transfer knowledge in multidisciplinary network environments (3.80)*

6	Knowledge vision and knowledge policy within the organisation (3.84)*
7	Offering clear learning and development paths (3.35)
8	Offer opportunities to deepen and broaden with regard to target groups (3.68)

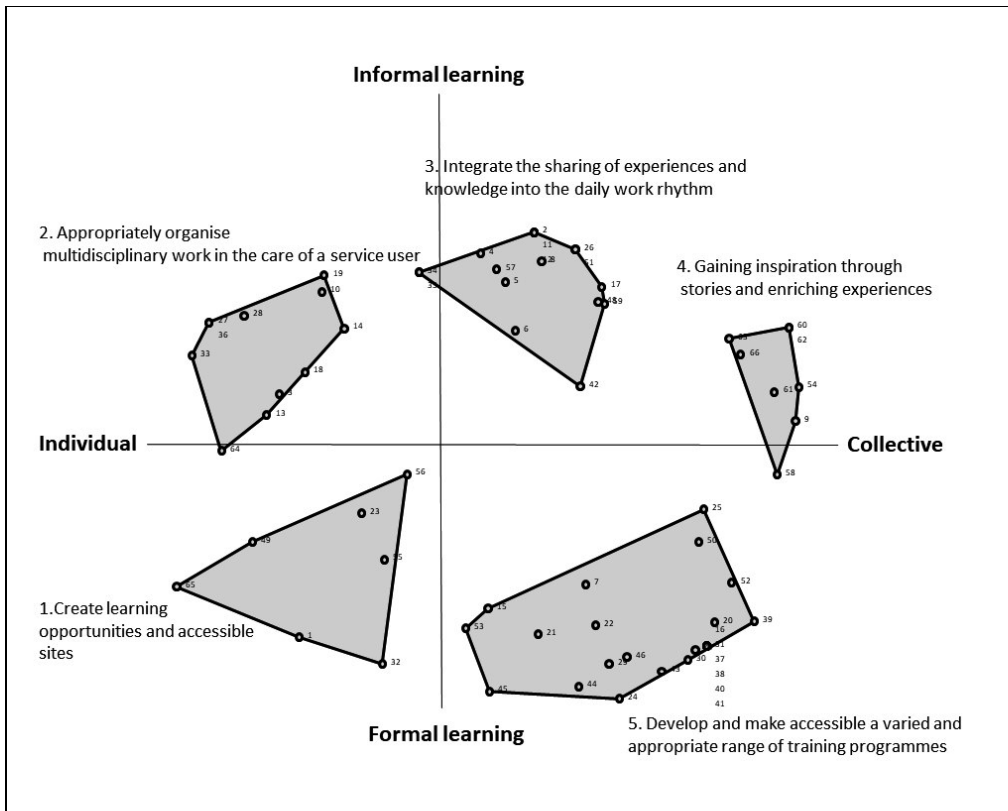
---

Explanatory notes: Rating on a five point Likert-scale (ranging from 1=most important to 5 =least important); \* Other disciplines are involved; \*\* Service users (council) and/or relatives council are also involved.

### Concept map for incoming support staff

The 66 statements provided by the incoming support staff were grouped into five clusters, which are visualised in a concept map (Figure 1). In stimulating themselves and other professionals to apply new knowledge, the incoming support staff considered 'gaining inspiration through stories and enriching experiences' (cluster 4, 8 statements) to be the most important. This suggestion aimed at motivating professionals' knowledge application by providing knowledge in an accessible and inspiring way and encouraging that it be shared, by, for example, visualising success stories in images, so that they come to live more (statement 62 in Appendix 1), or through experiential learning (such as eating in a restaurant in the dark to experience what it is like to be blind) (statement 61 in Appendix 1). The second most important cluster is 'integrate the sharing of experiences and knowledge into the daily work rhythm' (cluster 3, 16 statements). This cluster focused on the teams of professionals who collaborate to support service users together. The incoming support staff indicated that it is important for organisations to encourage the sharing of new knowledge and multidisciplinary experiences within team meetings, which they indicated as a vital precondition for knowledge application, and to offer a team development programme that includes reflecting on the team's own actions and facilitating team learning (statements 2, 5, 11, 42, 51 in Appendix 1).

The third most important cluster is cluster 5 (24 statements): 'develop and make accessible a varied and appropriate range of training programmes', which described features and facilitators of both internal and external courses. Concerning features, the incoming support staff pointed to offering a wide range of both e-learning and live training courses that meet the needs of both service users (like diabetes) and professionals (e.g. statements 7, 29, 30, 38, 39 in Appendix 1). With regard to facilitators, providing time, budget, accessible information, and procedures (for example statements 20, 24, 37, 45 in Appendix 1) were mentioned. According to the incoming support staff, the fourth priority is cluster 1 (7 statements), which was labelled as 'create learning opportunities and accessible sites'.



**Figure 1** Concept mapping for incoming support staff. The cluster titles in the figure correspond to the cluster numbers listed in Table 2.

This cluster pertained to statements about stimulating a learning attitude (statement 1, Appendix 1) and motivating people to acquire knowledge (such as by facilitating time to follow courses; statement 32, Appendix 1) as well as making information (knowledge) easy to find (statement 55, Appendix 1). Both these aspects are strongly related to one another. That is to say, in order to engage with learning opportunities, sites providing accessible information are required, while without organisations motivating support staff to learn, they will not go to the sites where information can be found. Finally, the incoming support staff stressed the need to 'appropriately organise multidisciplinary work in the care of a service user' (cluster 2, 11 statements). On the one hand, this cluster consisted of statements related to multidisciplinary cooperation, like stimulating open communication between all

persons involved (support staff, ID physicians, managers, psychologists, and service users; statement 3, Appendix 1) and the multidisciplinary development of treatment plans grounded in the same vision (statement 18, Appendix 1). On the other hand, the statements in this cluster related to providing organisational preconditions for such cooperation. This involved, amongst other things, creating more space and energy for acquiring and applying new knowledge by paying greater attention to time pressure/work pressure (statements 27, 28, 36 in Appendix 1).

As illustrated by the lines in the concept map (Figure 1), all the clusters are centred around an x- and y-axis, which indicate their focus. While the x-axis ranges from a focus on individual support staff to a focus on their collective (i.e. the teams in which they collaborate), the y-axis distinguishes between informal learning and formal learning.

### **Concept map for incoming psychologists**

The incoming psychologists provided 100 statements, which were subsequently grouped into eight clusters and visualised in a concept map (Figure 2). When organisations encourage the application of new knowledge by incoming professionals, the most important thing for this respondent group was 'stimulating a broadly oriented professional development' (cluster 3, 14 statements). This cluster pointed to broadening the horizon of incoming professionals, by, for example, encouraging them to both participate in their departments (statement 81, Appendix 1) and register with a professional association (statements 75, 76 in Appendix 1). Besides encouraging and stimulating professional development, the incoming psychologists requested greater facilitation in the sharing of knowledge, which, in turn, would increase the knowledge they are able to apply (e.g. statements 34, 36, 37 in Appendix 1). The second most important priority reported by incoming psychologists was 'offering clear learning and developmental paths' (cluster 7, 11 statements), which is related to explicating their organisations' vision on their professional development. In other words, the incoming psychologists indicated that it is important for organisations to give insight into both the knowledge that incoming professionals and professionals with greater work experience are expected to possess (statements 21, 25, 39 in Appendix 1) and the caseload during the induction period (for example, that should not be too large and should be limited to a smaller target group; statements 65, 66 in Appendix 1). In third place, the incoming psychologists prioritised 'stimulate knowledge sharing between psychologists and support staff' (cluster 4, 6 statements), which underscored the importance of both meetings and digital channels for knowledge facilitation and encouragement to increase the knowledge base of all professionals involved. For example,

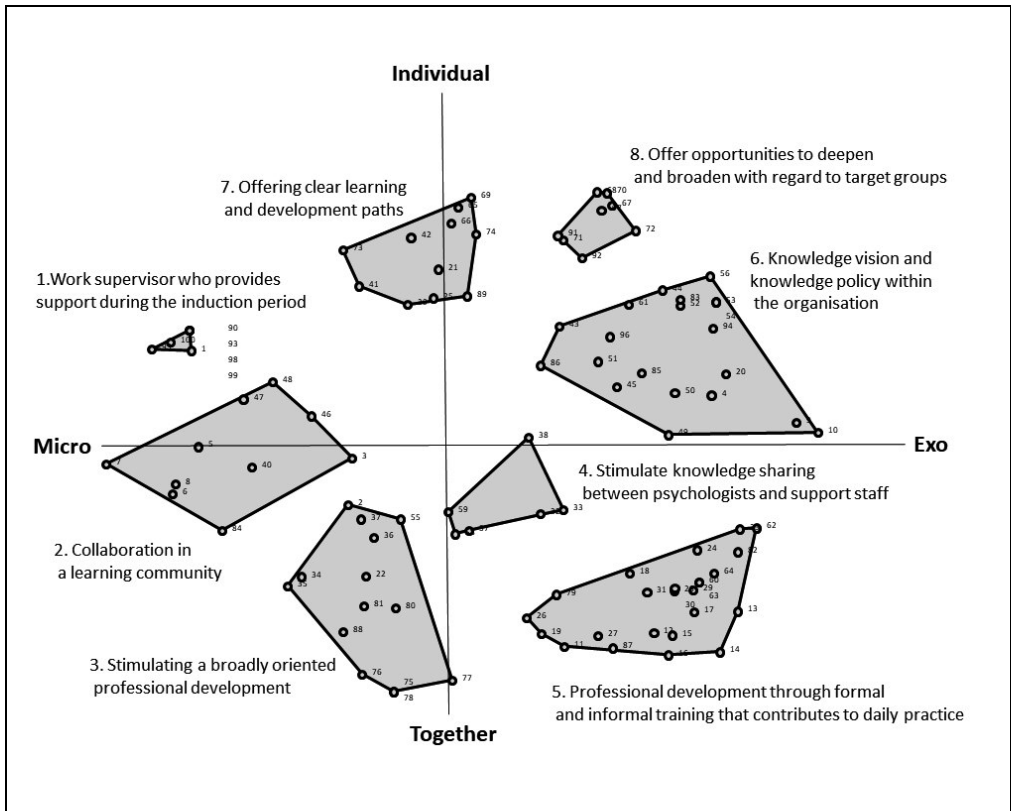
an organisation can provide space for knowledge exchange (statement 32, Appendix 1), which, in turn, can lead to the creation of new knowledge (statement 57, Appendix 1), and encourage incoming psychologists to help support staff in sharing their knowledge (by encouraging them to take ownership; statement 58, Appendix 1), which is a precondition for improved knowledge application.

This is followed by 'offer opportunities to deepen and broaden with regard to target groups' (cluster 8, 8 statements), which pertained to supporting incoming professionals' autonomy in learning by providing the conditions needed to help them develop a preference for a specific target group. For example, the organisation could provide opportunities to identify incoming professionals' preferences and help them choose a target group to work with (statement 67, 68, 70 in Appendix 1). The fifth most important point is 'knowledge vision and knowledge policy within the organisation' (cluster 6, 20 statements), which concerned the incoming psychologists' need for clear guidelines, frameworks, a vision, and a learning culture. Also, they suggested making relevant tools, methods, procedures, and the distribution of responsibilities accessible, for example, by providing insight into the roles and positions of the care manager or team leader (statement 52, Appendix 1). The sixth most important priority for the incoming psychologists is 'professional development through formal and informal training that contributes to daily practice' (cluster 5, 24 statements). With respect to its content they suggested, for example, considering which knowledge is important for which discipline, and when (statement 18, Appendix 1). Moreover, they highlighted what they deemed to be enabling conditions for professional development, namely providing opportunities for support staff to be trained by the psychologists (statement 30, Appendix 1) and to support them with the practical skills they have yet to learn (sufficiently) in their training, such as conversational techniques, positioning within teams and gaining authority (statement 64, Appendix 1).

The seventh priority cited by the incoming psychologists is 'collaboration in a learning community' (cluster 2, 10 statements). They indicated that such a learning community would offer opportunities to not only learn from their direct colleagues (i.e. psychologists) but also from involved support staff. Elaborating on this, the incoming psychologists noted that facilitating support staff in their role as a knowledge holder, more specifically, facilitating and encouraging a sense of ownership amongst them and take into account the amount of information support staff can process (like during COVID-19) (statements 5-8 in Appendix 1). Finally, the incoming psychologists expressed their need for 'a work supervisor who provides support during the induction period' (cluster 1, 7 statements). This supervisor was described as someone who is readily available and reliable, and who incoming

psychologists can check with to ensure they are using the correct working method (statement 90, 99, 100 in Appendix 1). In other words: to assist them to accurately applying newly acquired knowledge.

As Figure 2 visualises, the clusters generated by the incoming psychologists range from both a micro-level focus (i.e. primary process) to an exo-level focus (i.e. organisation, the level in between the micro- and macro-level; x-axis) and a focus on individual professionals to professionals working together (y-axis).



**Figure 2** Concept mapping for incoming psychologists. The cluster titles in the figure correspond to the cluster numbers listed in Table 2.

**Concept map for incoming ID physicians**

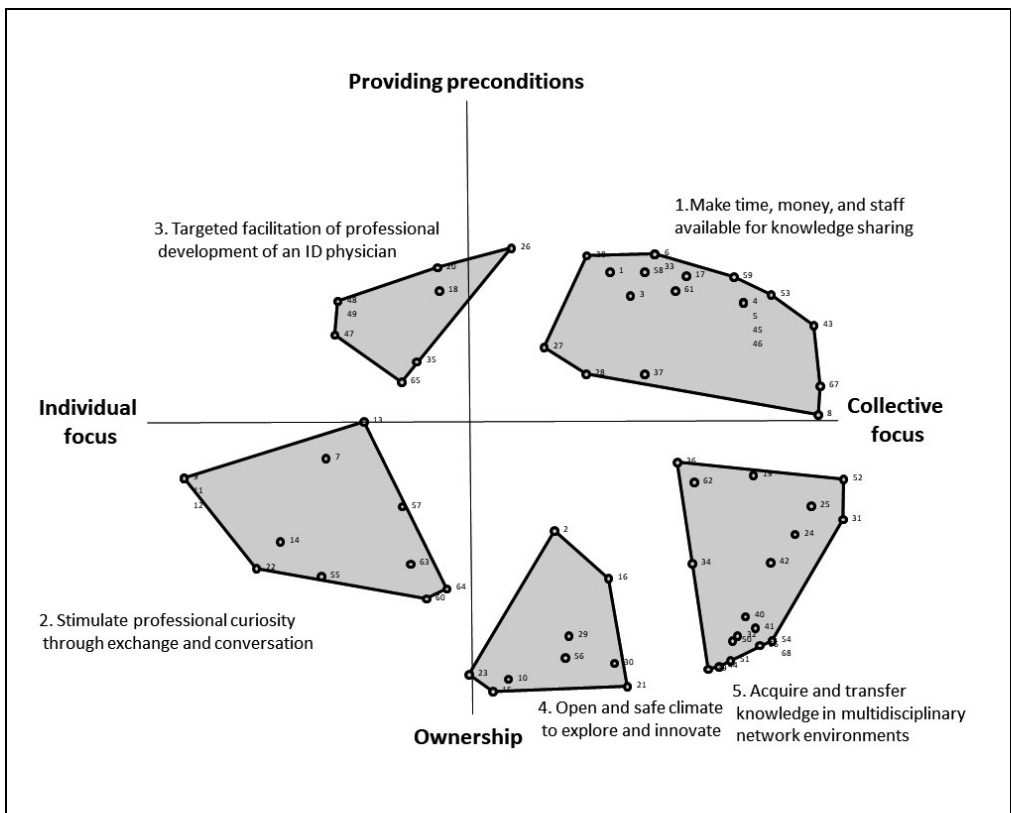
Five clusters were formed based on the 68 statements generated by the incoming ID physicians. With respect to stimulating the application of new knowledge, the 'targeted

facilitation of the professional development as an ID physician' (cluster 3, 8 statements) was considered to be the most important factor for them. According to the incoming ID physicians, this involved a set of preconditions for their professional work. Besides pointing to knowledge sources (such as the availability of a library, statement 49, Appendix 1), they underscored the importance of enlarging their occupational group and provided suggestions for how to do so, such as creating more assignments for training future professionals and encouraging more trained people to come into the profession (statements 18, 20 in Appendix 1). The second-ranked priority for the incoming ID physicians is the cluster 'stimulate professional curiosity through exchange and conversation' (cluster 2, 12 statements). They indicate that it is important that care organisations for people with intellectual disabilities encourage incoming professionals to keep an open mind with respect to issues concerning the service users and to facilitate the exchange of knowledge and ideas in team meetings and between different organisations (statements 14, 55, 60 in Appendix 1). In addition, with respect to stimulating professional curiosity, besides professionals, the contribution of service users was also highlighted in several statements. For example, the suggestion to let support staff and service users discuss the wishes/needs of service users together (statement 11, Appendix 1).

Next, the incoming ID physicians prioritised the following: 'stimulate an open and safe climate to explore and innovate' (cluster 4, 9 statements). This stresses the importance of a safe environment in which uncertainties, problems and errors can be discussed (statement 10, 15 in Appendix 1). In addition, they suggested fostering an innovation climate, which invites incoming professionals to reflect on their own actions and, in so doing, identify where improvements are needed (statement 16, Appendix 1), alongside greater cross-pollination between organisations (statement 29, 56 in Appendix 1). Cluster 5, 'acquire and transfer knowledge in multidisciplinary network environments' (19 statements) was deemed to be of equal importance as cluster 4. Both clusters are in line with each other and concern both incoming ID physicians and other disciplines. While cluster 4 focuses on the working climate, cluster 5 is primarily related to enabling preconditions within their own organisation by providing an overview of the available expertise and encouraging and facilitating the development, sharing and application of knowledge. This would involve, for example, setting up a knowledge network or a joint outpatient clinic of ID physicians with psychologists (statement 39, 41 in Appendix 1). In this way, they could complement each other, give feedback, and learn a lot from each other.

The final cluster of the incoming ID physicians is labelled 'make time, money and staff available for knowledge sharing' (cluster 1, 20 statements). According to incoming ID

physicians, it is important for care organisations for people with intellectual disabilities to facilitate their sharing of knowledge, so that they would have more knowledge to apply. This concerned a variety of preconditions, such as entering into partnerships with other organisations where their own expertise can be deployed (statement 28, Appendix 1), providing efficient work processes and good supportive ICT and office facilities (such as electronic client files) in order to create more space for knowledge application (statement 6, Appendix 1), and letting managers actively encourage employees to develop and facilitate this (statements 58, 59 in Appendix 1).



**Figure 3** Concept mapping for incoming ID physicians. The cluster titles in the figure correspond to the cluster numbers listed in Table 2.

The concept map for the incoming ID physicians (see Figure 3) distinguishes between an individual focus and a collective focus (x-axis). In addition, on the y-axis, providing



preconditions for the stimulation of incoming professionals' application of knowledge (i.e. the role of the organisation) is contrasted with ownership (i.e. their own commitment and role).

To summarise, the concept maps for incoming support staff, psychologists and ID physicians display various clusters of factors that highlight the different ways in which their organisations can encourage them to apply their newly learned knowledge within their jobs. These clusters encompass individual and collective learning, as well as internal and external environmental factors.

## Discussion

This study explored the perspectives of incoming support staff, psychologists and ID physicians on factors stimulating the application of new knowledge within the care and support for people with intellectual disabilities by using the concept mapping method. For each participant group, a concept map was composed based on their jointly generated statements, which they then prioritised and clustered individually.

Examination of the concept maps of the three groups of incoming professionals shows their similarities. They all mentioned factors relating to both individual and collective learning, with the latter both including mono- and multidisciplinary learning. More specifically, they all referred to ways in which both their own and their teams' ability to learn, share and apply new knowledge are likely to increase. Together, their concept maps also encompass a broad spectrum of stimulating factors, ranging from (1) providing tailored learning opportunities, (2) providing accessible sites, tools, and platforms to share knowledge, (3) stimulating motivation and ownership, (4) providing conditional resources like time, space, and budget, and (5) a stimulating environment with an open and safe climate and supporting structures (like multidisciplinary consultation).

The heterogeneity of factors stimulating the application of new knowledge is in accordance with Kersten *et al.*'s review (2018), who distinguished between three main clusters of factors, namely characteristics of the intervention, persons and the organisational context. Given that the incoming professionals mentioned both formal (such as training) and informal channels (like work-based learning), we recommend that care organisations for people with intellectual disabilities pay attention to the character of the learning opportunities (i.e. formal versus informal learning) and provide a mixture of formal and informal channels. Although formal learning is still common practice, research indicates that informal learning connects better with the learning style of support staff in intellectual

disabilities care (Gormley *et al.* 2020). Informal learning belongs to the factors that aim to affect the personal characteristics of professionals on an individual level, by stimulating their motivation to learn.

Alongside this, the incoming professionals also cited factors at the organisational level that foster a stimulating context such as knowledge, financial resources, a learning culture and tailored learning opportunities. This combination of factors influencing both personal characteristics and the context is consistent with the need for a knowledge application capacity, which Berta *et al.* (2010, p. 1) defined as “the absorptive capacity to effect change through learning”, referring to the ability of an organisation to recognize the value of new, external information, assimilate it and apply it. Taking into account that this combination of factors is required to stimulate knowledge application is likely to prove beneficial for the attempts of care organisations for people with intellectual disabilities’ to improve their knowledge application capacity.

A comparison of the three concept maps, including their axes, displays a second similarity between the three groups of incoming professionals, as well as differences between them. Like expressed by the labels of the axes, they all indicated that stimulating knowledge application requires individual and collective learning as well as organisational resources, both at the micro and organisational level. This is consistent with a review of Muller-Schoof and colleagues (2021), in which factors influencing caregivers’ learning in nursing homes were identified. They also concluded that this involves individual learning, collective learning and resources. However, in that study, no levels to which the resources belong (micro- or organisational level) were specified. Besides these similarities, there were also differences between the three concept maps corresponding to the specific needs highlighted by the incoming professionals concerning a stimulating organisational context, and reflect how they perceive their own role. Specifically, this difference concerns incoming support staff versus incoming practitioners (i.e. psychologists and ID physicians). The incoming support staff appeared to define themselves primarily as knowledge receivers and expressed a lack of ownership over their knowledge, requested both informal and formal modes of learning, focusing on both individuals and their teams. In accordance with their preference for informal learning, they also mainly reported the enabling conditions in their daily work (i.e. at the micro-level), such as integrating the sharing of experiences and knowledge within their daily work rhythm, which would enable them to apply more knowledge. This is consistent with results of Nijs *et al.* (2022), who conducted a concept mapping study amongst service users, experienced support staff and psychologists on how to improve the support for people with intellectual disabilities with behaviours that

challenge. They found similar needs from support staff, such as a need for knowledge, skills, and attitudes, coaching, reflection and a sense of feeling supported and appreciated by means of a reduced workload and the availability of additional expertise. Moreover, these authors established that experienced psychologists perceive support staff as knowledge holders, just as the incoming psychologists in our study indicated.

Furthermore, we found that both incoming psychologists and incoming ID physicians displayed their ownership (i.e. as a knowledge holder) by sharing their knowledge with support staff. These incoming professionals requested opportunities to develop themselves both in the internal (micro- and exo-level) and in the external context (macro-level). For example, they noted being encouraged to register with a professional association in order to extend their own knowledge base and identify knowledge relevant for their organisation such as a new diagnostic method. In this respect, they can be said to perform a so-called boundary spanning role, which Greenhalgh *et al.* (2004) argue is beneficial for adopting innovations insofar as it allows these professionals to identify new knowledge. Finally, the vital role played by clinical leaders, identified by Berta *et al.* (2010), was mainly noted by the incoming psychologists in our study when expressing the need for a supervisor. Regarding the internal context, especially ID physicians requested more assignments for training future professionals. Although there were similarities, the three groups of incoming professionals all expressed distinct needs, we recommend adopting a customised approach for each group of incoming professionals in order to stimulate their application of new knowledge.

When examining the clusters of factors reported by the incoming professionals, combinations of the four main strategies employed by CEOs to stimulate the sharing and application of knowledge in care organisations for people with intellectual disabilities were identified: providing organisational conditions for effective knowledge processes; focusing attention on talent development; acknowledging and deploying knowledge holders, and knowledge-driven participation in collaborative partnerships (Kersten *et al.* 2022a). For example, providing sites, tools, and platforms through which to share knowledge is part of the strategy related to effective knowledge processes, while encouraging motivation and a sense of ownership relates to talent development. Interestingly, the results of the present study establish that these strategies appear to be standard practice (Kersten *et al.* 2022a). For example, the aforementioned strategies regarding talent development are similar to the suggestions of the incoming professionals regarding learning. Whereas these authors found that combining strategies enabled them to complement and reinforce one another, the current analysis conducted by Groupwisdom™ provide valuable insights into what are good

combinations of factors to be combined in strategies, for example 'Creating learning opportunities and accessible sites'.

Given that knowledge in the field of intellectual disabilities care derives from multiple sources (i.e. evidence-based practices, professional expertise and experiential expertise of service users and their relatives (Embregts 2017), it is relevant to know whether these sources were all acknowledged by the incoming professionals in our study. A closer look at the stakeholders mentioned in the three concept maps shows that in most clusters several disciplines are involved, such as support staff, psychologists, ID physicians, physiotherapists, and dietitians, which implicates the use of evidence based and practice based knowledge. This is consistent with the multidisciplinary character of intellectual disabilities care ( Farrington et al., 2015, Haines and Brown, 2018, Herps *et al.* 2016). However, the role played by service users and relatives, and thus experiential expertise, is mostly lacking in our study, which indicates a blind spot of the incoming professionals. Recent research (e.g. Jansen *et al.* 2018, Nijs *et al.* 2022, Olivier-Pijpers *et al.* 2020) underscores their valuable contribution by bringing in an expedient additional perspective in order to improve the support for people with intellectual disabilities. The involvement of relatives, in terms of sharing knowledge, is also required in light of sustainable service provision, which acknowledges the indispensable role played by the informal network during the COVID-19 pandemic (Trip *et al.* 2022). Therefore, this blind spot needs attention in the knowledge policies of care organisations for people with intellectual disabilities.

### **Limitations**

The findings of the present study should be interpreted in light of several limitations. The first limitation pertains to the small number of participating incoming support staff and ID physicians, which is likely due to the COVID-19 pandemic, insofar as this demanded prioritising the primary process and led to intensified work pressure and a shortage of staff. However, Kane and Trochim (2007) suggest at least five participants can produce meaningful data. Second, although a wide variety of experts were included in the expert group, the study lacked insight from an organisational science expert as well as from relatives and service users. This might have influenced the interpretation of the concept maps. We recommend replicating this study with larger numbers and including an expert on organisational science and relatives and service users in the expert group. Likewise, the study may be limited by not including incumbent professionals, as their perspectives may differ from those of incoming professionals. Future research may benefit from including professionals with a broader range of experience. Finally, the transferability of the findings

to other settings or countries may be limited since the study was conducted only in the Netherlands. However, the organisational issues and challenges present in the Netherlands may be comparable to those in other developed countries where mainstream organisations provide services to individuals with intellectual disabilities. Conducting similar research in other countries would help determine the generalizability of the present findings.

### **Clinical implications**

Our results indicate five key strategies through which to stimulate the application of new knowledge by incoming professionals: (1) providing tailored formal and informal learning opportunities, (2) providing accessible sites, tools, and platforms to share knowledge, (3) stimulating motivation and a sense of ownership, (4) providing preconditional resources such as time, space, and budget, and (5) providing a stimulating environment characterised by an open and safe climate and supportive structures (e.g. via multidisciplinary consultations). As such, care organisations for people with intellectual disabilities should consider the strategies suggested by the incoming professionals on how individual and collective learning can be facilitated including both personal characteristics and the context. Additionally, co-creative collaboration between all knowledge holders, including relatives and service users, will add to a customised response to the different groups of incoming professionals, accommodating their specific needs and providing a mixture of formal and informal learning opportunities. This might prove beneficial when seeking to maintain or improve incoming professionals' performance (i.e. their contribution to the quality of life of their service users) in the current era of labour market shortages.

Given that the incoming professionals mentioned both formal channels for learning, such as training, and informal channels for learning, such as work-based learning, the present study indicates that it is important for care organisations for people with intellectual disabilities to pay attention to the character of the learning opportunities (i.e. formal versus informal learning) and provide a mixture of formal and informal channels. Although formal learning is still common practice, research indicates that informal learning connects better with the learning style of support staff in intellectual disabilities care (Gormley *et al.* 2020). Moreover, in light of the specific needs highlighted by incoming professionals, the present study suggests that adopting a customised approach for each group of incoming professionals in order to stimulate their application of new knowledge is essential. Applying the aforementioned implications of the present study will not only prove beneficial for incoming professionals without previous experience in the care and support for people with intellectual disabilities, but will also prove beneficial for incumbent professionals and

incoming professionals - with experience in the care and support for people with intellectual disabilities - who are embarking on a new job in a different care organisation.

This study provides valuable insights into the perspectives of incoming professionals regarding the ways in which care organisations for people with intellectual disabilities can effectively promote the application of newly acquired knowledge. Furthermore, it highlights the importance of environmental factors in providing professionals with the necessary knowledge. For example, the study reveals that incoming professionals expressed a need for more practical training during their initial vocational education and showed interest in joining professional associations. These findings are consistent with previous research (Kersten *et al.*, 2022b) emphasizing the role of environmental factors in the successful execution of knowledge strategies within these organisations.

### **Conclusion**

To conclude, the results of this study show that from the perspective of incoming professionals there are numerous ways in which their organisations can stimulate the application of new knowledge, such as arousing motivation, and providing preconditional resources and an inspiring environment.

## References

- Augustsson, H., Churruca, K. and Braithwaite, J. 2019. Re-energising the way we manage change in healthcare: the case for soft systems methodology and its application to evidence-based practice. *BMC Health Services Research* 19, 1-11.  
<https://doi.org/10.1186/s12913-019-4508-0>
- Berta, W., Teare, G.F., Gilbert, E., Ginsburg, L. S., Lemieux-Charles, L., Davis, D. and Rappolt, S. 2010. Spanning the know-do gap: understanding knowledge application and capacity in long-term care homes. *Social Science & Medicine*, 70, 1326-1334.  
<https://doi.org/10.1016/j.socscimed.2009.11.028>
- Birken, S. A. and Currie, G. 2021. Using organization theory to position middle-level managers as agents of evidence-based practice implementation. *Implementation Science*, 16, 1-6. <https://doi.org/10.1186/s13012-021-01106-2>
- Burton, M., and Chapman, M. J. 2004. Problems of evidence based practice in community based services. *Journal of Learning Disabilities*, 8, 56-70.  
<https://doi.org/10.1177/1469004704041705>
- Cobigo, V., Martin, L., Lysaght, R., Lunskey, Y., Hickey, R. and Ouellette-Kuntz, H. 2014. Quality improvement in services for adults with intellectual and developmental disabilities: Guiding principles. *Journal on Developmental Disabilities*, 20, 89-102. Retrieved from: [https://oadd.org/wp-content/uploads/2014/12/41018\\_JoDD\\_20-2\\_v10f\\_89-102\\_cobigo\\_et\\_al.pdf](https://oadd.org/wp-content/uploads/2014/12/41018_JoDD_20-2_v10f_89-102_cobigo_et_al.pdf)
- Concept Systems Incorporated. 2021. Concept System Groupwisdom™ (Build 2020.24.01) [Web-based Platform], <https://www.groupwisdom.tech>.
- de Boer, M. E., Depla, M. F., Frederiks, B. J., Negenman, A. A., Habraken, J. M., van Randeraad-van der Zee, C. H., Embregts, P. J. and Hertogh, C. M. 2019. Involuntary care—capturing the experience of people with dementia in nursing homes. A concept mapping study. *Aging & Mental Health*, 23, 498-506.  
<https://doi.org/10.1080/13607863.2018.1428934>
- Drahota, A. M. Y., Meza, R. D., Brikho, B., Naaf, M., Estabillo, J. A., Gomez, E. D., Vejnaska, S. F., Dufek, S., Stahmer, A. C. and Aarons, G. A. 2016. Community-academic partnerships: A systematic review of the state of the literature and recommendations for future research. *The Milbank Quarterly*, 94, 163-214.  
<https://doi.org/10.1111/1468-0009.12184>
- Embregts, P. J. C. M. 2017. Kennisontwikkeling en kennisdeling in gelijkwaardige verbinding tussen praktijk en wetenschap. *NTZ: Nederlands Tijdschrift voor de Zorg aan Mensen*

- met Verstandelijke Beperkingen*, 43, 219-26. Retrieved from:  
[https://www.ntzonline.nl/art/50-4446\\_Kennisontwikkeling-en-kennisdeling-in-gelijkwaardige-verbinding-tussen-praktijk-en-wetenschap](https://www.ntzonline.nl/art/50-4446_Kennisontwikkeling-en-kennisdeling-in-gelijkwaardige-verbinding-tussen-praktijk-en-wetenschap)
- Farrington, C., Clare, I. C. H., Holland, A. J., Barrett, M. and Oborn, E. 2015. Knowledge exchange and integrated services: experiences from an integrated community intellectual (learning) disability service for adults. *Journal of Intellectual Disability Research: JIDR*, 59, 238-247. <https://doi.org/10.1111/jir.12131>
- Gormley, L., Healy, O., Doherty, A., O'Regan, D. and Grey, I. 2020. Staff training in intellectual and developmental disability settings: A scoping review. *Journal of Developmental and Physical Disabilities*, 32, 187-212.  
<https://doi.org/10.1007/s10882-019-09683-3>
- Greenhalgh, T., Robert, G., Macfarlane, F., Bate, P. and Kyriakidou, O. 2004. Diffusion of innovations in service organizations: systematic review and recommendations. *The Milbank Quarterly*, 82, 581-629. <https://doi.org/10.1111/j.0887-378X.2004.00325.x>
- Haines, D., and Brown, A. 2018. Health professionals working effectively with support workers to enhance the quality of support for adults with intellectual disabilities: A meta-ethnography. *Journal of Applied Research in Intellectual Disabilities: JARID*, 31, 200-212. <https://doi.org/10.1111/jar.12343>
- Herps, M. A., Buntinx, W. H. E., Schalock, R. L., Van Breukelen, G. J. P. and Curfs, L. M. 2016. Individual support plans of people with intellectual disabilities in residential services: content analysis of goals and resources in relation to client characteristics. *Journal of Intellectual Disability Research: JIDR*, 60, 254-262.  
<https://doi.org/10.1111/jir.12245>
- Jansen, S. L., van der Putten, A. A., Post, W. J. and Vlaskamp, C. 2018. Do they agree? How parents and professionals perceive the support provided to persons with profound intellectual and multiple disabilities. *Journal of Intellectual & Developmental Disability*, 43, 441-452. <https://doi.org/10.3109/13668250.2017.1287885>
- Kaiser, A. P. and McIntyre, L. L. 2010. Introduction to special section on evidence-based practices for persons with intellectual and developmental disabilities. *American Journal on Intellectual and Developmental Disabilities*, 115, 357-363.  
<https://doi.org/10.1352/1944-7558-115-5.357>
- Kane, M., and Trochim, W. M. K. 2007. *Concept mapping for planning and evaluation*. Thousand Oaks, CA: SAGE.



- Karamitri, I., Talias, M. A. and Bellali, T. 2017. Knowledge management practices in healthcare settings: a systematic review. *The International journal of health planning and management*, 32, 4-18. <https://doi.org/10.1002/hpm.2303>
- Kersten, M., Taminiau, E., Weggeman, M. and Embregts, P. 2022b. Contextual factors related to the execution of knowledge strategies in intellectual disabilities organizations. *Knowledge and Process Management*. 29, 242-254. <https://doi.org/10.1002/kpm.1700>
- Kersten, M.C.O., Taminiau, E.F., Schuurman, M.I.M., Weggeman, M.C.D.P. and Embregts, P.J.C.M., 2018. How to improve sharing and application of knowledge in care and support for people with intellectual disabilities? A systematic review. *Journal of Intellectual Disability Research: JIDR*, 62, 496-520. <https://doi.org/10.1111/jir.12491>
- Kersten, M., Taminiau, E., Weggeman, M. and Embregts, P. 2022a. Motives and strategies for stimulating the sharing and application of knowledge in care and support for people with intellectual disabilities. *Journal of Knowledge Management*, 26, 114-141. <https://doi.org/10.1108/JKM-06-2021-0463>
- Lokman, S., van Oorsouw, W. M., Didden, R. and Embregts, P. J. 2022. Setting up a new team of support staff for people with mild intellectual disability or borderline intellectual functioning and severe challenging behaviour: A concept mapping study. *Journal of Applied Research in Intellectual Disabilities: JARID*. 35, 1348-1359. <https://doi.org/10.1111/jar.13023>
- Muller-Schoof, I. J., Verbiest, M. E., Stoop, A., Snoeren, M. and Luijkx, K. G. 2022. How do practically trained (student) caregivers in nursing homes learn? A scoping review. *Journal of Nursing Education and Practice*, 12, 25-33. <https://doi.org/10.5430/jnep.v12n1p25>
- Nicolini, D., Powell, J., Conville, P. and Martinez-Solano, L. 2008. Managing knowledge in the healthcare sector. A review. *International Journal of Management Reviews*, 10, 245-263. <https://doi.org/10.1111/j.1468-2370.2007.00219.x>
- Nijs, S., Taminiau, E. F., Frielink, N. and Embregts, P. J. C. M. 2022. Stakeholders' perspectives on how to improve the support for persons with an intellectual disability and challenging behaviors: a concept mapping study. *International Journal of Developmental Disabilities*, 68, 25-34. <https://doi.org/10.1080/20473869.2019.1690859>
- Olivier-Pijpers, V. C., Cramm, J. M. and Nieboer, A. P. 2020. Residents' and resident representatives' perspectives on the influence of the organisational environment on

- challenging behaviour. *Research in Developmental Disabilities*, 100, 103629. <https://doi.org/10.1016/j.ridd.2020.103629>
- Olsson, S., and Gustafsson, C. (2020). Employees' experiences of education and knowledge in intellectual disability practice. *Journal of Policy and Practice in Intellectual Disabilities*, 17, 219-231. <https://doi.org/10.1111/jppi.12338>
- Overwijk, A., Hilgenkamp, T. I., van der Schans, C. P., van der Putten, A. A. and Waninge, A., 2021. Needs of direct support professionals to support people with intellectual disabilities in leading a healthy lifestyle. *Journal of Policy and Practice in Intellectual Disabilities*, 18, 263-272. <https://doi.org/10.1111/jppi.12383>
- Pentland, D., Forsyth, K., Maciver, D., Walsh, M., Murray, R., Irvine, L. and Sikora, S. 2011. Key characteristics of knowledge transfer and exchange in healthcare: integrative literature review. *Journal of Advanced Nursing*, 67, 1408-1425. <https://doi.org/10.1111/j.1365-2648.2011.05631.x>
- Ramerman, L., Hoekstra, P. J. and Kuijper, G. de 2018. Exploring barriers and facilitators in the implementation and use of guideline recommendations on antipsychotic drug prescriptions for people with intellectual disability. *Journal of Applied Research in Intellectual Disabilities: JARID*, 31, 1062-1070. <https://doi.org/10.1111/jar.12461>
- Ruud, M. P., Raanaas, R. K. and Bjelland, M. 2016. Caregivers' perception of factors associated with a healthy diet among people with intellectual disability living in community residences: a concept mapping method. *Research in Developmental Disabilities*, 59, 202-210. <https://doi.org/10.1016/j.ridd.2016.09.006>
- Schalock, R. L., Verdugo, M. A., Bonham, G.S., Fantova, F. and Van Loon, J., 2008. Enhancing personal outcomes: Organizational strategies, guidelines, and examples. *Journal of Policy and Practice in Intellectual Disabilities*, 5, 276-285. <https://doi.org/10.1111/j.1741-1130.2007.00135.x>
- Schepens, H. R., Van Puyenbroeck, J. and Maes, B. 2019. How to improve the quality of life of elderly people with intellectual disability: A systematic literature review of support strategies. *Journal of applied research in intellectual disabilities*, 32, 483-521. <https://doi.org/10.1111/jar.12559>
- Trip, H., Northway, R., Perkins, E., Mirfin-Veitch, B. and Adams, R. 2022. COVID-19: Evolving challenges and opportunities for residential and vocational intellectual disability service providers. *Journal of Policy and Practice in Intellectual Disabilities*, 19, 102-115. <https://doi.org/10.1111/jppi.12414>

- Trochim, W. M., 1989. An introduction to concept mapping for planning and evaluation. *Evaluation and Program Planning*, 12, 1-16. [https://doi.org/10.1016/0149-7189\(89\)90016-5](https://doi.org/10.1016/0149-7189(89)90016-5)
- Trochim, W. and Kane, M. 2005. Concept mapping: an introduction to structured conceptualization in health care. *International Journal for Quality in Health Care*, 17, 187-191. <https://doi.org/10.1093/intqhc/mzi038>
- Van Bon-Martens, M. J., van de Goor, I. A. and van Oers, H. A. 2017. Concept mapping as a method to enhance evidence-based public health. *Evaluation and Program Planning*, 60, 213-228. <https://doi.org/10.1016/j.evalprogplan.2016.08.014>
- Van Dijk, A., De Nooijer, A., Niessen, I., Kerkhof, L., Buter, M., Verpalen, S. and Dragt, W. 2021. Alle aandacht naar implementatie Evaluatie van de kennisinfrastructuur langdurige zorg. Utrecht, AndersonElffersFelix & ExpertiseZorg Retrieved from: <https://www.zorginstituutnederland.nl/publicaties/rapport/2021/11/12/onderzoeksrapport-alle-aandacht-naar-implementatie---evaluatie-van-de-kennisinfrastructuur-langdurige-zorg>
- Van Driesten, G. and Wessels, K. 2020. *Zó werkt de gehandicaptenzorg*. Amsterdam, De Argumentenfabriek.
- Vereniging Gehandicaptenzorg Nederland. 2019. *De gehandicaptenzorg in kerngetallen*. Retrieved from: <https://www.vgn.nl/feiten-en-cijfers-de-gehandicaptenzorg>
- Weggeman, M. C. D. P. 2007. *Leidinggeven aan professionals? Niet doen*. Schiedam: Scriptum.
- World Health Organization, 2006. *Bridging the "know-do" gap. Meeting on knowledge translation in global health*. Geneva: WHO.
- Zorginstituut Nederland (2016). *Passend Onderzoek effectiviteit Langdurige Zorg*. Retrieved from: <https://www.zorginstituutnederland.nl/publicaties/rapport/2016/12/12/passend-onderzoek-effectiviteit-langdurige-zorg>

## Appendix 1

Statements gathered in response to the predefined focus sentence: ““In order to stimulate me and other care professionals to apply new knowledge, my organisation can...”...” (Step 2 of the concept mapping procedure)

### Statements provided by Support staff

Cluster 1: Create learning opportunities and accessible sites

- 1 Encourage a learning attitude and reflection on one's own work situation (e.g. also by participating in a study)
- 23 Identify the qualities of employees and facilitate them to develop further (e.g. via a trajectory in which previously acquired competences are recognised)
- 32 Facilitate time to follow courses in order to motivate employees to acquire knowledge
- 49 Clearly indicate where information can be found within the organisation via signposting (personal or digital)
- 55 Make information (knowledge) easy to find
- 56 Capture information (knowledge) in a clear way
- 65 Encourage professionals to feel pride about their positive experiences by showing and sharing your qualities as support staff

Cluster 2: Appropriately organise multidisciplinary work in the care of a service user

- 3 Stimulate open communication between all those involved (support staff, ID physicians, managers, psychologists and service users)
- 10 Provide support from psychologists and managers to teams
- 13 Promote that support staff are on the same page and that everyone offers the agreed guidance to service users
- 14 Be open to the signals from professionals that a service user is not doing well and take action on behalf of the organisation together as a team
- 18 Encourage that a treatment plan is developed in a multidisciplinary consultation based on a shared vision
- 19 Encourage that in a multidisciplinary consultation (with support staff, ID physician and psychologist) an image is formed about the situation of the service user based on the current information
- 27 Ensure there are enough colleagues to reduce workload
- 28 Ensure less turnover and greater continuity in colleagues (i.e., not always flexible workers) in order to reduce the workload
- 33 Facilitate time for coaching (new) colleagues so that you can also exhibit enthusiasm
- 36 Pay attention to time pressure/work pressure, so that more space and energy is created for acquiring and applying new knowledge
- 64 Keep an eye out for the qualities of support staff and try to strengthen these by making them visible

Cluster 3: Integrate the sharing of experiences and knowledge into the daily work rhythm

- 2 Facilitate the improvement of team functioning (share opinions in meetings to understand each other better)

- 4 Encourage support staff themselves to remain enthusiastic and motivated by sharing positive experiences with each other
- 5 Encourage that multidisciplinary experiences are shared with each other
- 6 Encourage psychologists to participate in the group from time to time so that they also get a concrete picture of things
- 8 Ensure that other disciplines can support the team with their own knowledge and insights in the event of problems (e.g. providing an identification plan)
- 11 Provide a team development programme that includes reflection on the team's own actions and encourages team learning (via discussion of team roles)
- 12 Organize monthly team meetings, which also include the manager and the psychologist, and ensure that during each meeting one resident is discussed and one team role
- 17 Encourage that a service users' progress becomes visible to professionals through video recordings and can be shared with all involved
- 26 Offer the possibility (again) for live meetings because you learn more from them
- 34 Allow for time to train a new colleague so that one's own work is not left undone
- 35 Allow for time to train a new colleague so that there is also room for questions and someone does not have to figure it all by themselves
- 42 Offer space in team meetings to share new knowledge (e.g. about new care and coercion law, changes in medication)
- 48 Appoint knowledge brokers who can ensure that knowledge is shared between homes and groups
- 51 Organise fixed moments at which knowledge can be shared (such as in team meetings)
- 57 Make it possible for professionals and teams to look behind the scenes
- 59 Indicate which paths should be taken internally to share success stories

#### Cluster 4: Gaining inspiration through stories and enriching experiences

- 9 Ensure that other disciplines, such as psychologists, ID physicians, physiotherapists and dietitians, can provide new knowledge about how to deal with service users from outside the team
- 54 Make information (knowledge) easily accessible via the intranet
- 58 Allow for space in the internal training to share experiences, which then ensures that it is spread like an oil slick
- 60 Make it easy to share a success story (e.g. around permission for images)
- 61 Inspire professionals by providing knowledge through experiential learning (such as eating in a restaurant in the dark to learn what it is like to be blind or experiencing autism)
- 62 Visualise success stories in images so that they come to life more
- 63 Let the communication department share experiences of professionals who have a proactive attitude
- 66 Encourage professionals to share success stories in which new knowledge has been applied (from technology to care and coercion law) in order to motivate others

#### Cluster 5: Develop and make accessible a varied and appropriate range of training programmes

- 7 Facilitate further training of psychologists and ID physicians so that they have the latest insights
- 15 Proactively respond to the (knowledge) needs of the staff
- 16 Allow use of an extensive and wide range of courses within the organisation (e.g. also on euthanasia)
- 20 Offer a separate budget for external courses
- 21 Have managers provide courses to healthcare professionals that specifically relate to service users' problems
- 22 Encourage participation in (mandatory) courses necessary to work for the organisation
- 24 Offer trajectories in which previously acquired competences are recognised so that professionals can develop further
- 25 Encourage professionals to help with training or research in order to apply their knowledge
- 29 Offer appropriate training courses that meet the needs of service users
- 30 Offer appropriate training courses that meet the needs of professionals
- 31 Provide a budget for employees to follow courses in order to help to motivate them to acquire further knowledge
- 37 Offer information via e-learning and the intranet
- 38 Offer e-learning so that you can choose when you follow the module
- 39 In addition to e-learning modules for skills, also offer live group meetings (e.g. practice to learn to prick)
- 40 Use e-learning modules that are interactive in nature (e.g. with assignments)
- 41 Offer courses on themes that are very much in line with the care needs of their own service users (e.g. diabetes)
- 43 Announce which courses are available and which new courses are on the horizon via clear communication
- 44 Set up an accessible procedure for following a training course (removing barriers, e.g. regarding team budget)
- 45 Build in time for employees to be able to take part in a training (such as Community Care)
- 46 Encourage professionals to follow training courses
- 47 Offer a good training offer with a wide range of training and courses
- 50 Appoint a dedicated officer for knowledge/innovation within the organisation who can provide new knowledge (source of information)
- 52 Offer information (knowledge) in an accessible language
- 53 Initially describe information (knowledge) in a compact way, so that it stimulates people to read further

#### Statements provided by Psychologists

Cluster 1: Work supervisor who provides support during the induction period

- 1 Enable regular contact with the work supervisor during the induction period
- 90 Provide a work supervisor during the induction period, which would allow you to check whether you are using the correct working method
- 93 Provide good supervision during the induction period that can help you think through things

- 95 Provide a supervisor during the induction period who can help you to look beyond your day-to-day routine
- 98 During the induction period, provide the opportunity to choose your own supervisor with whom you click the most
- 99 During the induction period, provide a supervisor who is accessible and readily available
- 100 Provide a supervisor during the induction period who gives you confidence

#### Cluster 2: Collaboration in a learning community

- 3 Provide access to examples and formats of reports from colleagues
- 5 Facilitate the support staff in their functioning as knowledge holder
- 6 Take into account the amount of information support staff can process (e.g. during the COVID-19 pandemic)
- 7 Encourage a sense of ownership amongst the support staff
- 8 Facilitate a sense of ownership by support staff (e.g. making time available)
- 40 Provide an overview of colleagues specialisations
- 46 Foster a good working atmosphere among colleagues
- 47 Provide the opportunity to observe a more experienced colleague to see how they handle it
- 48 Provide the opportunity to work at a location with a more experienced colleague to consult with
- 84 Enable easy interaction between colleagues

#### Cluster 3: Stimulating a broadly oriented professional development

- 2 Provide access to examples and formats of peer referrals
- 22 Encourage psychologists to share with each other what knowledge is necessary to be able to work as a psychologist
- 34 Facilitate space to meet other colleagues from other regions and other disciplines
- 35 Make time available for meeting other colleagues and engaging with other disciplines from other regions
- 36 Facilitate that different disciplines from different regions can share their experiences with and questions about the target group
- 37 Facilitate that healthcare professionals can share their experiences about certain target groups
- 55 Encourage healthcare professionals to ask each other questions in order to make use of each other's knowledge
- 75 Encourage staff to be registered with a professional association in order to be able to comply with the re-registration
- 76 Encourage them to register with a professional association so that you can go there with your questions
- 77 Stimulate registration at SKJ [=Youth Quality Register Foundation] because re-registration helps you to develop as a professional
- 78 Encourage them to register with a professional association to connect with other colleagues
- 80 Encourage participation in intervision sessions
- 81 Encourage participation in their departments

- 88 Offer reference meetings where you can meet other psychologists of your own organisation

Cluster 4: Stimulate knowledge sharing between psychologists and support staff

- 32 Facilitate knowledge sharing through meetings
- 33 Facilitate sharing knowledge digitally, e.g. via a site similar to Facebook
- 38 Share a knowledge map for your own organisation (knowledge networks, reporting point)
- 57 Provide space for the exchange of knowledge between psychologists and support staff, which can lead to the generation of new knowledge
- 58 Encourage psychologists to help support staff share their knowledge (by encouraging them to take ownership)
- 59 Stimulate knowledge exchange in the group between psychologists and support staff so that new knowledge is generated

Cluster 5: Professional development through formal and informal training that contributes to daily practice

- 11 Encourage the acquired knowledge to be shared with other disciplines such as care managers
- 12 Encourage the knowledge to be written down
- 13 Regularly refresh acquired knowledge within the organisation
- 14 Make sure people remember what they have learned, by regularly repeating the information, for example, after a course
- 15 Offer knowledge that is in line with service users' problems
- 16 Offer knowledge closer to ones' own workplace to ensure that it is remained better
- 17 Connect knowledge to what healthcare professionals need at that moment
- 18 Consider which knowledge is important for which discipline, and when
- 19 Offer knowledge to support staff in moderation
- 23 Facilitate the availability of specific learning materials for support staff
- 24 Make an inventory of what knowledge should be offered individually and collectively
- 26 Facilitate the deployment of experts within the organisation (such as a coach on treatment, a coach on education)
- 27 Facilitate the involvement of experts from outside the organization on specific themes (e.g. addiction problems)
- 28 Facilitate regular themed meetings within the team
- 29 Provide opportunities for psychologists to acquire didactic skills for training and case studies
- 30 Provide opportunities for training for support staff led by the psychologists
- 31 Provide opportunities for professional training within the organisation (e.g. CBT course)
- 60 Offer training or courses to encourage you to continue to develop within your role (e.g. keep up-to-date with literature)
- 62 Offer you space for professional development
- 63 Offer a behavioural sciences learning track to learn how to deal with dynamics in teams, so that theoretical knowledge can be provided there



- 64 Support you in your professional development to learn the practical skills that you have not yet learned (sufficiently) in your training, such as conversation techniques, positioning within teams, gaining authority
- 79 Encourage participation in supervision
- 82 Make training budget available
- 87 Offer referral meetings where you gain new knowledge

#### Cluster 6: Knowledge vision and knowledge policy within the organisation

- 4 Provide space to learn
- 9 Involve the people who will be working with the methods when setting up an implementation plan
- 10 When using new methods, draw up a well-thought-out implementation plan in advance
- 20 Be a learning organisation
- 43 Clarify the different methods of declaring
- 44 Clarify the function of the different locations (consultation, treatment) and the methods of action within them
- 45 Provide a digital library in which healthcare professionals can find information they need
- 49 Provide a good online platform that provides a shared knowledge base of the organisations' tools and working methods
- 50 Have a clear method in which healthcare professionals are trained
- 51 Have a clear vision in which healthcare professionals are trained
- 52 Provide insight into the roles and positions of the care manager or team leader
- 53 Stimulate that the culture offers space for healthcare professionals to be vulnerable, e.g. by recognising that they do not need to know everything
- 54 Encourage that the culture that allows for room to make mistakes
- 56 Communicate to healthcare professionals that they do not need to know it all yet
- 60 Provide clarity about where responsibilities lie, in order to both be able to focus better on your own work and delegate if needed
- 82 Ensure a clear work process within the organisation, so that frameworks and responsibilities are clear
- 85 Provide insight into whom you should refer in the event that the Social Support Act applies
- 86 Provide insight into legislation (such as the Social Support Act)
- 94 Give healthcare professionals confidence so that they can learn
- 96 Make a reference work available on the intranet

#### Cluster 7: Offering clear learning and developmental paths

- 21 Provide explicit expectations of what knowledge you should have after 5 to 7 years of work experience
- 25 Make expectations from the organisation explicit regarding what knowledge you should have as a beginner
- 39 Provide an overview of what knowledge you need to have as a basis to work somewhere, e.g. the basic methods of the organisation

- 41 Offer a clear induction schedule that tells you what you need to know about the organisation
- 42 Offer tools to help you see how time can be divided on the basis of caseload
- 62 Let you start with an unambiguous target group to make it easier for you to master the knowledge
- 63 Let you start with a not too large caseload
- 69 Provide the space to get to know different target groups (e.g. through maternity leave)
- 73 Match your personal wishes with regard to onboarding
- 74 Provide the opportunity to start with a smaller target group and then expand later
- 89 Provide insight into the structure of the organisation, so that you know who to turn to

Cluster 8: Offer opportunities to deepen and broaden your knowledge of target groups

- 64 Provide the space to allow people to develop a preference
- 65 Offer the space to be able to choose a target group that you prefer to focus on
- 70 Offer the space to discover where your preferences lie in terms of a target group
- 71 Offer you the time to immerse yourself in a target group
- 72 Offer opportunities to deepen and broaden your knowledge of target groups
- 91 Provide variety in the work so as to allow you to master the applied knowledge
- 92 Ensure repetition in the work so that you can apply knowledge properly
- 97 Offer diversity in target groups so that you can tap into your knowledge to work methodically

#### Statements provided by ID physicians

Cluster 1: Make time, money, and staff available for knowledge sharing

- 1 Facilitate greater ID physician training place, both so that ID physicians can transfer their knowledge more and so there can be more ID physicians
- 3 Facilitate this process by making time available so that professionals can educate future professionals so that they become interested in working in this field (given the shortage of ID physicians)
- 4 Free up budget to be able to run training
- 5 Facilitate time for training (being able to do training during working hours)
- 6 Provide efficient work processes and good supportive ICT and office facilities (such as electronic client files), so that more space is created for knowledge application
- 8 Offer time and space to proactively develop new initiatives to share knowledge that are currently not possible due to the full agenda
- 17 Create space and facilitate that remedial educationalists can specialise
- 27 Ensure that success stories but also problems are placed on the agenda of national organisations, such as VGN, so that they can also be tackled nationally
- 28 Enter into good partnerships with other organisations so far as to deploy their specific expertise
- 33 Provide facilitation both through expertise management and general management, in line with their own role (also depending on the structure of the organisation)
- 37 Recruit employees with specific knowledge and areas of focus
- 38 Have managers actively ask employees what they need to do their job well

- 43 Stimulate further training by having managers question professionals about their plans for this
- 45 Encourage employees to follow courses for further training by making time available for this
- 46 Promote continuing education by making funding available for this
- 53 Facilitate being able to go to a conference together so that corridor conversations with colleagues can also be held there and knowledge can be more bundled (added value compared to attending an individual online conference)
- 58 Have managers proactively discuss their development options with healthcare professionals (e.g. given that ID physicians themselves have little room for this due to understaffing)
- 59 Have managers actively encourage employees to develop and facilitate them in this process
- 61 Reward professionals who are given more responsibility, such as performing reserved actions, in terms of their salary
- 67 Facilitate multidisciplinary consultations by making time available to professionals

Cluster 2: Stimulate professional curiosity through exchange and conversation

- 7 Encourage looking critically at the division of tasks and roles (who should do which care/administration) so that there is more room for knowledge application
- 9 When retrieving ideas/wishes/needs from service users, use good tools/questionnaires appropriate to their level so that they can complete them themselves as much as possible
- 11 Let support staff and service users discuss the wishes/needs of service users together
- 12 Also involve the service user council and the council of relatives when mapping out the wishes/needs of service users
- 13 Stimulate reflection amongst support staff by offering them the opportunity for peer review
- 14 Be cognisant of blind spots and encourage keeping an open mind (keeping the team awake), e.g. by discussing difficult cases with each other in team meetings
- 22 Have managers actively question new colleagues from any discipline on striking events in order to learn from them
- 55 Facilitate that knowledge and ideas can be exchanged between different organisations (from different sectors), e.g. organising a joint day of ID care and addiction care
- 57 Let managers talk to healthcare professionals and connect with where their qualities lie
- 60 Encourage practitioners to switch service user populations so that a fresh perspective can be gained on a problem and new knowledge applied (mobility policy)
- 63 Ensure a connection between the problems of the service user population and healthcare professionals
- 64 Challenge employees by bringing in a challenging service user population, so that they continue to develop their expertise and keep their knowledge up to date

## Cluster 3: Targeted facilitation of professional development of an ID physician

- 18 Facilitate the creation of more assignments for training future professionals
- 20 Encourage interns to be trained to become ID physicians (i.e. encourage more trained people to come into the profession)
- 26 Facilitate research within the organisation (including in collaboration with Academic collaborative centres) to generate new knowledge so that this knowledge can be applied
- 35 Challenge support staff in their work so that it remains interesting (to provide continuity to groups and prevent turnover)
- 47 Appoint good librarians who can help with literature searches
- 48 Arrange access to scientific literature in order to be able to broaden ones' own knowledge as easily as possible
- 49 Facilitate availability of knowledge sources through a good library
- 65 Empower employees, e.g. by challenging them, so that they apply their knowledge better

## Cluster 4: Open and safe climate to explore and innovate

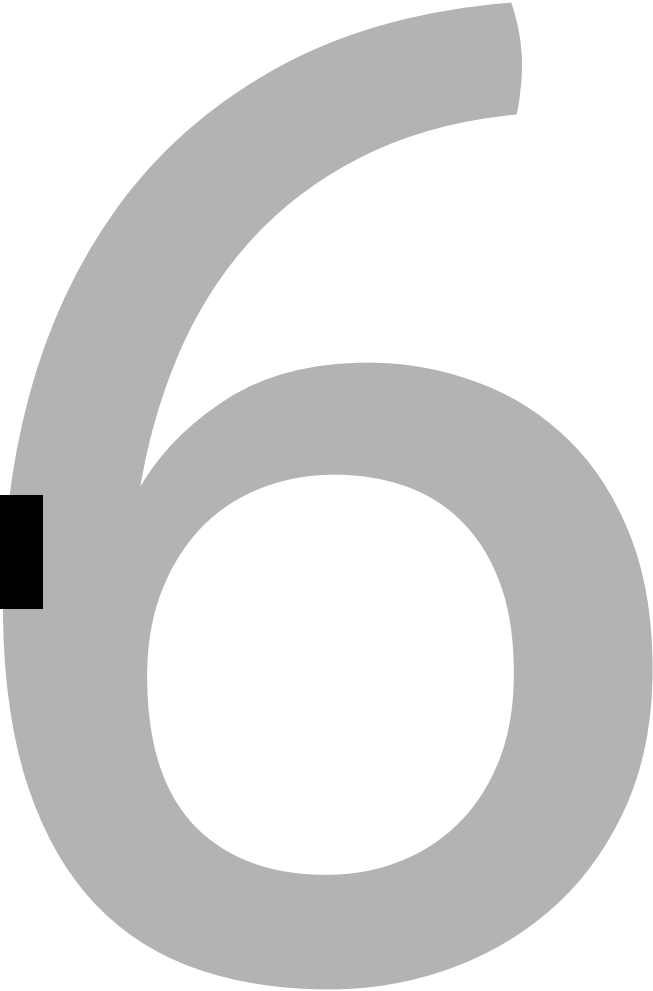
- 2 Facilitate by making time available so that professionals can provide education about ID care to future professionals who can then later apply that knowledge both within the ID care and beyond
- 10 Create a working climate in which it is safe for professionals to bring uncertainties to the table and ask questions
- 15 Encourage that there is a safe environment in which problems and errors can be discussed ("ring the bell if something is bothering you")
- 16 Stimulate an innovation climate in which professionals reflect on their own actions so that they can identify where improvements are needed
- 21 Share the question of the month and answers (success stories) via an internal portal (intranet) so that employees feel free to ask questions (lower threshold)
- 23 Managers should use the fresh perspectives of new colleagues by asking them to write down notable things and share them with colleagues and the manager so that they can learn from them
- 29 Make agreements with other (ID care) organisations to share knowledge as professionals (via mutual consultations)
- 30 Encourage policy advisors/innovation staff to obtain knowledge from practitioners (and not just managers) for policy making that is both better suited to problems and more feasible
- 56 Stimulate more cross-pollination between organisations

## Cluster 5: Acquire and transfer knowledge in multidisciplinary network environments

- 19 Facilitate that ID physicians can provide education to interns so that they also become more interested in the profession of ID physicians
- 24 Let managers encourage professionals to share knowledge gained during training with direct colleagues
- 25 Have the training coordinated and distributed jointly within (treatment) teams
- 31 Provide an internal facility in which professionals can indicate their expertise so that people can easily find each other internally within the organisation

- 32 Provide an overview of who within the organisation has what knowledge and expertise so that you as a professional can find colleagues
- 34 Use higher educated professionals to further develop the professional knowledge of support staff
- 36 Stimulate support staff as knowledge holders so that they stay in place for longer and continue to use their knowledge
- 39 Set up a joint outpatient clinic of ID physicians with psychologists so that they can complement each other, give feedback and learn a lot from each other
- 40 Make an inventory of the available expertise within your own organisation and make room for it to be used
- 41 Promote knowledge development, sharing and application by setting up a knowledge network and multidisciplinary consultation teams (e.g., on sleep, the desire to have children, people with challenging behaviour)
- 42 Encourage professionals to share new insights from continuing education by having managers question them about this
- 44 Facilitate that cases are viewed from a multidisciplinary perspective
- 50 Facilitate that employees can easily access other people with expertise to exchange knowledge and experiences (if disciplines work in the same location)
- 51 Facilitate that healthcare professionals can come together physically to exchange knowledge and to engage in debate
- 52 Facilitate that feedback can take place after a conference visit and that this can be discussed with all interested colleagues from different disciplines, e.g., by including this in the annual planning
- 54 Create time at fixed moments to share knowledge from everyone's field (ID physicians, psychologists, support staff), and ensure that the link to practice is also emphasised
- 61 Challenge professionals by assigning them tasks that they are also good at (e.g. having a nurse inject in the group home instead of a medical service)
- 66 Facilitate a platform through which to share knowledge, e.g. via team days in the expertise center
- 68 Offer a good consultation structure for knowledge sharing and application to safeguard knowledge, e.g., via multidisciplinary expertise teams that work together with case histories

**CHAPTER 6**



# Contextual factors influencing knowledge sharing and application in the care and support for people with intellectual disabilities during the COVID-19 pandemic

This chapter has been published as:

Marion Kersten, Noud Frielink, Mathieu Weggeman and Petri Embregts (2023). Contextual factors influencing knowledge sharing and application in the care and support for people with intellectual disabilities during the COVID-19 pandemic. *Knowledge and Process Management*. <https://doi.org/10.1002/kpm.1759>

## Abstract

During the COVID-19 pandemic, support workers and health professionals caring for and supporting people with intellectual disabilities (ID) required new knowledge on, for example, treatment and infection prevention. ID care organizations had to quickly share up-to-date knowledge and encourage its application. This study explored the contextual factors influencing knowledge sharing and application in the care and support for people with ID, contrasted their relevance prior to and during the pandemic, and compared the relevance of these factors according to support workers and health professionals. In 2021, 160 Dutch professionals working with people with ID completed an online survey, with being 69 support workers and 91 health professionals. For most of the participants, the contextual factors known to be relevant for knowledge sharing and application prior to the pandemic (e.g., the leadership of professionals, user-friendliness of interventions) also helped them to process knowledge during the pandemic. These factors were rated equally or as being even more important (e.g., 'Practice leadership of management' and 'Office arrangements and Information and Communication Technology (ICT) systems'). Moreover, support workers and health professionals rated factors such as available capacity of employees and office arrangements and ICT systems differently. The findings provide initial evidence that during a health crisis like the COVID-19 pandemic, both the role and importance of contextual factors influencing knowledge sharing and application in the care and support for people with ID partially differ from prior to the pandemic.



## Introduction

COVID-19, which causes respiratory infections, was declared a pandemic by the World Health Organization in March 2020 (World Health Organization, 2020). While the pandemic triggered a global crisis that threatened the physical, mental, and/or social functioning of everyone, vulnerable people, such as those with intellectual disabilities (ID) and their support systems, were especially at risk (Doody & Keenan, 2021). The level of ID ranges from mild to profound, and therefore they use a broad spectrum of services (e.g., from supported living and supported employment to 24-h staffed residential care dedicated to specific target groups). Due to their lifelong and life-wide care needs, the support systems of people with ID often consist of their relatives and professionals from multiple disciplines (e.g., support workers, psychologists, medics, and paramedics) (Schalock et al., 2021). In the ID field, three types of knowledge are vital: evidence-based knowledge (of scientists), practice-based knowledge (of healthcare professionals) and experiential knowledge (of people with ID and their relatives) (Embregts, 2017). Processing all these types of knowledge in ID care is challenging because of both the complexity of the network and the heterogeneity of expertise and disciplines sharing their specific knowledge (Kersten et al., 2022).

Specifically, people with ID were at greater risk of both contracting COVID-19 and experiencing more severe consequences on their physical and mental health (Embregts, Leusink, et al., 2020; Taggart et al., 2022). The pandemic impacted as well, both emotionally and practically, upon their support network, such as family and support workers (Embregts, Heerkens et al., 2021). Importantly, family and support workers urgently needed new knowledge pertaining to COVID-19 symptoms, potential treatment options, specific risk groups within this population, and infection prevention (Doody & Keenan, 2021; Embregts, van den Bogaard et al., 2020). Early in the pandemic, Tummers et al. (2020) responded to this need by both showing the availability of customized knowledge in the COVID-19 Open Research Dataset, which has information on the relationship between COVID-19 and ID, and calling upon more research on the intersection between COVID-19 and ID. Their research provided ID care organizations (IDCOs) with actionable knowledge to share and apply during the pandemic.

Before the pandemic, Kersten et al. (2018) identified several organizational factors that enable and disable the sharing and application of knowledge in IDCOs by support workers and health professionals, including the user-friendliness of interventions, managerial support, and organizational culture. Furthermore, Kersten et al. (2022)

established the contextual factors influencing the execution of strategies to stimulate the sharing and application of knowledge within IDCOs, including receptivity to professional knowledge, practice leadership, and a tight labor market. It remains unknown whether these contextual factors also hold during a health crisis like the COVID-19 pandemic. Gaining insight into the facilitators and barriers of knowledge sharing and application is crucial given their importance to managing pandemics, both with respect to decision-making about preventive measures like social distancing (Embregts et al., 2021b) as well as vaccination (Ammirato et al., 2020). Given the additional vulnerability of people with ID, gaining this insight is essential for limiting the impact of the virus and the preventive measures on them. This study aims to explore the contextual factors influencing knowledge sharing and application, contrast their relevance prior to and during the pandemic, and compare the relevance of these factors according to support workers and health professionals.

## Methods

### Study context

In the Netherlands, most of the 142,000 residents with ID receive services from approximately 170 specialized care organizations (Vereniging Gehandicaptenzorg Nederland, 2019). The size of these organizations ranges from a few dozen service users and employees to over 10,000 service users and employees. While some care organizations operate nationwide, most care organizations work at the regional level and are scattered across several locations. They provide care, support, and treatment (e.g. medical and psychological) to people with IDs across all domains of quality of life (physical, emotional and material wellbeing, interpersonal relationships, personal development, self-determination, social inclusion, and rights). In total, approximately 188,000 healthcare professionals work in the field of intellectual disabilities (Vereniging Gehandicaptenzorg Nederland, 2022), comprising a wide variety of professionals, including support workers, psychologists, ID physicians, physiotherapists, and speech and language therapists. In order to respond to service users' care and support needs across all domains of quality of life, multiple disciplines also encompass both the nursing and care domain (e.g., ID physicians and physiotherapists) as well as the socio-agogic domain (e.g., psychologists and support workers). The level of education of healthcare professionals ranges from lower vocational education to university level (38% lower level, 50% middle level, and 42% higher level) (Van Driesten & Wessels, 2020). "Health professionals" refers to psychologists, medics and paramedics who are responsible for assessment, diagnosis and treatment.

## Participants

One hundred and sixty professionals employed by IDCOs in the Netherlands completed a cross-sectional survey. The sample included support workers ( $N=69$ ) and health professionals ( $N=91$ ), such as physiotherapists, psychologists, and ID physicians (see Table 1). They worked both in congregate settings such as group homes and in individual community-based settings. The majority of the participants were female ( $N=143$ ), and most were aged over 36 years ( $N=110$ ) and had over 10 years work experience ( $N=118$ ). Regarding their level of education: 26 participants had finished lower vocational education, 67 finished higher vocational education and 67 attended university.

**Table 1** Demographic characteristics of the participants, divided into support workers and health professionals

	Support worker $N=69$		Health professionals $N=91$	
Gender:				
-male	6	(8.7%)	11	(12.1%)
-female	63	(91.3%)	80	(87.9%)
Age:				
- < 25 years old	3	(4.3%)	1	(1.1%)
- 26-35 years old	16	(23.2%)	30	(33.0%)
- 36-45 years old	14	(20.3%)	23	(25.3%)
- 46-55 years old	20	(29.0%)	20	(22.0%)
- 56-65 years old	16	(23.2%)	17	(18.7%)
Level of education:				
-lower vocational education	25	(36.2%)	1	(1%)
-higher vocational education	40	(58.0%)	27	(27%)
-university	4	(5.8%)	63	(63%)
Years of working experience:				
- < 1 year	-	(0%)	1	(1.1%)
- 1-5 years	5	(7.2%)	16	(17.6%)
- 6-10 years	9	(13.0%)	11	(12.1%)
- 11-20 years	19	(27.5%)	24	(26.4%)
- > 20 years	36	(52.2%)	39	(42.9%)

## Measures

Based on Kersten et al.'s (2018) systematic review of the organizational factors enabling and disabling the sharing and application of knowledge in IDCOs, the present authors developed an online survey to explore whether these factors influence knowledge processing during the pandemic. Relevant contextual factors highlighted by Kersten et al. (2022) as influencing the execution of strategies dedicated to stimulating the sharing and application

of knowledge in IDCOs were also added to the survey, including, for example, the contextual factor in which the role of CEOs is focused on “setting preconditions for knowledge application (e.g., providing support and resources)”. In preparing the survey, the first author operationalized the enabling and disabling contextual factors into items, which were discussed by the entire research team. Based on pilots among health professionals and researchers assessing relevance, clarity, and redundancies, the final version of the survey was developed which consisted of 63 items divided into five scales (see Table 2 and Appendix A): (1) the role of individual persons in knowledge sharing and application (e.g., “I am motivated to do my tasks”; five subscales), (2) the role of teams in knowledge sharing and application (e.g., “In my work, multidisciplinary consultations take place”), (3) the role played by specific characteristics of the intervention and tools in knowledge sharing and application (e.g., “I can share client-related information with other support workers and health professionals via tools”; two subscales), (4) the role of the organizational context in knowledge sharing and application (e.g., “I can implement a new way of working well”; six subscales), and (5) the role of the socio-political environment in knowledge sharing and application (e.g., “There are professional associations that I can turn to with questions”). For each item, participants had to answer two questions. First, they were asked whether this item played a role for them as a support worker or health professional in the sharing and application of knowledge during the pandemic. There were three options: yes, no, or not applicable. Second, they were asked how important the item was for them concerning sharing and application of knowledge in the pandemic, compared to prior to the pandemic. Participants had three answer options: less important, equally important, or more important. Alongside the 63 items, the survey concluded with an open-ended question that invited participants to add additional issues they deemed to be important for knowledge sharing and application during the pandemic.

### **Procedure**

The Ethics Review Board of Tilburg University approved this study (RP486). To collect the data, a secure web-based software platform designed to support data collection in research studies (i.e., Qualtrics) was used. Using a convenience sampling method, consisting of various recruitment techniques (e.g., posting on social media platforms and websites and sending emails to intermediates), support workers and health professionals providing care and support for people with ID were invited to participate in the study. Those who expressed interest could open the survey link on their laptop or mobile device, which provided background information on the study. After providing digital informed consent,

participants then completed the survey. The survey was active between July 9 and September 1, 2021. Participants could provide their email addresses to take part in a raffle to receive one of five gift cards worth €15.

### **Analysis**

Descriptive statistics were carried out in SPSS statistics version 24. For each subscale, we calculated the average percentage based on the related items for both support workers and health professionals. Moreover, chi-square tests were conducted to explore potential differences between the two groups. To assess the survey's internal consistency, Cronbach's alphas were calculated for each scale and subscale. All open-ended responses were analysed thematically by the first author. That is, each open-ended response was given a code, which was checked by the second author. This process was done separately for the support workers and health professionals. Next, the first author checked whether the codes fitted within the existing subscales of the questionnaire. When this was not possible, codes were assigned in new categories, which were added to the existing scales as new subscales. Analyzing the open-ended question did not result in new information with respect to a survey item, and as such the ranking of the survey items did not need to be changed. After the categorization was checked by the second author, the third and fourth author executed a final check.

## **Results**

Table 2 presents the average percentages for each scale and subscale for both support workers and health professionals, along with the Cronbach's alpha for each scale and subscale, and the statistically significant differences between the two groups, that is, support workers and health professionals, as well as relevance prior to and during the pandemics.

### *Scale 1: The role of individual persons in knowledge sharing and application*

The first scale concerns the role of everyone involved in knowledge sharing and application, including people with ID, relatives, support workers and health professionals, and management/CEOs. As shown in Table 2, all subscales, concerning the contribution of these people to these knowledge processes (e.g., accessibility of the knowledge of relatives,

**Table 2**  
**Role and importance of scales and subscales that influence knowledge sharing and application during the COVID-19 pandemic by support workers and health professionals (in percentages)<sup>1</sup>**

Scales and subscales	Does the item play a role for you as a professional during the COVID-19 pandemic? <sup>2</sup>				Compared to the pre-pandemic period, for me the item during the COVID-19 pandemic is ...			
	A <sup>3</sup>	Support workers	Health professionals	Support workers	Support workers	Health professionals	Support workers	Health professionals
<b>Scales and subscales</b>		Yes	No	Na. <sup>3</sup>	<	=	>	<
1. Involvement of service users and relatives (e.g., the knowledge of relatives is accessible to professionals)	.70	66.5	7.7	8.7	3.0	58.1	32.4	59.2
1.1 Involvement of service users and relatives (e.g., the knowledge of relatives is accessible to professionals)	.35	86.5	7.7	8.7	3.4	64.8	32.8	71.4
1.2 Craftsmanship of all professionals (e.g., exhibit leadership in my tasks)	.63	52.0	13.2	9.7	2.0	71.7	24.5	73.9
1.3 Craftsmanship of health professionals (e.g., health professionals, the ID physicians and psychologists, introduce a new way of working)	.62	52.3	23.8	13.9	2.8	53.9	20.1	6.6
1.4 Practice leadership of management (e.g., managers communicate unambiguously about the way in which the work is carried out)	.73	64.9	32.6	1.1	1.1	40.9	54.7	42.9
1.5 Involvement of management and CEOs toward professional (e.g., CEOs encourage me to provide appropriate care and support)	.67	69.9	32.4	2.3	2.4	53.1	38.8	2.0
2. The role of teams in knowledge sharing and application	.70	92.2	4.8	-	1.9	94.7	32.8	1.1
3. The role played by specific characteristics of the intervention and tools in knowledge sharing and application	.58	73.4	16.8	2.9	0.3	64.5	30.8	2.2
3.1 Availability of tools for sharing information, collaboration, and understanding the way of working (e.g., I can share client-related information with other professionals via tools)	.23	76.8	15.4	2.7	0.5	90.9	24.8	2.2
3.2 User-friendliness of the tools and intervention (e.g., the way of working is easy to apply for me)	.81	73.9	18.1	8.0	-	68.1	26.8	2.2
4. The role of the organizational context in knowledge sharing and application	.69	68.7	27.8	3.0	1.8	62.8	37.8	1.1
4.1 Office arrangements and ICT systems (e.g., professionals receive an explanation of the new way of working via the intranet or e-mails)	.44	91.8	5.3	2.4	2.4	40.1	56.0	-
4.2 Access to the complete electronic client files of my clients (e.g., I have access to the complete electronic client files of my clients)	.69	71.5	24.1	2.9	0.5	70.6	27.0	0.4
4.3 Resources are available for implementing the intervention (e.g., I have (scientific) substantiation of the way of working)	.36	79.7	15.4	4.8	1.9	76.3	18.7	1.1
4.4 Policy and culture of the organization (e.g., I have sufficient time to perform my tasks)	.73	51.6	45.0	0.2	1.9	61.6	34.7	1.3
4.5 Policy and culture of the organization (e.g., the way of working fits with day-to-day business, such as offering daytime activities in homes)	.66	63.1	30.9	3.7	5.4	69.1	19.0	3.2
4.6 Available capacity of employees (e.g., my team consists of enough people)	.63	50.7	45.3	4.0	4.7	59.1	21.4	0.6
5. The role of the socio-political environment to knowledge sharing and application	.69	59.8	9.4	30.8	7.4	9.9	9.4	1.7

Explanatory notes: <sup>1</sup>The average scores are calculated based on all available data; <sup>2</sup>Cronbach's Alpha; <sup>3</sup>Not applicable; <sup>4</sup>For readability we have underlined the scores of the support workers; <sup>5</sup>Some of the items were only submitted to ID physicians and psychologists and therefore Cronbach's alpha could not be calculated; \* p<.05; \*\* p<.01; \*\*\* p<.001

leadership of support workers and health professionals, and the support of [senior] management), contributed to the sharing and application of knowledge for at least half the professionals (range 49.3%-94.1%) during the pandemic. Also, the vast majority (93.4% of support workers and 95.9% of health professionals) considered the subscales to be either equally or more important for knowledge sharing and application during the pandemic compared to before it. Interestingly, those subscales related to health professionals and management played a larger role for health professionals to support workers: 'Craftmanship of health professionals' ( $X^2(8, N=160)=19.572, p=0.012$ ), 'Professional leadership of health professionals' ( $X^2(3, N=143, p<0.001$ ), 'Practice leadership of management' ( $X^2(6, N=158)=14.876, p=0.021$ ) and 'Role fulfilment by management and CEOs toward professional' ( $X^2(7, N=159), 19.418, p=0.007$ ). Furthermore, health professionals considered the subscale 'Professional leadership of health professionals' to be more important than support workers ( $X^2(6, N=153)=26.243, p <0.001$ ).

*Scale 2: The role of teams in knowledge sharing and application*

The second scale, which is not divided into subscales, involves (mono-or multidisciplinary) teams that utilize their respective knowledge. Most of the participants (95.2% of support workers and 98.5% of health professionals) acknowledged the role of teams in knowledge sharing and application, with around 65% who deemed this scale to be equally important both prior to and during the pandemic, while almost everyone else deemed it to be more important. No significant differences were found between support workers and health professionals regarding this scale.

*Scale 3: The role played by specific characteristics of the intervention and tools in knowledge sharing and application*

For around 75% of the participants, both subscales belonging to this third scale (i.e., "Availability of tools for sharing information, collaboration, and understanding the way of working" and "User-friendliness of tools and the intervention") played a role in knowledge sharing and application during the pandemic. While many professionals (64.5% of support workers and 49.1% of health professionals) rated these subscales as "equally important", the latter subscale was rated as either equally or more important by all support workers, thus indicating its importance during the pandemic. In this scale, no significant differences were found between support workers and health professionals.

*Scale 4: The role of the organizational context in knowledge sharing and application*

The fourth scale comprises six subscales focused on office arrangements and ICT systems (e.g., electronic care records, email and intranet), resources, time, policy and culture, and available capacity of employees (e.g., accessibility of electronic client files and the availability of sufficient time to perform tasks). All these subscales played a role in knowledge sharing and application during the pandemic for most support workers and health professionals (range 50.7%-94.9%). The vast majority considered the subscale "Office arrangements and ICT systems", which involves the transfer of information via intranet and email, to be either equally or more important for knowledge sharing and application compared to pre-pandemic. On average, over 60% of the professionals (67.3% of support workers and 71.7% of health professionals) rated the other subscales to be equally important compared to pre-pandemic, whereas almost no one deemed these subscales to be less important. No significant differences were found between support workers and health professionals for this scale.

*Scale 5: The role of the socio-political environment in knowledge sharing and application*

The fifth scale, which is not divided into subscales, involves "Network partners outside your own organization offering knowledge". For most professionals (59.8% of support workers and 82.7% of health professionals), this scale contributed to the sharing and application of knowledge during the pandemic. Furthermore, most rated this scale to be equally important during the pandemic; less than ten% rated this subscale as less important. No significant differences were found between support workers and health professionals.

*Additional factors based on open-ended question*

Finally, a third of the participants responded to the open-ended question. Besides mentioning topics related to the five scales, they indicated additional factors that were important for knowledge sharing and application during the pandemic. Support workers mentioned characteristics of themselves, such as the pandemic's impact on support workers themselves and adhering to one's values. Moreover, health professionals indicated that providing opportunities for (online) knowledge exchange during the pandemic is vital, such as discussing observations of service users via video analytics and online consultations.



## Discussion

This study explored the contextual factors influencing knowledge sharing and application in the care and support for people with ID, contrasted their relevance prior to and during the pandemic, and compared the relevance of these factors according to support workers and health professionals. One hundred and sixty support workers and health professionals completed an online survey, based upon which we identified three key insights.

First, according to most of the support workers and health professionals, all contextual factors influencing knowledge sharing and application prior to the pandemic played a role in processing knowledge during the pandemic. Furthermore, most of the participants rated all (sub)scales to be either equally or more important during the pandemic, which indicates that, despite other knowledge questions arising during the pandemic, knowledge processes were influenced by the same factors as pre-pandemic, such as the craftsmanship of the support workers and health professionals and organizational policies and culture. Given both the importance of processing knowledge for pandemic management and the paucity of the current knowledge base (Ammirato et al., 2020), it is important to know that the same enabling and disabling factors of knowledge sharing and application are involved.

Second, two subscales were found to be particularly important. Specifically, most support workers and health professionals considered "Practice leadership of management" and "Office arrangements and ICT systems" (involving complete and up-to-date electronic care records, email and intranet) to be more important during the pandemic for knowledge sharing and application than pre-pandemic. These key factors are thus potentially also important for future crises, which is in line with other studies emphasizing the importance of leadership (Forster et al., 2020) and adequate healthcare information systems during a pandemic (Ammirato et al., 2020; Doody & Keenan, 2021). Moreover, the studies of de Veer et al.'s panel study (de Veer et al., 2021) and Embregts et al. (2021a) into the pandemic's impact upon support workers and health professionals highlighted, among other things, (lack of) communication and leadership as reasons for support workers and health professionals' (dis)satisfaction with the response of their organization to the crisis. This links to the factors in our study related to the practice leadership of management and role fulfilment by management and CEOs. Mastebroek et al. (2014) already demonstrated the weaknesses of health information exchange pre-pandemic, stemming from separate databases in social and health services and the poor quality of record keeping by support workers. Our study indicates that effective health information exchange in IDCs must be

underpinned by good record keeping and sharing data, a stable internet connection, and ensuring that support workers and health professionals feel supported and heard by their manager and CEO.

Third, support workers and health professionals rated some factors differently, which is to be expected given the difference between their respective positions and educational levels. For example, support workers, who provide care and support appeared to find the availability and user-friendliness of tools more important than health professionals, who are involved in diagnostics and treatment. Moreover, their different working environments also might have influenced their ratings. For example, while support workers constantly worked on-site during the pandemic, due to regulations health professionals primarily worked remotely, for example, through digital meetings, digital coaching and digital treatment, which resulted in office arrangements and ICT systems being more important to them during the pandemic than they were to support workers. This fits with previous Dutch studies during the pandemic (de Veer et al., 2021, Embregts et al., 2021a, 2021b), which showed that support workers underscored the impact of preventive measures and support workers shortage (Embregts et al., 2021a; de Veer et al., 2021). That is to say, support workers experienced a profound fear of becoming infected with COVID-19, especially at the beginning of the pandemic, due to the limited availability of protective equipment (e.g., mouth masks) at that juncture. Moreover, social distancing proved to be impossible in many cases when working with people with ID. Hence, although the importance of wearing face masks and social distancing was based on new knowledge, ultimately it was not possible to apply this new knowledge. Moreover, the shortage of support workers stemming from them becoming infected by COVID-19 and having to quarantine also undermined knowledge sharing and application, insofar as it led to time pressures, working with temporary colleagues and having to pay additional attention to transferring information between shifts (e.g., reading reports). Psychologists stressed the importance of video conferencing and talked of problems with inadequate ICT systems during the pandemic (Embregts et al., 2021b), which corresponds to office arrangements and ICT systems. Since psychologists primarily worked from home, they were more dependent on this system than support workers, which both potentially explains their different experiences and underscores the need for a customized response to them.

The current results should be interpreted in light of several limitations. First, due to the sampling method, it is likely that support workers and health professionals interested in knowledge sharing and application in IDCs primarily took part, which may skew the results. Second, fewer support workers than health professionals participated, although, in

terms of absolute numbers, there are more support workers than health professionals working in the care and support for people with ID in the Netherlands. This might be because knowledge sharing and application are unfamiliar terms for support workers. Moreover, if the concepts were less familiar to their daily work, it might have been challenging to support workers to easily respond to all of the questions. Furthermore, no information is available on whether the support workers and health professionals were working with adults or also with children. Finally, although most (sub)scales had sufficient to adequate reliability, some (i.e., Involvement of service users and relatives; Availability of tools for sharing; Resources are available for implementation of the intervention) had a Cronbach's alpha  $< 0.40$ , which may have influenced the results. Since these subscales only contained a limited number of items, which might be a clarification for the relatively low Cronbach's alphas, it is recommended that future research include additional items to these subscales to improve the reliability of the survey.

Finally, the transferability of the present findings to other settings or countries may be undermined by the fact that this survey was only administered in one sector (i.e., the care and support for people with IDs) and in one country, where most care and support for people with ID is provided through both general and specialised care organizations (i.e., the Netherlands). However, both the organizational issues and challenges (such as bringing together knowledge from different sources and providing care and support for many locations scattered across a region) that are present in the Netherlands may be comparable to those in other sector or countries, where primarily mainstream organizations provide services to their citizens with ID (Wood et al., 2014). Conducting similar research in other sectors and in other countries is important to test to what extent the present insight on contextual factors is transferable.

The initial results of our study indicate that contextual factors influencing knowledge sharing and application prior to the pandemic also played a role in processing knowledge during the pandemic, albeit their role and importance partially differed both between the pandemic and pre-pandemic and between support workers and health professionals. Therefore, regarding future health crises, it would be beneficial for policy and practice to adapt their knowledge strategies by strengthening their fit with the contextual factors established in this study, namely monitoring organizational preconditions for processing knowledge, emphasizing practice leadership of management and providing adequate office arrangements and ICT systems.

## References

- Ammirato, S., Linzalone, R., & Felicetti, A. M. (2020). Knowledge management in pandemics. A critical literature review. *Knowledge Management Research & Practice*, 1-12. <https://doi.org/10.1080/14778238.2020.1801364>
- de Veer, A., Schlinkert, C., de Groot, K., & Wagner, C. (2021). Coronacrisis biedt mogelijkheden voor veiligere zorg. Utrecht: Nivel. Retrieved from: <https://www.nivel.nl/nl/nieuws/zorgverleners-en-zorgorganisaties-houden-veiligheid-van-zorg-op-peil-ook-drukke-coronatijd>
- Doody, O., & Keenan, P. M. (2021). The reported effects of the COVID-19 pandemic on people with intellectual disability and their carers: a scoping review. *Annals of Medicine*, 53(1), 786-804. <https://doi.org/10.1080/07853890.2021.1922743>
- Embregts, P. J. C. M. (2017). Kennisontwikkeling en kennisdeling in gelijkwaardige verbinding tussen praktijk en wetenschap. *NTZ: Nederlands Tijdschrift voor de Zorg aan Mensen met Verstandelijke Beperkingen*, 43(3), 219-26. Retrieved from: [https://www.ntzonline.nl/art/50-4446\\_Kennisontwikkeling-en-kennisdeling-in-gelijkwaardige-verbinding-tussen-praktijk-en-wetenschap](https://www.ntzonline.nl/art/50-4446_Kennisontwikkeling-en-kennisdeling-in-gelijkwaardige-verbinding-tussen-praktijk-en-wetenschap)
- Embregts, P. J. C. M., Heerkens, L., Frielink, N., Giesbers, S., Vromans, L., & Jahoda, A. (2021). Experiences of mothers caring for a child with an intellectual disability during the COVID-19 pandemic in the Netherlands. *Journal of Intellectual Disability Research*. <https://doi.org/10.1111/jir.12859>
- Embregts, P. J. C. M., Leusink, G., Maes-Festen, D., Putten, A., Schuengel, C., & Sterkenburg, P. (2020). COVID-19 en de zorg en ondersteuning aan mensen met verstandelijke beperkingen: alleen samen krijgen de academische werkplaatsen de kennisvragen beantwoord [COVID-19 and the care and support for people with intellectual disabilities: only together can the academic workshops answer the knowledge questions]. *Nederlands Tijdschrift voor de Zorg aan mensen met verstandelijke beperkingen*, 46(3), 105-111. Retrieved from: [https://www.ntzonline.nl/art/50-6135\\_COVID-19-en-de-zorg-en-ondersteuning-aan-mensen-met-verstandelijke-beperkingen](https://www.ntzonline.nl/art/50-6135_COVID-19-en-de-zorg-en-ondersteuning-aan-mensen-met-verstandelijke-beperkingen)
- Embregts, P. J. C. M., Tournier, T., & Frielink, N. (2021a). Experiences and needs of direct support staff working with people with intellectual disabilities during the COVID-19 pandemic: A thematic analysis. *Journal of Applied Research in Intellectual Disabilities*, 34(2), 480-490. <https://doi.org/10.1111/jar.12812>

- Embregts, P. J. C. M., Tournier, T., & Frielink, N. (2021b). The experiences of psychologists working with people with intellectual disabilities during the COVID-19 crisis. *Journal of Applied Research in Intellectual Disabilities*. <https://doi.org/10.1111/jar.12916>
- Embregts, P. J. C. M., van den Bogaard, K. J., Frielink, N., Voermans, M. A., Thalen, M., & Jahoda, A. (2020). A thematic analysis into the experiences of people with a mild intellectual disability during the COVID-19 lockdown period. *International Journal of Developmental Disabilities*, 1-5. <https://doi.org/10.1080/20473869.2020.1827214>
- Forster, B. B., Patlas, M. N., & Lexa, F.J. (2020). Crisis leadership during and following COVID-19. *Canadian Association of Radiologists Journal* 71(4), 421-422. <https://doi.org/10.1177/0846537120926752>
- Kersten, M. C. O., Taminiau, E. F., Schuurman, M. I. M., Weggeman, M. C. D. P., & Embregts, P. J. C. M. (2018). How to improve sharing and application of knowledge in care and support for people with intellectual disabilities? A systematic review. *Journal of Intellectual Disability Research*, 62(6), 496-520. <https://doi.org/10.1111/jir.12491>
- Kersten, M. C.O., Taminiau, E. F., Weggeman, M. C. D. P., & Embregts, P. J. C. M. (2022). Contextual factors related to the execution of knowledge strategies in intellectual disabilities organisations. *Knowledge and Process Management*, 1-13. <https://doi.org/10.1002/kpm.1700>
- Mastebroek, M., Naaldenberg, J., Lagro-Janssen, A. L., & Van Schroyen Lantman-de Valk, H. (2014). Health information exchange in general practice care for people with intellectual disabilities—a qualitative review of the literature. *Research in Developmental Disabilities*, 35(9), 1978-1987. <https://doi.org/10.1016/j.ridd.2014.04.029>
- Schalock, R. L., Luckasson, R., & Tassé, M. J. (2021). *Intellectual Disability: Definition, Diagnosis, Classification, and Systems of Supports*. Washington DC: American Association on Intellectual and Developmental Disabilities. 12th Edition.
- Taggart, L., Mulhall, P., Kelly, R., Trip, H., Sullivan, B., & Wallén, E. F. (2022). Preventing, mitigating, and managing future pandemics for people with an intellectual and developmental disability - Learnings from COVID-19: A scoping review. *Journal of Policy and Practice in Intellectual Disabilities* 19(1), 4-34. <https://doi.org/10.1111/jppi.12408>
- Tummers, J., Catal, C., Tobi, H., Tekinerdogan, B., & Leusink, G. (2020). Coronaviruses and people with intellectual disability: an exploratory data analysis. *Journal of Intellectual Disability Research*, 64(7), 475-481. <https://doi.org/10.1111/jir.12730>

- Van Driesten, G., & Wessels, K. (2020). *Zó werkt de gehandicaptenzorg*. Amsterdam, De Argumentenfabriek.
- Vereniging Gehandicaptenzorg Nederland (2019). *De gehandicaptenzorg in kerngetallen*. Retrieved from: <https://www.vgn.nl/feiten-en-cijfers-de-gehandicaptenzorg>.
- Vereniging Gehandicaptenzorg Nederland (2022). *Factsheet arbeidsmarkt*. Retrieved from <https://www.vgn.nl/feiten-en-cijfers-de-gehandicaptenzorg>
- Wood, S., Gangadharan, S., Tyrer, F., Gumber, R., Devapriam, J., Hiremath, A., & Bhaumik, S. (2014). Successes and challenges in the implementation of care pathways in an intellectual disability service: Health professionals' experiences. *Journal of Policy and Practice in Intellectual Disabilities*, 11(1), 1-7. <https://doi.org/10.1111/jppi.12063>
- World Health Organization (2020). *Infection prevention and control guidance for long-term care facilities in the context of COVID-19: interim guidance, 8 January 2021*. Retrieved from: [https://www.who.int/publications/i/item/WHO-2019-nCoV-IPC\\_long\\_term\\_care-2021.1](https://www.who.int/publications/i/item/WHO-2019-nCoV-IPC_long_term_care-2021.1)

## Appendix A: Survey Knowledge sharing and application during the COVID-19 pandemic

### Introduction/Instruction

We would like to know what makes professionals share and apply knowledge during the COVID-19 pandemic. We would also like to know whether sharing and applying knowledge during the pandemic differs from pre-pandemic. With regard to the following statements we ask you to indicate:

- 1) whether they play a role for you during the pandemic; and
- 2) how important you think they are compared to before the COVID-19 pandemic.

We request that you look back upon your experiences during the COVID-19 pandemic, from the first wave in spring 2020 (during the strict visiting rules), up to the present (in which testing for COVID-19 continues to take place along with the vaccination programme). Also, we would like you to compare this with the period prior to COVID-19.

### For example:

- 1) I have the knowledge I need about new clients → "Yes, this item plays a role for me during the COVID-19 pandemic"
- 2) Compared to the period prior to COVID-19, for me this item during the pandemic is → More important

### First question: function of the person completing the survey

- Apprentice support worker
- Support worker in the living environment
- Support worker in daytime activities
- Coordinating support worker
- Team leader
- Psychologist
- ID physician
- Physiotherapist
- Speech and language therapist
- Other, namely...

Item	Does the item play a role for you as a professional during the COVID-19 pandemic?		Compared to the period prior to COVID-19, for me the item during the COVID-19 pandemic is:			
	Yes	No	N.a.	Less important	Equally important	More important
<b>Scale 1 The role of individual persons in knowledge sharing and application</b> <b>1.1 Involvement of service users and relatives*</b> 1) My clients participate in support and treatment. 2) The severity of my clients' problems plays a role in my work performance.						

- 3) The knowledge of relatives is accessible to professionals
  - 4) I am able to perform new tasks because I have the knowledge needed for this.
  - 5) I understand substantiated choices for the way in which work is carried out.
  - 6) I feel sufficiently prepared to perform my tasks.
  - 7) I am positive about my tasks.
  - 8) In general, I can make my own decisions about how to perform my tasks.
  - 9) I am motivated to carry out my tasks.
  - 10) I exhibit leadership in my tasks.
  - 11) I learn new knowledge in a way that suits me.
- 1.2 Craftmanship of all professionals (support workers, ID physicians, psychologists and therapists)**
- 12) ID physicians and psychologists exhibit leadership in their tasks.
  - 13) ID physicians and psychologists keep abreast of the literature.
  - 14) Health professionals, like ID physicians and psychologists, introduce a new way of working.

#### **1.4 Practice leadership of management**

- 15) Managers exhibit leadership in their tasks.
  - 16) Managers communicate unambiguously about the way in which the work is carried out.
  - 17) Managers communicate on time when working in a new way.
  - 18) Managers are sufficiently accessible for consultation with professionals.
- 1.5 Role fulfillment by management and CEOs toward professional**
- 19) Managers support me so that I can perform my tasks well.
  - 20) Managers put pressure upon me.
  - 21) Managers ask me for advice before introducing a new way of working.
  - 22) CEOs provide the necessary preconditions (support, resources) to perform my tasks.
  - 23) CEOs encourage me to provide appropriate care and support.

#### **Scale 2. The role of teams in knowledge sharing and application**

- 24) In my work multidisciplinary consultations take place.
- 25) I consult with other professionals in meetings.
- 26) I exchange knowledge informally with other professionals, e.g. via telephone and e-mails.

#### **Scale 3. The role played by specific characteristics of the intervention and tools in knowledge sharing and application. Examples of tools are instructional videos and communication passports.**

##### **3.1 Availability of tools for sharing information, collaboration, and understanding the way of working.**

- 27) I can share client-related information with other professionals.
- 28) I can use tools to better collaborate with other professionals.
- 29) By using tools I understand how to work better.

##### **3.2 User-friendliness of the tools and intervention**

- 30) The tools available are user-friendly for me.
- 31) The way of working is easy to apply for me.



#### Scale 4. The role of the organizational context in knowledge sharing and application

##### 4.1 Office arrangements and ICT systems

- 32) On the intranet I can find the most recent information about the way of working within my organization.
- 33) Professionals receive an explanation of the new way of working via the intranet or e-mails.
- 34) I have good working access to e-mail and intranet.

##### 4.2 ICT systems: complete and up-to-date client-related information is available via electronic care records

- 35) I have access to the complete electronic client files of my clients.
- 36) My clients' health records are complete.
- 37) My clients' health records are up-to-date.

##### 4.3 Resources are available for implementing the intervention

- 38) I can use good tools for communication with clients, such as pictograms.
- 39) I have (scientific) substantiation of the way of working.
- 40) I have access to professional literature.

##### 4.4 Time needed to implement the intervention

- 41) I have sufficient time to perform my tasks.
- 42) I have enough time for the administration of my tasks.
- 43) I experience a high work pressure.
- 44) My caseload is too large.
- 45) There is ample time during team meetings to discuss issues related to the way of working.
- 46) I have enough time to participate in meetings.

##### 4.5 Policy and culture of the organization

- 47) Rules imposed by the organization hinder me from performing my tasks.
- 48) The tools I use in my work are consistent with my organization's policies.
- 49) The way of working fits well with day-to-day business, such as offering daytime activities in homes.
- 50) I can implement a new way of working well.
- 51) I can take part in training/courses.
- 52) I get supervision.

- 53) I get feedback on my performance.
- 54) For my clients there is continuity in the support they are provided.

##### 4.6 Available capacity of employees

- 55) Due to personnel changes, I feel there is a lack of information.
- 56) Enough professionals are available.
- 57) My team consists of enough people.
- 58) My organization encourages me to participate in research.
- 59) In my organization there is a knowledge policy.

#### Scale 5. the role of the socio-political environment in knowledge sharing and application

- 60) There is a national knowledge policy for the care of people with disabilities.
- 61) The VGN offers me guidelines that enable me to carry out my work properly.
- 62) There are professional associations I can turn to if I have questions.

No information available

No information available

63) I can make use of knowledge from partnerships, such as academic workplaces and knowledge platforms.

#### 6. Miscellaneous

64) Are there any other things that are important for you when sharing and applying knowledge during COVID-19? If so, please describe.

#### 7. Background information of the person who completed the survey (Thick)

Gender:

- Male
- Female

Age:

- < 25 years old
- 26-35 years old
- 36-45 years old
- 46-55 years old
- 56-65 years old
- >65 years old

Level of education:

- lower vocational education
- higher vocational education
- university

Years of working experience:

- < 1 year
- 1 – 5 years
- 5 – 10 years
- 10 – 20 years
- > 20 years

#### 8.If the person who fills in the survey:

- Wants to be eligible for the VVV voucher and/or
- Would like to receive a summary of the results

E-mail address

Explanatory note: <sup>1</sup>The titles of the subscales are in italics



**CHAPTER 7**



# General discussion

This PhD project aims to contribute to the current knowledge policy of care organisations supporting people with intellectual disabilities, in order to stimulate professionals to effectively share and apply new knowledge in their practice, leading to improved performance of these professionals and better quality of care and quality of life for service users (Buntinx & Van Gennep, 2007; Doody et al., 2022; Embregts & Hendriks, 2011). In the field of intellectual disability care, knowledge sharing and application involve three main sources of knowledge: evidence-based knowledge from scientific research, practice-based knowledge of professionals, and the experiential knowledge of service users and their informal network, such as relatives and friends (Cobigo et al., 2014; Embregts, 2017). However, the majority of knowledge in this field is practice-based, and often tacit, making knowledge exchange challenging (Farrington et al., 2015). To improve the sharing and application of knowledge based on these three sources, this exploratory PhD project investigated factors and strategies that influence knowledge sharing and application within care organisations for people with intellectual disabilities.

These factors influencing the sharing and application of knowledge among professionals can be categorized into personal factors related to people and environmental factors related to the care system. In the realm of intellectual disability care, the care system is a complex and dynamic multi-layered structure that includes a macro level (such as national policy), a meso level (comprising organisations providing care and support for people with intellectual disabilities), and a micro level (encompassing the primary process at specific locations) (Duryan et al., 2012, 2014). To fully comprehend the dynamics of knowledge sharing and application within intellectual disability care, it is essential to adopt a contextual approach that recognizes the significance of the context (e.g., Schalock et al., 2021). By employing this approach, the research can explore how various factors influence professionals' ability to share and apply knowledge, taking into account the specific context of intellectual disability care.

Five distinct studies have been conducted to investigate the factors and strategies that influence professionals' knowledge sharing and application. In this final chapter, an overview of the main findings derived from these five studies (Chapter 2-6) is presented. The research findings are summarized, integrated, and discussed in relation to existing research. A reflection on the primary conclusions is provided, considering the strengths and limitations of the research. Moreover, this chapter outlines the implications of this PhD project for future research, policy, and practice, before presenting the final conclusion.

## Main findings and interpretations

### **Organisational factors influencing knowledge sharing and application (Chapter 2)**

To comprehensively examine the existing research, a systematic review was conducted to identify the organisational factors influencing the sharing and application of knowledge within intellectual disability care. The review uncovered three primary clusters of factors: (1) *characteristics of the intervention*, (2) *factors related to people*, and (3) *factors related to the organisational context*. Analysis of the findings revealed an interdependence among these clusters, with management playing a preconditional role in providing support and practice leadership, while professionals played a key role in translating knowledge into primary processes. Personal factors, including motivation, leadership, interest, commitment, and attitudes towards the intervention, were identified as significant in the knowledge processing undertaken by professionals. The review also emphasized the importance of the context in fostering an environment conducive to knowledge processing. This entails cultivating a stimulating learning culture where professionals take responsibility for their own learning processes and engage in collaborative teamwork to deliver person-centred care.

### **Motives and strategies of CEOs for stimulating sharing and application of knowledge (Chapter 3) and contextual factors related to the execution of these strategies (Chapter 4)**

Chapter 3 and 4 of the research project investigated the role of senior management in enhancing the sharing and application of knowledge among professionals in care organisations for people with intellectual disabilities. The study involved conducting interviews with eleven CEOs (6 male and 5 female) from care organisations for people with intellectual disabilities in the Netherlands. The interviews aimed to delve into the motives and strategies employed by these CEOs to improve knowledge processes, as well as the contextual factors related to the execution of these strategies.

#### *Motives and strategies of CEOs*

The results indicated that CEOs' motives for stimulating knowledge processes primarily derived from internal factors such as personal and professional backgrounds, perceptions, and task performance, as well as the professionals' lacking knowledge base and competencies. External factors, such as the socio-political environment, also played a significant role. For instance, addressing labour market shortages and the Dutch long-term

care policy aimed at reducing involuntary care emerged as relevant external factors that impacted CEOs' strategies for knowledge improvement within their organisations.

Four main categories of strategies were identified, including *providing organisational conditions, focusing on talent development, acknowledging and deploying knowledge holders, and participating in collaborative partnerships*. However, most of these strategies primarily focused on knowledge sharing rather than knowledge application. The analysis of motives and strategies yielded three overarching themes: enhancing the quality and number of professionals, improving knowledge sharing and application, and promoting the equivalency of knowledge sources. Strategies were often used in combination, mutually reinforcing one another. For example, the development of a care pathway within an organisation was subsequently validated by external researchers, and the content of the pathway was integrated into the organisational curriculum.

#### *Contextual factors related to the execution of knowledge strategies*

In Chapter 4, the contextual factors that affected the execution of CEOs' knowledge strategies were examined. The analysis of the data revealed four clusters of factors: a) factors related to persons, b) factors related to the organisational context (internal context), c) factors related to the socio-political environment (external context), and d) factors related to collaborative partnerships (external context). Within the internal context, factors included individuals such as service users, professionals, managers, and the CEOs themselves, as well as groups such as teams of professionals and relatives. The organisational context encompassed aspects such as user-friendliness and currency of office arrangements and ICT systems, the vision regarding learning, and the presence of a knowledge culture within the organisation. The external context involved factors within the socio-political environment, such as the national quality framework, grant programmes, and the limited explicit knowledge base in the field of care for people with intellectual disabilities. Additionally, collaborative partnerships played a role, particularly when policies and culture emphasized knowledge sharing.

It is important to highlight that the majority of factors identified were associated with the internal context, specifically pertaining to the knowledge-related characteristics of support staff, psychologists, and managers (both existing and incoming). The CEOs emphasised their own active role in creating conducive conditions, promoting knowledge sharing, networking and providing educational opportunities. Furthermore, the results showed similarities and interconnectedness between personal and environmental factors influencing the execution of strategies across different levels within the dynamic system. For



instance, the cohesion between the knowledge and competencies of support staff, including incoming support staff, was observed at the micro level. At the meso level, the availability of well-designed training programs within the organisation played a crucial role. Furthermore, the macro level encompassed the influence of vocational education within the socio-political environment.

Overall, the findings of Chapter 4 align with the systematic review conducted in Chapter 2, which demonstrated that organisational factors influencing knowledge sharing and application by professionals also impact the execution of CEOs' strategies. For instance, the leadership of support staff was identified as a critical factor that enables or hinders knowledge-related processes within organisations. The CEOs also acknowledged the influence of external context factors, such as legislation and inter-organisational networks. Additionally, the study highlighted internal context factors, including the knowledge-related personal characteristics of support staff and the role and characteristics of incoming support staff. Finally, the analysis showed that multiple factors interact and shape a continuous process. The successful facilitation of knowledge sharing and application depends on the interplay between motives, strategies, and contextual factors.

### **Incoming professionals' perspectives on the application of new knowledge (Chapter 5)**

Chapter 5 examined the perspectives of three groups of incoming professionals, namely support staff ( $n=5$ ), psychologists ( $n=9$ ), and ID physicians ( $n=6$ ), regarding new knowledge application. Through a concept mapping study, five key strategies were identified to encourage knowledge application in both individual and collective learning settings: (1) *providing tailored learning opportunities*, (2) *providing accessible sites, tools, and platforms to share knowledge*, (3) *stimulating motivation and ownership*, (4) *providing conditional resources such as time, space, and budget*, and (5) *providing a stimulating environment with an open and safe climate and supporting structures* (e.g., via multidisciplinary consultation). These strategies encompass personal factors (e.g., motivation) and environmental factors (e.g., enabling conditions and resources).

Furthermore, the study indicated that each group of incoming professionals had distinct needs, emphasizing the significance of tailoring approaches to meet their specific requirements. For example, incoming support staff expressed a preference for experiential and work-based learning, while incoming psychologists sought supervisor support during the induction period, and ID physicians desired additional assignments to prepare for their future roles. Additionally, the study revealed that incoming support staff primarily perceived

themselves as knowledge receivers, whereas incoming psychologists and ID physicians recognized themselves as knowledge holders, demonstrating professional leadership. Finally, the study highlighted the benefits of combining strategies, as they complemented and reinforced each other effectively.

### **Contextual factors influencing knowledge sharing and application during the COVID-19 pandemic (Chapter 6)**

The final study in this PhD project aimed to explore the contextual factors influencing knowledge sharing and application within care organisations for people with intellectual disabilities, both before and during the COVID-19 pandemic. A comprehensive online survey, based on the previous findings of this project, was completed by 160 professionals, including 69 support staff and 91 practitioners, during the summer of 2021.

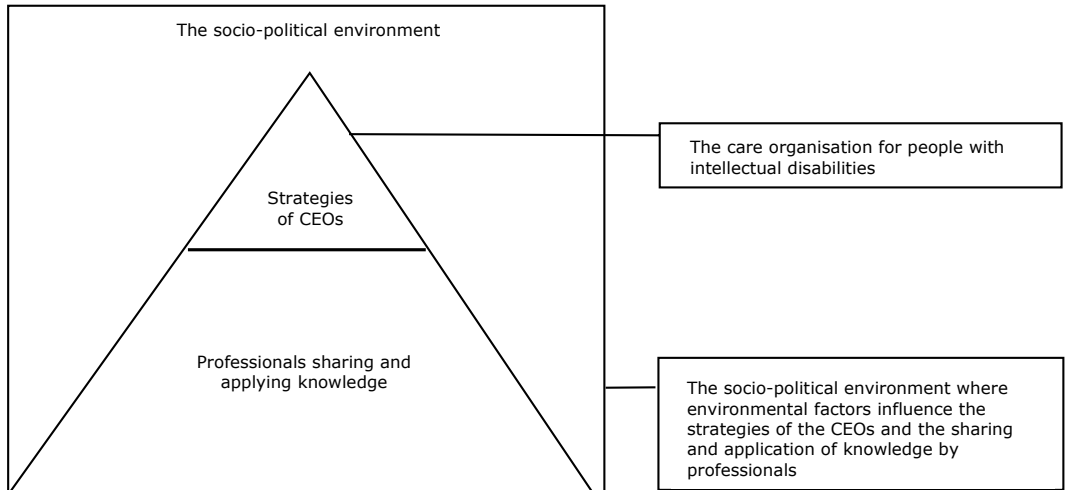
The study found that contextual factors influencing knowledge sharing and application prior to the pandemic remained important during the pandemic. However, certain factors gained increased significance in the pandemic context. These included the involvement of service users and their relatives, professional leadership among practitioners, and adequate practice leadership by management. Additionally, other factors such as team dynamics, accessibility of information sharing and collaboration tools, user-friendly interventions, office arrangements and ICT systems, allocated time for professionals, and workforce capacity were identified as influential factors.

### **Reflections on the results**

In this exploratory research, personal factors, environmental factors, and strategies that influence the sharing and application of knowledge among professionals within care organisations for people with intellectual disabilities were investigated. Figure 1 provides a graphical representation of the context in which these factors and strategies are positioned. This context encompasses in the first place the care organisation, where CEOs' strategies, personal and environmental factors (i.e., organisational factors) influence professionals' sharing and application of knowledge. Additionally, the socio-political environment influences the strategies of the CEOs and the sharing and application of knowledge through environmental factors.

Table 1 (Appendix) elaborates on Figure 1 and presents the key findings from all studies, forming the basis for their integration. The subsequent sections discuss the development and execution of CEOs' strategies, professionals' knowledge sharing, and

knowledge application within the care organisation. Following this, there is a reflection on insights related to the socio-political environment, including socio-cultural factors and political factors. Finally, an overall reflection on the results is provided.



**Figure 1 Positioning of organisational and environmental factors influencing professionals' sharing and application of knowledge in care organisations for people with intellectual disabilities**

### Development of CEOs' strategies

First of all, many *motives* of CEOs to develop strategies that promote knowledge processes were uncovered. These motives stem from personal and environmental factors. While the latter concern the organisational policy on education and training and participation in collaborative partnerships, the former include CEOs' characteristics (such as curiosity), personal and professional background (such as having a family member with an intellectual disability or previous experience in education), motivations (such as a desire to contribute to a dignified existence of service users), and perceptions (such as recognizing the importance of knowledge for quality of care) (Chapter 3).

The influence of CEOs' perceptions on their knowledge management strategies is a crucial element in the concept of '*organisational knowledge leadership*' (Lakshman, 2007, 2009). This concept emphasizes CEOs' personal involvement in customer-focused

knowledge management, specifically aimed at improving organisational performance and the quality of care for service users. There are similarities between the organisational knowledge leadership exhibited by the CEOs in the current studies and the key characteristics of digital leadership observed in recent studies by Derksen (2021) and Zantvoord et al. (2022) in the context of Dutch long-term care. These characteristics include awareness, sharing a vision, adequate knowledge and skills, a connecting role, the ability to stimulate, and access to resources.

In addition to CEOs' motives for developing knowledge strategies, valuable insights were gained regarding the topics and goals of these **strategies**. The systematic review revealed that CEOs have an organisational policy encompassing various aspects such as office arrangements, ICT systems, resources, interventions and tools, training, administrative staff, and teams (Chapter 2). Moreover, the empirical study presented in Chapter 3 demonstrated that CEOs adopted a wide range of strategies to encourage professionals' sharing and application of knowledge. Four main categories of CEOs' strategies were identified: *providing organisational conditions for effective knowledge processes, focused attention on talent development, acknowledgement and deployment of knowledge holders, and knowledge-driven participation in collaborative partnerships* (Chapter 3). While the concept mapping study specifically explored strategies to stimulate knowledge application, incoming professionals mentioned strategies that also aimed at promoting knowledge sharing. This indicates that knowledge sharing is a prerequisite for knowledge application. Notably, incoming professionals highlighted similar strategies to those mentioned by CEOs, such as *providing accessible sites, tools, and platforms for knowledge sharing, and fostering a stimulating environment with an open and safe climate and supportive structures*. Therefore, these strategies appear to be standard practice.

Additionally, incoming professionals, including support staff, psychologists, and ID physicians, expressed the need for **additional strategies** from their organisations, such as *tailored learning opportunities*. The demand for customization highlights an important insight from this research, emphasizing the importance of aligning knowledge content and design with their specific tasks, education level, and learning style. The research suggests that there is currently inadequate attention given to practical skills training in their initial vocational education, indicating a potential gap in collaboration between CEOs' strategies and educational institutions. In terms of learning strategies, this study underscores the importance of combining formal learning methods, such as training, with informal approaches like supervision and practice-oriented learning (Chapter 2, 3, 5, 6). Also, the combination of individual learning and group learning, such as coaching teams and

facilitating multidisciplinary work (Chapter 4, 5) has proven to be beneficial, aligning with the findings of Muller-Schoof and colleagues (2021) in the context of caregivers in nursing homes. Finally, the systematic review and the COVID-19 study highlight the importance of including knowledge sharing and application in the organisational policy regarding office arrangements and ICT system, particularly during health crisis like the COVID-19 pandemic (Chapter 2, 6). This is crucial as more knowledge, including information on new working methods and service users, is shared digitally.

### **Execution of CEOs' strategies**

The execution of strategies by CEOs to encourage knowledge sharing and application among professionals is influenced by both personal and environmental factors within the care organisation. These factors pertain to the CEOs themselves, their management team, and the professionals. Regarding personal factors, the leadership and role fulfilment of CEOs and their management were found to have significant impact (Chapter 2-4). Moreover, during the COVID-19 pandemic, a majority of professionals considered the role fulfilment of both management and CEOs equally or more important (Chapter 6). Environmental factors encompasses aspects such as office arrangements, ICT systems, organisation size and structure, culture, policy, availability of resources, time, staff, training and collaborative partnerships (Chapter 2, 4-6). The following sections will provide further elaboration on the key factors influencing the implementation of CEOs' strategies.

Concerning CEOs, **personal factors** encompass their *organisational knowledge leadership* (as explained in the previous subsection) and the fulfilment of various roles, including setting preconditions, stimulating professional growth, promoting a collective vision within the management team, and networking (Chapter 4). Notably, the role of being an interface or influencer is specifically mentioned by female CEOs. This aligns with the concept of '*agents*' who bridge the gap between the organisation's internal and external worlds, a role that female CEOs tend to prioritize more (Van der Scheer, 2013). Exploring the influence of gender on CEOs' role fulfilment would be an interesting avenue for future research, particularly considering the growing number of female CEOs in healthcare (De Koeijer-Gorissen & Van der Scheer, 2022).

The findings reveal that *managers* play a crucial role in CEOs' strategies to promote knowledge sharing and application. Their role encompasses providing support, guidance, and facilitating learning (Chapter 2, 5, 6). CEOs specified this role more in detail, emphasizing the importance of creating a conducive learning environment, demonstrating commitment through exemplary behaviour, motivating and coaching employees, prioritizing

educational activities, and avoiding punitive measures while providing appropriate recognition (Chapter 4). This role fulfilment is similar to how the vital role of *practice leadership* of managers in the implementation of active support is described (Beadle-Brown et al., 2014, 2015; Bould et al., 2018). The importance of practice leadership by management is also acknowledged in the current studies (Chapter 2, 4-6). Mansell and colleagues (2005) define this concept as focussing all aspects of their work on the quality of life of service users and how well support staff help to support this goal, which is similar to the focus of CEOs' organisational knowledge leadership.

During the COVID-19 pandemic, the practice leadership of managers became increasingly vital particularly in terms of effective communication and accessibility for consultations (Chapter 6). Recently, Sriharan and colleagues (2022) presented an overview of competencies needed for crisis leadership during a pandemic. These competencies encompass task-oriented skills (such as preparation, planning, communication, and collaboration), adaptive skills (including decision making, system thinking, and tacit knowledge) and people-oriented skills (such as inspiring and influencing, demonstrating leadership presence, and showing empathy and awareness). While it would have been interesting to compare these competencies with the data collected in the present studies, such a comparison was not feasible. However, in relation to the knowledge-related personal characteristics of managers, the findings indicated that, besides practice leadership, support, communication, and ability to handle pressure all contribute to influencing knowledge sharing and application (Chapter 2). Moreover, these characteristics gained even more importance during the COVID-19 pandemic (Chapter 6). CEOs also emphasized the significance of additional attributes, such as the professional background of managers (including having adequate knowledge and management skills) and their receptiveness to new knowledge (Chapter 4).

In addition to personal factors, ***environmental factors*** within the care organisation also play a crucial role in the execution of CEOs' strategies to foster knowledge sharing and application. The significance of '*office arrangements and ICT systems*' has been consistently highlighted in four studies (Chapter 2, 4-6). Office arrangements and ICT systems serve as fundamental elements in executing these strategies by providing professionals with essential infrastructure for sharing, storing, and accessing information both inside and outside their own organisation. This infrastructure encompasses a broad variety of information and communication technology, including access to email, online platforms both on the intranet and the internet (e.g., access to knowledge resources like e-learning and research literature), organisation of documentation, terminology, communication and

accessibility and reliability of electronic care records. During the COVID-19 pandemic, the importance of this factor further amplified, as professionals heavily relied on video conferencing to carry out their tasks (such as coaching service users, supporting staff, and conducting therapy sessions). However, practitioners encountered barriers in knowledge sharing and application due to inadequate equipment, such as unstable internet connections and small screens, which hindered their ability to effectively engage (Embregts et al., 2022; Oudshoorn et al., 2023).

Lastly, the execution of CEOs' strategies is influenced by three important characteristics of the care organisation, which have varying degrees of changeability: size, structure, and culture (Chapter 2, 4-6). Regarding size and structure, CEOs identified key factors such as budget availability, number of locations, service integration, regional operations, knowledge positioning, geographical spread, distance from universities, and available facilities for sharing knowledge (Chapter 4). They also mentioned the importance of a culture that fosters knowledge sharing and application, including features such as a knowledge-oriented culture, professional pride, self-awareness, openness, demand-driven utilization of knowledge, an open team culture, and a balanced approach that goes beyond solely focusing on practice (Chapter 4). Similarly, incoming professionals highlighted the importance of a learning culture and an open and safe climate that encourages exploration and innovation (Chapter 5). These findings are consistent with existing literature, such as the study by Steiger et al. (2014) that demonstrated the influence of organisational structure types on knowledge management practices, as well as the research conducted by Bigby and colleagues (2012, 2016) that explored the relationship between culture and performance in group homes for people with intellectual disabilities. However, changing the organisational culture is a challenging process that also requires leadership (Schein, 2010).

### **Professionals' knowledge sharing**

When considering the *personal factors* that influence professionals' knowledge sharing, the current studies underscore the importance of professional leadership among all professionals involved in the primary process, including support staff and practitioners (Chapter 2, 4-6). According to Nightingale (2020), leadership in healthcare practice entails influencing others through positive qualities, behaviors, and interpersonal skills shaped by personal and professional values. This form of leadership was exemplified by psychologists who acted as knowledge holders, work supervisors, and kept themselves updated with relevant literature (Chapter 4, 5). During the COVID-19 pandemic, the role of professional leadership of practitioners was rated as even more important than before. They were tasked

with tailoring general policy measures to meet the diverse needs of service users and introducing innovative approaches to their work (Chapter 6). By sharing their knowledge, these practitioners facilitated the application of new insights to address the health crisis. In this way, these professionals demonstrated their crisis leadership (Sriharan et al. 2022).

In addition to leadership, the current studies have identified other personal factors that influence professionals' knowledge sharing, including their motivation, competencies, and attitudes (Chapter 2-6). However, CEOs provided a broader perspective and mentioned additional knowledge-related personal characteristics, such as support staff's receptivity to knowledge, their ability to learn and read, self-esteem/professional pride, and learning style. Similar characteristics were also mentioned in relation to incoming support staff (Chapter 3, 4). Interestingly, incoming professionals categorized themselves differently, with support staff identifying themselves as knowledge receivers and practitioners identifying as knowledge holder (Chapter 5). While other researchers (e.g., Embregts, 2011; Overwijk et al., 2021; Zomerplaa, 2017) have indicated the influence of personal characteristics like motivation, skills, and attitude, the specific emphasis on reading and learning skills, as well as the distinction between knowledge holder/receiver identities, is a unique contribution of the present studies. Providing a variety of learning opportunities, as requested by all incoming professionals (Chapter 4), is likely help to match their learning preferences and capacities.

In addition to individual personal factors, team-related factors were found to play a significant role in knowledge sharing, as indicated by the current studies. These factors encompassed formal and informal knowledge exchange, multi-disciplinary teamworking (providing support and assistance to others), team functioning and composition, attitude (support and eagerness), multi-disciplinary team meetings, multi-disciplinary cooperation, and learning communities (Chapter 2, 4-6). During the COVID-19 pandemic, the multi-disciplinary consultations, meetings for consultation, and informal knowledge exchange was rated equally or even more important by almost all professionals (Chapter 6). The significance of multi-disciplinary knowledge sharing and collaboration stems from the lifelong and life-wide character of care provision to people with intellectual disabilities. This requires a broad range of knowledge across various domains of quality of life, involving professionals from diverse disciplines (such as support staff, psychologists and (para)medics) who work together in teams (Buntinx, 2008; Schalock et al. 2008).

In addition to personal factors, **environmental factors** play a significant role in knowledge sharing, similar to the development and execution of strategies. In the execution of CEOs' strategies, office arrangements and ICT systems were found to be vital in



facilitating knowledge sharing (see the previous subsections). This factor also played an important role in professional practice, where actual knowledge sharing takes place (Chapter, 2, 4-6). Furthermore, the results of multiple studies highlight the importance of the availability of employees, time, and resources (Chapter 2, 4-6). Insufficient time for knowledge sharing can result in imbalanced workloads, such as understaffing, which can discourage participation in educational activities. Also, the lack of continuity due to turnover can hinder knowledge sharing as experienced individuals leave the organisation. As previously indicated by Buntinx (2008), continuity is required for professionals to effectively understand the needs of service users and respond appropriately. If knowledge is not transferred or recorded upon their departure, it risks being lost. Furthermore, professionals' knowledge sharing is influenced by the time and resources needed for implementing interventions, as well as the availability of tools for information sharing, collaboration, and understanding work processes. The factors related to the availability of employees, time, and resources were rated even more important during the COVID-19 pandemic when support staff shortages due to infections and quarantine created time pressures and necessitated working with temporary colleagues (Chapter 6).

### **Professionals' knowledge application**

Next, the *personal factors* that influence professionals' knowledge application were examined and were found to be largely similar to those affecting knowledge sharing, including leadership, other knowledge-related personal characteristics, and mono- and multi-disciplinary teamworking (Chapter 2, 4-6). To avoid repetition, reference is made to the previous subsection. However, there are additional factors of vital importance that deserve discussion. Across all studies, professionals' basic and specific knowledge and competencies of professionals are acknowledged as significant factors (Chapter 2-6). These factors are essential for bridging the know-do gap and effectively applying knowledge in practice. Professionals' knowledge and competencies form the foundation of their expertise, which is crucial for providing quality care and support to service users. CEOs identify the lack of these knowledge and competencies as a driving force behind their knowledge strategies (Chapter 3).

The craftsmanship of professionals relies on continuous learning organisational support (Simons & Ruijters, 2015; Weggeman, 2007). This necessitates the availability of knowledge resources, as previously mentioned as an important environmental factor for knowledge sharing (see the previous subsection). In addition, another valuable source of knowledge is the expertise held by individuals and teams. In this perspective, research

(e.g., Jansen et al., 2018; Nijs et al., 2019; Olivier-Pijpers et al., 2020) indicates that the knowledge of service users and their relatives contributes significantly to improving support for people with intellectual disabilities. It is noteworthy, however, that the results of the current studies provide limited information about the role of these knowledge holders in knowledge application. However, this is consistent with the scoping review of Tournier and colleagues (2021), which identified a lack of attention to the role of families.

In terms of **environmental factors**, the organisational culture was found to be influential in whether professionals actually apply knowledge. In other words, individually and as a team, committing themselves to change their behaviour if the knowledge available at that time indicates this, such as after a multidisciplinary team meeting, the introduction of a new method or the consultation of experts. As discussed in the subsection 'Execution of CEOs' strategies, a supportive knowledge culture was identified, characterized by professionals who value research, demonstrate professional pride and self-awareness, and foster an open learning culture. This includes creating an open and safe climate that encourages exploration and innovation (Chapter 2, 4-6).

### **Socio-cultural factors in the environment**

When considering the socio-political environment, it is important to acknowledge the limited number of **socio-cultural factors** identified in the current studies (Table 1 in Appendix 1). However, both CEOs and professionals have indicated the role of professional groups within this broader context. The presence of a professional association and registration with such as association have been recognized as important factors in facilitating knowledge sharing and application (Chapter 4-6). These associations provide a network that allows professionals to expand their knowledge base and access relevant information to their organisation. This is consistent with research of Berta et al. (2010). Furthermore, membership in a professional association can enhance professionals' sense of ownership over knowledge and foster professional pride.

Interestingly, the discussion of socio-cultural factors primarily stemmed from the insights shared by CEOs. Based on their environmental analyses, they pointed to two noteworthy socio-cultural factors: the limited explicit knowledge base and the attitude towards knowledge within the socio-political environment. The latter factor manifests itself in the role of various stakeholders, including care organisations (their openness to knowledge), the branch as a whole (their interest in knowledge), and collaborative partnerships (cultivating a culture that emphasizes knowledge sharing). Finally, CEOs identified the tight labour market and negative public image as motives for their strategies

to promote knowledge sharing and application. In both cases, the underlying driver is market forces, underscoring the importance of enhancing attractiveness for both employees and service users (Chapter 4).

### **Political factors in the environment**

Furthermore, within the care organisation's environment, *political factors* have been identified that impact knowledge sharing and application. These factors pertain to the policies of various stakeholders, including the national government, vocational education institutions, the branch as a whole, other care organisations, and collaborative partnerships (Chapter 3-6). CEOs highlighted the influence of national policies, such as laws and regulations, rate levels, the national quality framework, and grant programmes, on the development and execution of their knowledge strategies (Chapter 3, 4). Moreover, professionals mentioned the presence of a national policy for the care of people with disabilities as a significant factor during the COVID-19 pandemic (Chapter 6). The influence of laws and regulations was also acknowledged in other research (Bakkum et al., 2022; Flottorp et al., 2013; Ramerman et al., 2018).

Furthermore, both CEOs and incoming professionals highlighted the issue of insufficient educational provision, noting a mismatch between the knowledge offered in educational institutions and the knowledge required in care organisations (Chapter 3-5). They also emphasized the importance of policies that promote engagement in academic collaborative partnerships (Chapter 4-6). These partnerships, also known as community-academic partnerships in international literature (Drahota et al., 2016), are defined by Wijenberg & Nies (2015) as knowledge infrastructures that facilitate collaboration among practice, research, policy, and training. They have been established in the field of intellectual disability care in the Netherlands for over a decade (Embregts, 2017; Van Balkom et al., 2014), and the government actively encourages their development due to their contribution to professionalization in the sector and professional practice (Ministerie van VWS, 2019).

### **Overall reflection on the results**

This exploratory research investigated how to improve the policy of care organisations to stimulate professionals' knowledge sharing and application. Based on the preceding subsections, four key insights have been identified. These insights explicitly confirm existing knowledge about the role of the organisation and the environment in care organisations for people with intellectual disabilities.

First, there appears to be an *interconnectedness of strategies, people, personal factors, and environmental factors within a layered system*. To optimize knowledge sharing and application in healthcare organisations, it is advantageous to implement multiple strategies that address personal and environmental factors across all layers of the system, including the primary process, the care organisation, and intellectual disability care. These strategies, which have been validated by professionals, encompass various aspects such as creating favourable organisational conditions for knowledge processes, emphasizing talent development, recognizing and utilizing knowledge holders, and actively engaging in collaborative partnerships. These strategies are improving the quality and quantity of professionals, promoting knowledge sharing and application, and fostering the equal recognition of the three knowledge sources. Furthermore, prioritizing continuous learning through customized approaches, employing a combination of learning strategies, and facilitating stronger connections between vocational education and professional practice are also essential components of effective knowledge management.

Second, when developing and deploying strategies, *the dynamic nature of personal and environmental factors within the entire system* should be taken into account. While certain factors can be modified, others are inherent and unchangeable. Strategies should not solely focus on altering non-modifiable factors but should instead be designed to effectively respond to them. For instance, the learning style of support staff is a personal factor that cannot be changed, but strategies can be adapted to accommodate different learning styles through approaches such as workplace learning and experiential learning. Similarly, environmental factors like the COVID-19 pandemic, which is beyond control, cannot be changed. In such cases, strategies need to be adjusted to address the impact of these factors. For example, enhancing digital knowledge sharing systems, fostering an open and safe environment for exploration and innovation, and leveraging the experiential knowledge of relatives and service users can be effective strategies to navigate the challenges posed by the tight labour market and employee shortages.

Third, *leadership* turned out to be a key factor in stimulating knowledge sharing and application. Leadership was identified at different levels, including CEOs (organisational knowledge leadership), managers (practice leadership) and professionals (professional leadership). Across these roles, leadership manifested as the motivation to learn, transfer, and apply knowledge in their respective responsibilities. By fulfilling the role of knowledge holders, leaders actively promote a culture of knowledge-driven practices. Therefore, leadership promotion appeared to be a core element of the strategies to stimulate the sharing and application of knowledge.

Fourth, the present thesis emphasizes the significance of *distinguishing between explicit and tacit knowledge and its implications for knowledge sharing*. Explicit knowledge, which can be readily articulated and documented, lends itself well to digital sharing platforms. Examples include client information in electronic care records or treatment method details in published materials. However, in the context of intellectual disability care, a substantial portion of knowledge is tacit in nature. Tacit knowledge can only be shared through socialization, either by observing the knowledge holder or through explicit articulation by the holder. Therefore, when developing and implementing knowledge-sharing strategies, it is crucial to consider the nature of the knowledge being shared. The research highlighted that CEOs' strategies encompassed both approaches, addressing the sharing of tacit knowledge through activities such as multidisciplinary consultations and meetings, while also emphasizing the importance of user-friendly digital systems for sharing, storing, and retrieving explicit knowledge.

### **Strengths, limitations, and directions for future research**

This section provides an overview of the strengths and limitations of this PhD project, as well as directions for future research.

#### **Strengths**

##### *Contextual approach*

During this PhD project, knowledge processing was studied within the field of intellectual disability care, adopting a contextual approach. This approach recognized intellectual disability care as a complex and multi-layered dynamic system encompassing a micro, meso, and macro level. By emphasizing the importance of the context in the field of intellectual disability care, this contextual approach aligns with the growing recognition of contextual factors in this field (e.g., Schalock et al., 2021). The utilization of the contextual approach proved to be advantageous since it allowed for a focused examination of the unique characteristics present in this field. Specifically, attention was given to the inherent heterogeneity among service users, who possess diverse and ongoing care and support needs throughout their lives (i.e., personal factors). Additionally, the contextual approach shed light on the intricate nature in which this care and support is provided and organised, typically involving multidisciplinary teams dispersed across varying geographical locations (i.e., environmental factors).

*Perspectives of professionals and CEOs*

To obtain a more comprehensive understanding on knowledge sharing and application, this PhD project examined multiple perspectives. This approach aimed to capture a diverse range of viewpoints, and produce a richer depiction of the phenomenon under investigation (Small & Sage, 2005). By considering multiple perspectives, a key finding emerged regarding the pivotal role played by two distinct groups engaged in knowledge processing within the healthcare organisation. First, by including CEOs who were actively involved in the knowledge management of their organisations, the influence of their organisational knowledge leadership became apparent. Exploring the motives, strategies, and personal and environmental factors that shaped CEOs' execution of their strategies shed light on the dynamics of their organisational knowledge leadership. This proved to be vital to stimulate professionals' knowledge sharing and application. Second, it was deemed advantageous to incorporate multiple disciplines with varying educational levels, including support staff, practitioners, experienced professionals, and incoming professionals. Each discipline expressed unique needs and requirements related to stimulating knowledge sharing and application. By combining these two perspectives, a comprehensive view of how to enhance knowledge sharing and application among professionals emerged, contributing to a more nuanced approach to knowledge management.

*Sources and nature of knowledge*

Recognizing the significance of the available sources of knowledge (i.e., evidence-based knowledge from scientific research, practice-based knowledge of professionals, and experiential knowledge of service users and their informal network) and to their nature in the field of intellectual disability care appeared to be vital for this PhD project. These three sources of knowledge exhibited distinct properties, characterized by their codifiability and the explicit or implicit nature of the knowledge they encompassed, as elucidated by Polanyi and Sen (2009). The nature of knowledge, whether it is codifiable and explicit or non-codifiable and tacit, has significant implications for its sharing, as discussed in studies by Farrington et al. (2015) and Nonaka et al. (2000). As aforementioned, it became evident that CEOs' strategies aimed at stimulating knowledge sharing and application took into consideration the diverse sources of knowledge and their nature. Furthermore, it became apparent that these knowledge processes faced challenges stemming from the inequality among the three sources of knowledge and the under-utilization of one of these sources, namely experiential knowledge.

### *Methods and techniques*

This PhD project employed a range of research methods, including a systematic literature review, in-depth qualitative interviews, concept mapping, and a survey, with the aim of enhancing the value of the insights gained. This approach, known as methods triangulation (Noble & Heale, 2019), yielded two benefits. First, the utilization of multiple research methods enhanced the credibility of the research findings by providing a well-rounded and comprehensive explanation to the reader. Second, by repeatedly exploring personal and environmental factors and strategies across multiple different study designs, the validity of the results was strengthened.

### **Limitations**

One limitation of this PhD project relates to the relatively small number of respondents who participated in the concept mapping study (Chapter 5). Despite manifold efforts to recruit more participants, the final number of participants remained limited, with five incoming support staff and six ID physicians participating in the study. However, it adheres to the recommended minimum number of five participants, as proposed by Kane (2007), to generate meaningful data in a concept mapping study. It is worth noting that this sample size aligns with the studies by Nijs et al. (2019) and Lokman et al. (2022) who conducted similar concept mapping studies.

Another limitation concerns the distribution of participants between the support staff ( $n=69$ ) and practitioners ( $n=91$ ) in the COVID-19 study, outlined in Chapter 6. Despite there being more support staff participants in absolute numbers, the relative distribution between the two groups is imbalanced. This discrepancy can be attributed to the context of the COVID-19 pandemic during the recruitment and data collection period. The COVID-19 pandemic necessitated prioritising the primary care process, leading to intensified work pressure and staff shortages. Additionally, the terminology used in the PhD project, specifically the terms knowledge sharing and application, may have been unfamiliar to support staff. This lack of familiarity could have contributed to a lower response rate among this group, and potentially affected their ability to comprehensively respond to all the questions posed.

One additional limitation of this PhD project pertains to the sampling methods employed. In Chapter 6, a convenience sampling method was used, which may have resulted in self-selection bias. It is likely that only support staff and practitioners who were already interested in knowledge sharing and application chose to participate in the study. This self-selection bias introduces the possibility that the results are skewed towards more

positive responses. Moreover, in the studies conducted in Chapter 3, 4, and 5 where purposive sampling was applied to ensure a diverse range of perspectives (Patton, 2002), a selection bias may have occurred. The deliberate selection of participants based on specific criteria may have resulted in a sample that is not fully representative of the broader population.

A further limitation is the focus on the perspectives of CEOs and professionals, while excluding the perspective of other important stakeholders. Although the PhD project examined the perspectives of CEOs and professionals, recent research on the knowledge infrastructure of long-term care in the Netherlands (Van Dijk et al., 2021) and the outcomes of this PhD project indicate that other important stakeholders are involved in knowledge sharing and application. Within organisations themselves, stakeholders such as service users, relatives, and managers also contribute to knowledge processes. Additionally, in the broader socio-political environment, policymakers from the national government and academic leaders of consortia of research institutes and care organisations also play significant roles in shaping knowledge processes. By not including these additional perspectives in this exploratory research, the PhD project has a limitation in terms of its comprehensiveness. This may result in an incomplete understanding of the complexities and nuances of knowledge sharing and application within the field of intellectual disability care.

One final limitation of this PhD project concerns the transferability of the present findings to other settings or countries. It is important to note that all studies were conducted in Dutch care organisations for people with intellectual disabilities, and as a result, this PhD project reflects the unique organisation of healthcare services for people with intellectual disabilities in the Netherlands. In contrast, other countries such as the United Kingdom, predominantly provide services for people with intellectual disabilities by mainstream organisations. The differences in the organisation and delivery of healthcare services for people with intellectual disabilities across countries may hinder the direct transferability of the findings from this PhD project to other contexts. However, it is worth noting that while the organisation and delivery of healthcare may vary, the environmental factors identified, such as organisational issues and challenges, may still be comparable to those in other countries. Previous research conducted in different contexts has highlighted similar issues (e.g., Farrington et al., 2015; Lennox et al., 2013; Totsika et al., 2008; Wood et al., 2014). This suggests that certain environmental factors impacting knowledge processes may be relevant across different healthcare systems, despite variations in organisation and delivery of healthcare.



### **Directions for future research**

Drawing from the insights gained in this PhD project, four important directions for future research emerged: 1) the role of leadership in knowledge processes within intellectual disability care, 2) how to stimulate individual and collective learning by professionals, both during vocational education and in professional practice, 3) the influence of stakeholders on processing knowledge, and 4) evaluating the effects of improved knowledge sharing and application.

#### *The role of leadership in knowledge processes*

The first important direction for future research involves further exploration of leadership within intellectual disability care, focussing on CEOs (i.e., organisational knowledge leadership), management (i.e., practice leadership) and professionals (i.e., professional leadership). The findings from Chapter 3 and 4, focusing on the role of CEOs, underscore the significance of the theory and concept of 'organisational knowledge leadership' as introduced by Lakshman (2007; 2009), especially in the field of intellectual disability care. Future research should consider applying the concept of organisational knowledge leadership to other settings, such as small-scale residential initiatives and community-based services, both within the Netherlands and in other countries. Moreover, it is important to expand the scope of research beyond intellectual disability care and examine the concept of organisational knowledge leadership in other fields of care such as long-term care for other groups of vulnerable citizens (e.g., elderly and people with physical or sensory disabilities).

Furthermore, it is highly recommended to apply the concept of 'organisational knowledge leadership' in other study designs to gain a deeper understanding of its dynamics. One valuable study design to pursue is to conduct action research that builds on the findings of Chapter 3 and 4. This type of study design can delve into the underlying reasons why certain strategies are chosen over others, explore the significance of organisational and CEO-related motives, and identify effective ways to encourage and enhance CEOs' organisational knowledge leadership. By employing action research, researchers can actively involve participants in the research process. This collaborative approach allows for immediate application of the insights gained from the research.

In addition to exploring the leadership of CEOs, further research on the leadership of management and professionals is of great importance. The findings from the study on the contextual factors influencing knowledge sharing and application during the COVID-19 pandemic (Chapter 6) clearly demonstrate the crucial role played by practice leadership of management and professional leadership and craftsmanship of practitioners in intellectual

disability care. Moreover, Chapter 5 reveals that professional leadership also encompasses taking ownership of one's own learning process, an area that was lacking among incoming support staff. To address these aspects, it is recommended to conduct a mixed-method study (Regnault et al., 2018) that investigates how to foster professional leadership among both incoming and incumbent support staff and practitioners, as well as practice leadership among management, including their digital leadership. This future study could commence with focus group interviews to gather in-depth insights and perspectives from participants. The focus group interview findings can then be further explored through a survey, allowing for a more comprehensive understanding and validation of this topic.

#### *Stimulating individual and collective learning*

The second direction for future research focuses on how to stimulate individual and collective learning by professionals, both during vocational education and in professional practice (i.e., strategies). The findings from the study that examined the perspective of incoming professionals on knowledge application strategies indicate several key points: 1) professionals engage in both individual and collective learning, 2) professionals utilize a combination of formal and informal learning opportunities tailored to their specific needs, and 3) learning from service users and relatives is often overlooked in daily practice. To further explore this topic, it is recommended to investigate strategies that can effectively stimulate individual and collective learning among professionals, which needs to be addressed during both vocational education and professional practice. More specifically, this research can delve into ways to enhance motivation and foster a sense of ownership over knowledge holdership, create informal learning opportunities (such as on-the-job learning), and promote a culture of continuous learning. To conduct this future research, a qualitative study design, preferably through focus group interviews, would be beneficial. A diverse range of participants should be included, such as vocational education teachers, students (the future healthcare professionals), trainers, learning coaches, and experienced as well as incoming professionals.

#### *Stakeholder influence on knowledge processes*

The third direction for future research focuses on investigating the influence of stakeholders on knowledge processing, both within organisations themselves and in the broader socio-political environment. This includes stakeholders such as service users, relatives, and managers within organisations, as well as policymakers at the national government level and academic leaders of consortia of research institutes and care organisations for people

with intellectual disabilities. Exploring the perspectives of these stakeholders can provide valuable insights into the knowledge dynamics within the field of intellectual disability care. To gain a deeper understanding of the influence of stakeholders on knowledge processing, qualitative research methods such as interviews and concept mapping should be employed. These methods can uncover critical insights into additional environmental factors that impact knowledge processing. For instance, future studies can explore the external context where these factors operate, shedding light on the dynamics within the multi-layered system of intellectual disability care. Additionally, investigating the phenomenon of knowledge hiding, where intentional knowledge withholding occurs (Connelly et al., 2012; Di Vaio et al., 2021), can be an important aspect to consider. This phenomenon may arise when certain knowledge, such as specific treatments, becomes a unique selling point for care organisations competing to provide services for people with intellectual disabilities.

#### *Evaluating the effects of improved knowledge sharing and application*

The fourth direction for future research involves investigating the effect of improved knowledge sharing and application within care organisations for people with intellectual disabilities. While Chapter 3 provides, amongst other things, insights into the perception of CEOs that these knowledge processes contribute to organisational performance and enhance the quality of care and quality of life of service users, this PhD project did not specifically focus on studying the direct impact of improved knowledge sharing and application on service users. To address this gap, it is recommended to conduct future research using a multiple case study design to examine the effects of improved knowledge sharing and application on service user outcomes. This research can build on existing studies that have explored the effects of knowledge management on the management of health and social care, such as the work by Hujala and Laihonen (2021). Additionally, studies by Kianto et al. (2016) and Rafique and Mahmood (2018) that have investigated the influence of knowledge management on job satisfaction can provide valuable insights for examining the impact of knowledge management on service user outcomes.

### **Implications for policy and practice**

From the perspective of improving and renewing strategies for knowledge policies that stimulate professionals to share and apply knowledge, this section highlights implications for policy and practice in four key areas that contribute to driving this change. These areas encompass: 1) promoting knowledge leadership at all organisational levels, 2) evaluating,

improving, and renewing strategies aimed at stimulating knowledge sharing and application, 3) establishing favourable conditions within the internal context, and 4) establishing favourable conditions within the external context.

### **Promoting knowledge leadership**

The first implication focuses on promoting knowledge leadership at all organisational levels. This begins by acknowledging the importance of the competency leadership, exhibited by individuals involved in the organisation (i.e., CEOs, managers, professionals) as well as in the policy framework that operates within the multi-layered system encompassing micro, meso, and macro levels. A key aspect of this implication involves acknowledging the value of informed decision-making and actions based on up-to-date knowledge for all stakeholders. To facilitate the development of knowledge leadership, it is essential to create an environment that supports and nurtures this mindset. This includes promoting a knowledge and learning climate at all organisational levels, including the primary processes, locations, and the organisation as a whole.

Promoting a knowledge and learning climate necessitates the establishment of an organisational vision that recognizes the value of knowledge, with respect to the quality of care and quality of life of service users. It is important to foster an environment that appreciates and encourages curiosity and receptivity towards knowledge, combined with the development of the necessary capacity and skills to effectively share and apply knowledge. To stimulate curiosity and receptivity to knowledge, individuals at all levels within the organisation can play a crucial role. This includes incoming professionals, managers, and CEOs, regardless of whether they are fresh from vocational education, switching from another care organisation for people with intellectual disabilities, or switching careers from a different professional field. It is beneficial to actively involve newcomers in getting to know the service users and leveraging the experiential knowledge held by them and their relatives. Additionally, all newcomers should be encouraged to ask questions about the organisation's working methods, providing them with the opportunity to offer fresh perspectives and valuable feedback to their colleagues and management team. They should also be encouraged to take action based on the unique insights they possess. By harnessing this sense of wonder and curiosity, organisations in the field of intellectual disability care can generate a movement in the sharing and application of knowledge, ultimately making knowledge work in practice.

Promoting leadership aimed at knowledge sharing and application necessitates a range of crucial actions that should be undertaken by care organisations for people with

intellectual disabilities, as well as other organisations seeking to embrace this approach. These actions revolve around policy and practice, and the following steps are crucial in this endeavour. First, it is essential to develop awareness about the added value of knowledge and importance of leadership in relation to knowledge within education, recruitment, and talent development processes. Second, a particular focus should be placed on service user-focused knowledge management. Third, it is crucial to enhance knowledge-related competences. This includes developing competences such as reflection, feedback, active listening, collaborative learning, and an open mindset. Additionally, individuals should be encouraged to recognise their own developmental identity and learning style, as well as acquire the necessary digital skills to navigate and use digital resources. Last, organisations must promote knowledge-informed decision making and foster a knowledge and learning climate at all organisational levels.

Executing such a policy can potentially create favourable conditions for fostering knowledge ownership, sharing knowledge, and taking informed action. In essence, it entails demonstrating knowledge-based leadership in roles such as CEO (*organisational knowledge leadership*), manager (*practice leadership*), or professional (*professional leadership*), with the ultimate goal of improving the quality of care and quality of life of service users. Given the current context, which presents various challenges including workforce shortages and limited digital skills, alongside the increasing demand for care and importance of cost controls, it is essential to also prioritize digital leadership within management roles (Lindenberg et al., 2022).

### **Evaluating, improving, and renewing strategies**

The second implication focuses on the evaluation, improvement, and renewal of strategies to promote knowledge sharing and application. A key recommendation is to prioritize service user-focused knowledge management, with a specific focus on improving the quality of care and quality of life for service users. To facilitate this, organisations can leverage the national quality framework, as highlighted by CEOs who identified this framework as a facilitating environmental factor. An effective tool in this regard is the recently launched *Quality Compass 2023-2028* (Landelijke Stuurgroep Kwaliteitskompas Gehandicaptenzorg, 2021), which is a policy document collaboratively developed by all stakeholders in the care and support for people with intellectual disabilities. The Quality Compass outlines four building blocks to focus on for enhancing quality of care and quality of life of service users, and gaining insights into its impact: 1) optimise the individual's care process, 2) research on service user experiences, 3) professional development, and 4) insight into quality of care.

Moreover, policymakers in care organisations for people with intellectual disabilities can draw inspiration from the identified strategies presented in this PhD project. These strategies can offer valuable insights not only to these organisations but also to stakeholders in the external context, such as the Ministry of Health, Welfare, and Sport (VWS), and Ministry of Education, Culture, and Sciences (OCW), knowledge institutes, and educational institutions. Opportunities for improvement can be expected by focussing on the following areas: a) motivating all professionals to acquire and apply knowledge, b) designing strategies that focus on the application of knowledge, c) integrating and combining mutually reinforcing strategies, and d) implementing the strategy of '*acknowledgement and deployment of knowledge holders*' on a larger scale.

The importance of the '*acknowledgment and deployment of knowledge holders*' strategy cannot be overstated. It involves recognizing and utilizing all three knowledge sources: evidence-based knowledge from scientific research, practice-based knowledge of professionals, and the experiential knowledge of service users and their informal network. This is particularly relevant, for instance, in the development and implementation of support plans in the primary process. For this strategy to work, it is essential to emphasize the importance of experiential knowledge of service users and their informal network (such as relatives and friends) for future professionals. This can be achieved through various means, such as incorporating guest lectures in vocational education and integrating experiential knowledge into the onboarding process for incoming professionals. Furthermore, a customised approach that considers the preferences of specific groups of professionals, such as support staff versus practitioners, younger versus older professionals, incoming versus experienced professionals, can enhance workplace and experiential learning. Finally, stakeholders including CEOs, management, knowledge specialists, and policymakers, can benefit from the overview of contextual factors presented in Chapter 4. The understanding of these factors will support the execution of the identified knowledge strategies outlined in Chapter 3 and 5.

### **Establishing favourable conditions within the internal context**

The third implication focuses on establishing favourable conditions within the internal context of care organisations to facilitate knowledge sharing and application by professionals. In addition to promoting a knowledge- and learning climate, as presented in the first implication, it is crucial to improve the knowledge infrastructure of these organisations (Van Dijk et al., 2021). The COVID-19 pandemic has highlighted the importance of robust ICT-facilities, effective record keeping and secure exchange of health

information, both within the organisation and with external partners. Furthermore, engaging in collaborative partnerships with knowledge institutes (e.g., academic collaborative centres), knowledge networks and platforms (e.g., Platform EMG, which is dedicated to people with profound intellectual and multiple disabilities), and with educational institutes (i.e., universities of applied sciences and lower vocational education) is highly recommended. These collaborative partnerships can provide quick access to relevant knowledge, while also ensuring the potential availability of well-trained future professionals. Finally, it is vital to have preconditions in place like allocating sufficient resources, such as time and access to knowledge sources, to professionals. Additionally, it is important to foster an open and safe climate that encourages to explore and innovate, which is also called innovative culture.

### **Establishing favourable conditions within the external context**

The fourth implication concerns establishing favourable conditions in the external context of care organisations, with an emphasis on the stimulating and facilitating role of national stakeholders like the Ministry of Health, Welfare, and Sport (VWS), and the Ministry of Education, Culture, and Science (OCW). It is crucial to recognize and address the existing knowledge gap between education at all levels and the professional field (Van Dijk et al., 2021). Additionally, strengthening the knowledge infrastructure is essential. This involves providing adequate resources and support for knowledge sharing activities, such as team coaching and multidisciplinary consultations, which allow for in-depth discussions and collaboration among professionals. Allocating appropriate rates for complex care needs is also important, as it allows sufficient time for knowledge sharing and application within the primary process.

### **Concluding remarks**

The main focus of this PhD project revolved around the question: How to improve knowledge sharing and application by professionals in care organisations for people with intellectual disabilities? Through a series of studies, various factors and strategies influencing these knowledge processes were identified and examined. The pivotal role played by the context in which these knowledge processes occur became clear and, moreover, that this context is a dynamic, multi-layered system involving numerous stakeholders. It turned out that attention must be paid to the three distinct sources of knowledge in this particular field of care: evidence-based knowledge from scientific

research, practice-based knowledge of professionals, and experiential knowledge of service users and their informal network. Each source of knowledge brings unique perspectives and insights to the table, and recognizing their nature (explicit or tacit) is essential in leveraging their value effectively.

Knowledge sharing and application are influenced by both personal and environmental factors. To improve these knowledge processes, it is essential to establish a good interplay between these factors. Professionals hold a crucial role in this interplay as they directly contribute to the quality of life of service users through their care and support. They can enhance their contributions by focusing on their craftsmanship, professional leadership, and motivation. That in turn requires organisational knowledge leadership of CEOs and practice leadership of management. CEOs and management should place emphasis on the ongoing development of professionals' knowledge and competencies. This involves providing tailored learning strategies, necessary resources (such as suitable office arrangements and ICT systems), and a conducive learning environment. Creating an open learning culture is vital, in which the equivalence of the three knowledge sources is recognized and valued. By focusing on these three sources, strategies can be tailored to make knowledge work effectively. This, in turn, will positively impact the quality of care and quality of life provided to service users in care organisations for people with intellectual disabilities.



## References

- Bakkum, L., Bisschops, E. H., Lagerweij, S., & Schuengel, C. (2022). Impact of the Care and Coercion Act on recorded involuntary care in intellectual disability care: a time-series analysis. *Journal of Intellectual Disability Research*. <https://doi.org/10.1111/jir.12991>
- Beadle-Brown, J., Bigby, C., & Bould, E. (2015). Observing practice leadership in intellectual and developmental disability services. *Journal of Intellectual Disability Research*, 59(12), 1081-1093. <https://doi.org/10.1111/jir.12208>
- Beadle-Brown, J., Mansell, J., Ashman, B., Ockenden, J., Iles, R., & Whelton, B. (2014). Practice leadership and active support in residential services for people with intellectual disabilities: an exploratory study. *Journal of Intellectual Disability Research*, 58, 838-50. <https://doi.org/10.1111/jir.12099>
- Berta, W., Teare, G.F., Gilbert, E., Ginsburg, L. S., Lemieux-Charles, L., Davis, D., & Rappolt, S. (2010). Spanning the know-do gap: understanding knowledge application and capacity in long-term care homes. *Social science & medicine*, 70, 1326-1334. <https://doi.org/10.1016/j.socscimed.2009.11.028>
- Bigby, C., & Beadle-Brown, J. (2016). Culture in better group homes for people with intellectual disability at severe levels. *Intellectual and Developmental Disabilities*, 54(5), 316-331. <https://doi.org/10.1352/1934-9556-54.5.316>
- Bigby, C., Knox, M., Beadle-Brown, J., Clement, T., & Mansell, J. (2012). Uncovering dimensions of culture in underperforming group homes for people with severe intellectual disability. *Intellectual and Developmental Disabilities*, 50 (6), 452-467. <https://doi.org/10.1352/1934-9556-50.06.452>
- Bould, E., Beadle-Brown, J., Bigby, C., & Iacono, T. (2018). The role of practice leadership in active support: Impact of practice leaders' presence in supported accommodation services. *International Journal of Developmental Disabilities*, 64(2), 75-80. <https://doi.org/10.1080/20473869.2016.1229524>
- Buntinx, W. H. E., & Gennepe, A. T. G. van (2007). *Professionaliteit in de hulpverlening aan mensen met verstandelijke beperkingen*. Antwerpen-Apeldoorn: Garant.
- Buntinx, W. (2008). The logic of relations and the logic of management. *Journal of Intellectual Disability Research*, 52(7), 588-597. <https://doi.org/10.1111/j.1365-2788.2008.01067.x>
- Cobigo, V., Martin, L., Lysaght, R., Lunskey, Y., Hickey, R., & Ouellette-Kuntz, H. (2014). Quality improvement in services for adults with intellectual and developmental

- disabilities: Guiding principles. *Journal on Developmental Disabilities*, 20(2), 89-102. Retrieved from: [https://oadd.org/wp-content/uploads/2014/12/41018\\_JoDD\\_20-2\\_v10f\\_89-102\\_cobigo\\_et\\_al.pdf](https://oadd.org/wp-content/uploads/2014/12/41018_JoDD_20-2_v10f_89-102_cobigo_et_al.pdf)
- Conelly, C.E., Zweig, D., Webster, J., & J.P. Trougakos (2012). Knowledge hiding in organizations. *Journal of organizational behaviour* 33 (1), 64–88. <https://doi.org/10.1002/job.737>
- De Koeijer-Gorissen, R., & Scheer, W. van der (2022). *Bestuurders in beeld 20 jaar. Onderzoek naar het besturen van zorgorganisaties*. Rotterdam: Erasmus Centrum voor Zorgbestuur en de NVZD, Vereniging van bestuurders in de zorg. Retrieved from: [https://data.maqlr.com/3505/issues/34061/436224/assets/downloads/ecvz-rapport-170x240-bestuurders-in-beeld-lr8\\_1.pdf](https://data.maqlr.com/3505/issues/34061/436224/assets/downloads/ecvz-rapport-170x240-bestuurders-in-beeld-lr8_1.pdf)
- Derksen, M. (2021). *Leiderschap bij digitalisering in de zorg Onderzoeksresultaten en aanbevelingen*. Coalitie Digivaardig in de zorg. Retrieved from: <https://www.digivaardigindezorg.nl/wp-content/uploads/2021/04/Rapport-digitaal-leiderschap-door-Marco-Derksen-def.pdf>
- Di Vaio, A., Hasan, S., Palladino, R., Profita, F., & I. Mejri (2021). Understanding knowledge hiding in business organizations: A bibliometric analysis of research trends, 1988–2020. *Journal of Business Research*, 134, 560-573. <https://doi.org/10.1016/j.jbusres.2021.05.040>
- Doody, O., Hennessy, T., Moloney, M., Lyons, R., & Bright, A. M. (2022). The value and contribution of intellectual disability nurses/nurses caring for people with intellectual disability in intellectual disability settings: A scoping review. *Journal of Clinical Nursing*. <https://doi.org/10.1111/jocn.16289>
- Drahota, A. M. Y., Meza, R. D., Brikho, B., Naaf, M., Estabillo, J. A., Gomez, E. D., ... & Aarons, G. A. (2016). Community-academic partnerships: A systematic review of the state of the literature and recommendations for future research. *The Milbank Quarterly*, 94(1), 163-214. <https://doi.org/10.1111/1468-0009.12184>
- Duryan, M., Nikolik, D., van Merode, G., & Curfs, L. (2012). System dynamics modeling for intellectual disability services: A case study. *Journal of Policy and Practice in Intellectual Disabilities*, 9(2), 112-119. <https://doi.org/10.1111/j.1741-1130.2012.00342.x>
- Duryan, M., Nikolik, D., van Merode, G., & Curfs, L. M. (2014). Using cognitive mapping and qualitative system dynamics to support decision making in intellectual disability care. *Journal of Policy and Practice in Intellectual Disabilities*, 11(4), 245-254. <https://doi.org/10.1111/jppi.12095>

- Embregts, P. J. C. M. (2011). *Zien, bewogen worden, in beweging komen*. Tilburg: Tilburg University. Retrieved from:  
[https://pure.uvt.nl/ws/portafiles/portal/60339804/110459\\_oratie\\_Embregts\\_web1.pdf](https://pure.uvt.nl/ws/portafiles/portal/60339804/110459_oratie_Embregts_web1.pdf)
- Embregts, J. C. M. (2017). Kennisontwikkeling en kennisdeling in gelijkwaardige verbinding tussen praktijk en wetenschap. *NTZ: Nederlands Tijdschrift voor de Zorg aan Mensen met Verstandelijke Beperkingen*, 43(3), 219-26. Retrieved from:  
[https://www.ntzonline.nl/art/50-4446\\_Kennisontwikkeling-en-kennisdeling-in-gelijkwaardige-verbinding-tussen-praktijk-en-wetenschap](https://www.ntzonline.nl/art/50-4446_Kennisontwikkeling-en-kennisdeling-in-gelijkwaardige-verbinding-tussen-praktijk-en-wetenschap)
- Embregts, P., & Hendriks, A. H. C. (2011). *Menslievende professionalisering in de zorg voor mensen met een verstandelijke beperking. Aansluiten bij cliënten en hun ouders*. Nijmegen: HAN.
- Embregts, P. J., Tournier, T., & Frielink, N. (2022). The experiences of psychologists working with people with intellectual disabilities during the COVID-19 crisis. *Journal of Applied Research in Intellectual Disabilities*, 35(1), 295-298.  
<https://doi.org/10.1111/jar.12916>
- Farrington, C., Clare, I. C. H., Holland, A. J., Barrett, M., & Oborn, E. (2015). Knowledge exchange and integrated services: experiences from an integrated community intellectual (learning) disability service for adults. *Journal of Intellectual Disability Research*, 59(3), 238-247. <https://doi.org/10.1111/jir.12131>
- Flottorp, S. A., Oxman, A. D., Krause, J., Musila, N. R., Wensing, M., Godycki-Cwirko, M., ... & Eccles, M. P. (2013). A checklist for identifying determinants of practice: a systematic review and synthesis of frameworks and taxonomies of factors that prevent or enable improvements in healthcare professional practice. *Implementation science*, 8(1), 1-11. <https://doi.org/10.1186/1748-5908-8-35>
- Hujala, T., & Laihonon, H. (2021). Effects of knowledge management on the management of health and social care: a systematic literature review. *Journal of Knowledge Management*, 25(11), 203-221. <https://doi.org/10.1108/JKM-11-2020-0813>
- Jansen, S. L., van der Putten, A. A., Post, W. J., & Vlaskamp, C. (2018). Do they agree? How parents and professionals perceive the support provided to persons with profound intellectual and multiple disabilities. *Journal of Intellectual & Developmental Disability*, 43(4), 441-452. <https://doi.org/10.3109/13668250.2017.1287885>
- Kianto, A., Vanhala, M., & Heilman, P. (2016). The impact of knowledge management on job satisfaction. *Journal of Knowledge Management* 20(4), 621-636.  
<https://doi.org/10.1108/JKM-10-2015-0398>

- Lakshman, C. (2007). Organizational knowledge leadership: A grounded theory approach. *Leadership & Organization Development Journal*, 28(1), 51-75.  
<https://doi.org/10.1108/01437730710718245>
- Lakshman, C. (2009). Organizational knowledge leadership: An empirical examination of knowledge management by top executive leaders. *Leadership & Organization Development Journal*, 30(4), 338-364. <https://doi.org/10.1108/01437730910961676>
- Landelijke Stuurgroep Kwaliteitskompas Gehandicaptenzorg (2022), *Kwaliteitskompas Gehandicaptenzorg 2023-2028 Landelijk Kompas voor goede zorg en kwaliteit van bestaan*. Utrecht. Retrieved from: [https://www.vgn.nl/system/files/2023-08/kwaliteitskompas-GHZ\\_augustus2023\\_DEF.pdf](https://www.vgn.nl/system/files/2023-08/kwaliteitskompas-GHZ_augustus2023_DEF.pdf)
- Lennox, N. G., Brolan, C. E., Dean, J., Ware, R. S., Boyle, F. M., Taylor Gomez, M., ... & Bain, C. (2013). General practitioners' views on perceived and actual gains, benefits and barriers associated with the implementation of an Australian health assessment for people with intellectual disability. *Journal of Intellectual Disability Research*, 57(10), 913-922. <https://doi.org/10.1111/j.1365-2788.2012.01586.x>
- Lindenberg, M., Nieuwenhuis, B., & Van Gemert-Pijnen, L. (2022). *Digitalisering in de gezondheidszorg nader beschouwd*. Eindrapport VWS MEVA. Retrieved from: <https://www.utwente.nl/en/techmed/research/research-programmes/sht/projects-and-results/meva/eindrapport-vws-meva-220420.pdf>
- Lokman, S., Van Oorsouw, W. M., Didden, R., & Embregts, P. J. (2022). Setting up a new team of support staff for people with mild intellectual disability or borderline intellectual functioning and severe challenging behaviour: A concept mapping study. *Journal of Applied Research in Intellectual Disabilities*, 35(6), 1348-1359.  
<https://doi.org/10.1111/jar.13023>
- Mansell, J., Beadle-Brown, J., Ashman, B., & Ockendon, J. (2005). *Person-centred active support: a multi-media training resource for staff to enable participation, inclusion and choice for people with learning disabilities*. Brighton: Pavilion.
- Ministerie van Volksgezondheid, Welzijn en Sport. (2019). *Kamerbrief Beter weten: versterken professioneel handelen in de langdurige zorg*. Ministerie van Volksgezondheid, Welzijn en Sport (VWS).
- Muller-Schoof, I. J., Verbiest, M. E., Stoop, A., Snoeren, M., & Luijkx, K. G. (2022). How do practically trained (student) caregivers in nursing homes learn? A scoping review. *Journal of Nursing Education and Practice*, 12(1), 25-33  
<https://doi.org/10.5430/jnep.v12n1p25>

- Nightingale, A. (2020). Implementing collective leadership in healthcare organisations. *Nursing standard*, 35(2). <https://doi.org/10.7748/ns.2020.e11448>
- Nijs, S., Taminiau, E. F., Frielink, N., & Embregts, P. J. C. M. (2022). Stakeholders' perspectives on how to improve the support for persons with an intellectual disability and challenging behaviors: a concept mapping study. *International Journal of Developmental Disabilities*, 68(1), 25-34. <https://doi.org/10.1080/20473869.2019.1690859>
- Noble, H., & Heale, R. (2019). Triangulation in research, with examples. *Evidence-based nursing*, 22(3), 67-68. <http://dx.doi.org/10.1136/ebnurs-2019-103145>
- Nonaka, I., Toyama, R., & Konno, N. (2000). SECI, *Ba* and leadership: a unified model of dynamic knowledge creation. *Long range planning*, 33(1), 5-34. [https://doi.org/10.1016/S0024-6301\(99\)00115-6](https://doi.org/10.1016/S0024-6301(99)00115-6)
- Olivier-Pijpers, V. C., Cramm, J. M., & Nieboer, A. P. (2020). Residents' and resident representatives' perspectives on the influence of the organisational environment on challenging behaviour. *Research in Developmental Disabilities*, 100, 103629. <https://doi.org/10.1016/j.ridd.2020.103629>
- Oudshoorn, C. E., Frielink, N., Riper, H., & Embregts, P. J. (2023). Experiences of therapists conducting psychological assessments and video conferencing therapy sessions with people with mild intellectual disabilities during the COVID-19 pandemic. *International Journal of Developmental Disabilities*, 69(2), 350-358. <https://doi.org/10.1080/20473869.2021.1967078>
- Overwijk, A., Hilgenkamp, T. I., van der Schans, C. P., van der Putten, A. A., & Waninge, A. (2021). Needs of direct support professionals to support people with intellectual disabilities in leading a healthy lifestyle. *Journal of Policy and Practice in Intellectual Disabilities*, 18(4), 263-272. <https://doi.org/10.1111/jppi.12383>
- Patton, M. Q. (2002). *Qualitative Research & Evaluation Methods*. 3rd edition. Thousand Oaks: Sage Publications, Inc.
- Polanyi, M. & Sen, A. (2009). *The tacit dimension*. Chicago: University of Chicago press.
- Ramerman, L., Hoekstra, P. J., & de Kuijper, G. (2018). Exploring barriers and facilitators in the implementation and use of guideline recommendations on antipsychotic drug prescriptions for people with intellectual disability. *Journal of Applied Research in Intellectual Disabilities*, 31(6), 1062-1070. <https://doi.org/10.1111/jar.12461>
- Rafique, G.M., & Mahmood, K. (2018) Relationship between knowledge sharing and job satisfaction: a systematic review. *Information and Learning Science*, 119(5/6), 295-312. <https://doi.org/10.1108/ILS-03-2018-0019>

- Regnault, A., Willgoss, T., & Barbic, S. (2018). Towards the use of mixed methods inquiry as best practice in health outcomes research. *Journal of patient-reported outcomes*, 2(1), 1-4. <https://doi.org/10.1186/s41687-018-0043-8>
- Schalock, R. L., Luckasson, R., & Tassé, M. J. (2021). *Intellectual Disability: Definition, Diagnosis, Classification, and Systems of Supports*. Washington DC: American Association on Intellectual and Developmental Disabilities. 12<sup>th</sup> Edition.
- Schalock, R. L., Verdugo, M. A., Bonham, G. S., Fantova, F., & Van Loon, J. (2008). Enhancing personal outcomes: Organizational strategies, guidelines, and examples. *Journal of Policy and Practice in Intellectual Disabilities*, 5(4), 276-285. <https://doi.org/10.1111/j.1741-1130.2007.00135.x>
- Schein, E. H. (2010). *Organizational culture and leadership*. San Francisco: John Wiley & Sons. Fourth edition.
- Simons, P. R. J., & Ruijters, M. C. (2014). The real professional is a learning professional. *International handbook of research in professional and practice-based learning*, 955-985.
- Sriharan, A., Ratnapalan, S., Tricco, A. C., & Lupea, D. (2021). Women in healthcare experiencing occupational stress and burnout during COVID-19: a rapid review. *BMJ open*, 11(4), e048861. <https://doi.org/10.1177/10775587211039201>
- Small, C. T., & Sage, A. P. (2005). Knowledge management and knowledge sharing: A review. *Information Knowledge systems management*, 5(3), 153-169.
- Steiger, J. S., Hammou, K. A., & Galib, M. H. (2014). An examination of the influence of organizational structure types and management levels on knowledge management practices in organizations. *International Journal of Business and Management*, 9(6), 43. <https://doi.org/10.5539/ijbm.v9n6p43>
- Tournier, T., Wolkorte, R., Hendriks, A. H., Jahoda, A., & Embregts, P. J. (2021). Family involvement in person-centered approaches for people with intellectual disabilities and challenging behaviors: A scoping review. *Journal of Mental Health Research in Intellectual Disabilities*, 14(4), 349-374. <https://doi.org/10.1080/19315864.2021.1959689>
- Totsika, V., Toogood, S., Hastings, R. P., & Nash, S. (2008). Interactive training for active support: Perspectives from staff. *Journal of Intellectual and Developmental Disability*, 33(3), 225-238. <https://doi.org/10.1080/13668250802283348>
- Van Balkom, H., Buntinx, W., Curfs, L., Didden, R., Dupuis, H., Embregts, P., Evenhuis, H., ... & Vlaskamp, C. (2014). *Bouwstenen Nationaal Programma Gehandicaptten Einddocument*. Utrecht: Vereniging Gehandicaptenzorg Nederland. Retrieved from:

<https://www.vgn.nl/documenten/rapport-bouwstenen-voor-een-toekomstbestendige-gehandicaptensector181121>

- Van Dijk, A., De Nooijer, A., Niessen, I., Kerkhof, L., Buter, M., Verpalen, S., & Dragt, W. (2021). *Alle aandacht naar implementatie Evaluatie van de kennisinfrastructuur langdurige zorg*. Utrecht, AndersonElffersFelix & ExpertiseZorg. Retrieved from: <https://www.zorginstituutnederland.nl/publicaties/rapport/2021/11/12/onderzoeksrapport-alle-aandacht-naar-implementatie---evaluatie-van-de-kennisinfrastructuur-langdurige-zorg>
- Van der Scheer, W.K. (2013). *Onder zorgbestuurders. Omgaan met bestuurlijke ambiguïteit in de zorg*. Thesis. Amsterdam: Reed Business Elsevier. Retrieved from: <http://hdl.handle.net/1765/41436>
- Weggeman, M. C. D. P. (2007). *Leidinggeven aan professionals. Niet doen*. Schiedam: Scriptum.
- Wijenberg, W., & Nies, H. L. G. R. (2015). *Academische Werkplaatsen Zorg & Gezondheid. Een verkenning van overeenkomsten en verschillen in aanpak*. Utrecht: Vilans.
- Wood, S., Gangadharan, S., Tyrer, F., Gumber, R., Devapriam, J., Hiremath, A., & Bhaumik, S. (2014). Successes and challenges in the implementation of care pathways in an intellectual disability service: health professionals' experiences. *Journal of Policy & Practice in Intellectual Disabilities*, 11(1), 1-7. <https://doi.org/10.1111/jppi.12063>
- Zantvoord, J., Kortland, L., & Verheijden, S. (2022). *De succesfactoren van digitaal leiderschap in de VVT. De noodzakelijke lijm tussen de verschillende aspecten en stakeholders op het gebied van zorgtechnologie en digitalisering*. Bureau Strakz. Retrieved from: [https://www.burostrakz.nl/wp-content/uploads/2022/07/Rapport-leiding-geven-digitalisering-VVT-VWS-StrakZ.-spread\\_v2.pdf](https://www.burostrakz.nl/wp-content/uploads/2022/07/Rapport-leiding-geven-digitalisering-VVT-VWS-StrakZ.-spread_v2.pdf)
- Zomerplaaag, J. (2017). *Kennis en praktijk in de gehandicaptenzorg. De betekenis van het samenspel tussen kennis met een grote en een kleine K voor het omgaan met handelingsverlegenheid*. Thesis. Universiteit voor Humanistiek.

## Appendix

**Table 1: Overview of key personal factors, environmental factors and strategies influencing knowledge sharing and application in the care and support for people with intellectual disabilities in all studies, divided into within the care organisation and within the socio-political environment**

Care organisation for people with intellectual disabilities		Socio-political environment	
CEOs		Professionals <sup>21</sup>	
Development of strategies	Execution of strategies	Knowledge sharing	Knowledge application
		Socio-cultural factors	Political factors

### 1. Systematic review (chapter 2)

<p>Policy regarding:</p> <ul style="list-style-type: none"> <li>office arrangements and ICT system (e.g., on care records)</li> <li>resources</li> <li>interventions and tools</li> <li>training, supervision and feedback on performance</li> <li>administrative staff</li> <li>teams</li> </ul> <p>Characteristics of:</p> <ul style="list-style-type: none"> <li>organisation (size and structure)</li> </ul>	<p>Managers:</p> <ul style="list-style-type: none"> <li>knowledge-related personal characteristics<sup>22</sup></li> <li>practice leadership</li> <li>communication</li> <li>presence/continuity</li> <li>role (support and guidance, consultation of professionals)</li> </ul> <p>Administrative staff: presence and role (assistance, scheduling, coordination)</p> <p>Teams: composition (adequate representation of various disciplines)</p> <p>Characteristics of:</p> <ul style="list-style-type: none"> <li>office arrangements and ICT system (organisation of documentation, terminology, communication, access to</li> </ul>	<p>All professionals:</p> <ul style="list-style-type: none"> <li>knowledge-related personal characteristics<sup>22</sup></li> <li>professional leadership</li> </ul> <p>Administrative staff: presence and role (assistance, scheduling, coordination)</p> <p>Teams: composition (adequate representation of various disciplines) and role (formal and informal knowledge exchange, multidisciplinary teamworking)</p> <p>Characteristics of:</p> <ul style="list-style-type: none"> <li>office arrangements and ICT system (organisation of documentation,</li> </ul>	
--	--	--	--

<sup>21</sup> Practitioners and support staff

<sup>22</sup> Motivation, competencies and attitudes



- email and online resources, accessibility and reliability of care records)
- organisation (size and structure)
  - intervention (user-friendliness, availability of tools)
  - culture (supportive to do and use research)
  - policy
- Availability of resources, time, staff & continuity, training & supervision

- documentation, terminology, communication, access to email and online resources, accessibility and reliability of care records)
- organisation (size and structure)
  - intervention (user-friendliness, availability of tools)
  - policy
- Availability of resources, time, staff & continuity, training & supervision

- terminology, communication)
- organisation (size and structure)
  - intervention (user-friendliness, availability of tools)
  - culture (supportive to do and use research)
  - policy
- Availability of resources, time, staff & continuity, training & supervision

- Motives for CEOs strategies to stimulate knowledge sharing and application are derived from:
- CEOs' personal and professional background, motivations, perceptions, responsibility for quality (i.e., organisational knowledge leadership)
  - organisational policy on education and training and participation in collaborative partnerships

## 2. Context study Motives and strategies (chapter 3)

- Professionals lacking basic and specific knowledge and competencies (is a motive for CEOs' strategies to stimulate knowledge sharing and application)
- Labour market shortage and negative public image of organisation (are motives for CEOs' strategies to stimulate knowledge sharing and application)

- Political factors:
- national policy on disability
  - policy of other organisations providing care and support for persons with intellectual disabilities
  - insufficient educational provision (are motives for CEOs' strategies to stimulate knowledge sharing and application)

- Four main strategies to stimulate knowledge sharing and application:
- providing organisational conditions for effective knowledge processes
  - focused attention on talent development
  - acknowledgement and deployment of knowledge holders
  - knowledge-driven participation in collaborative partnerships

### 3. Context study Contextual factors (chapter 4)

<p><b>CEOs:</b></p> <ul style="list-style-type: none"> <li>• organisational knowledge leadership</li> <li>• role: stimulating, setting preconditions, networker, professionally, promoting the collective vision in management team</li> </ul> <p><b>Managers:</b></p> <ul style="list-style-type: none"> <li>• knowledge-related personal characteristics: professional background, receptivity to knowledge</li> <li>• practice leadership</li> <li>• role: creating a learning environment and conditions, showing commitment through exemplary behavior, motivating, coaching, prioritizing educational activities, lack of penalizing and rewarding</li> </ul>	<p><b>(Incoming) support staff:</b></p> <ul style="list-style-type: none"> <li>• knowledge-related personal characteristics: learning style, receptivity to knowledge, motivation, ability to learn and read, knowledge and competencies, self-esteem/professional pride</li> <li>• professional leadership</li> </ul> <p><b>Psychologists:</b></p> <ul style="list-style-type: none"> <li>• knowledge-related personal characteristics</li> <li>• role: Keeping up to date with literature, knowledge holder</li> </ul> <p><b>Relatives:</b> knowledge-related personal characteristics: motivation, accessibility of knowledge</p> <p><b>Service users:</b></p>	<p><b>(Incoming) support staff:</b></p> <ul style="list-style-type: none"> <li>• knowledge-related personal characteristics: learning style, receptivity to knowledge, motivation, ability to learn and read, knowledge and competencies, self-esteem/professional pride</li> <li>• professional leadership</li> </ul> <p><b>Psychologists:</b></p> <ul style="list-style-type: none"> <li>• knowledge-related personal characteristics</li> <li>• role: keeping up to date with literature, knowledge holder</li> </ul> <p><b>Relatives:</b> knowledge-related personal characteristics: motivation, accessibility of knowledge</p> <p><b>Service users:</b></p>	<p><b>Role of professional groups:</b></p> <ul style="list-style-type: none"> <li>• absence of conflicts between schools of thought within special education</li> <li>• presence of a professional association and of ownership</li> </ul> <p><b>Role of other care organisations:</b></p> <p>openness to knowledge</p> <p><b>Role of branch:</b> presence of national direction</p> <p><b>Collaborative partnerships:</b></p> <ul style="list-style-type: none"> <li>• presence of a policy on engaging, small amount of collaborative partners</li> <li>• policy focuses on knowledge sharing</li> </ul> <p><b>Culture:</b> appreciation of knowledge</p> <p><b>Collaborative partnerships:</b> culture</p>	<p><b>National policy:</b></p> <ul style="list-style-type: none"> <li>• laws and regulations</li> <li>• level of rates</li> <li>• national quality framework and grant programs</li> </ul> <p><b>Role of vocational education:</b> gap of knowledge</p> <p><b>Role of branch:</b> presence of national direction</p> <p><b>Collaborative partnerships:</b></p> <ul style="list-style-type: none"> <li>• presence of a policy on engaging, small amount of collaborative partners</li> <li>• policy focuses on knowledge sharing</li> </ul> <p><b>Culture:</b> appreciation of knowledge</p> <p><b>Collaborative partnerships:</b> culture</p>
---	---	---	---	---

<p>Administrative staff: role (facilitating planning of meetings and rooms)</p>	<p>motivation, accessibility of knowledge</p>	<ul style="list-style-type: none"> <li>• cooperation with implementation</li> <li>• severity of problem</li> </ul>	<p>focuses on knowledge sharing</p>
<p>IT staff: availability</p>	<p>Service users:</p> <ul style="list-style-type: none"> <li>• cooperation with implementation</li> <li>• severity of problems</li> </ul>	<p>Administrative staff: role (facilitating planning of meetings and rooms)</p>	<p>Labour market: shortage</p>
<p>Knowledge specialist: availability</p>	<p>Administrative staff: role (facilitating planning of meetings and rooms)</p>	<p>Teams: composition, leadership, functioning and attitude (support, eagerness)</p>	<p>Negative public image</p>
<p>Teams: composition</p>	<p>Teams: composition, leadership, functioning and attitude (support, eagerness)</p>	<p>Characteristics of: • office arrangements and ICT system (availability of knowledge storage, user-friendly, content up to date, incentive for learning)</p>	
<p>Management team: collective vision</p>	<p>Characteristics of: • office arrangements and ICT system (availability of knowledge storage, user-friendly, content up to date, incentive for learning)</p>	<p>• ICT system (availability of knowledge storage, sharing and learning, user-friendly, content up to date, incentive for learning)</p>	
<p>Supervisory board: support</p>	<p>• organisation, related to size (budget), lack of complexity</p>	<p>• knowledge culture, professional pride, self-awareness, open, demand-driven use of knowledge, open team culture</p>	
<p>Characteristics of: • office arrangements and ICT system (availability of knowledge storage, sharing and learning, user-friendly, content up to date, incentive for learning)</p>	<p>• culture: presence of knowledge culture, professional pride, self-awareness, open, demand-driven use of knowledge, open team culture, not a purely practice-oriented team culture</p>	<p>Availability of resources, time, staff, training, workload in balance (no understaffing)</p>	
<p>• organisation, related to size (budget), lack of complexity</p>	<p>Availability of resources, time, staff, training, workload in balance (no understaffing)</p>		
<p>• organisational, related to structure: small number of locations, integrated services, integration of regional operations, positioning of knowledge, limited geographical spread, short distance from universities, available facilities for sharing knowledge</p>			
<p>• culture: presence of knowledge culture, professional pride, self-awareness, open, demand-driven use of knowledge, open team culture, not a purely practice-oriented team culture</p>			

- policy: vision regarding learning, corporate policy, internal communication policy, knowledge policy is responsibility of board and management

Availability of resources, time, staff, training, workload in balance (no understaffing)

Negative public image

- Collaborative partnerships:
- presence of a policy on engaging, small amount of collaborative partners
  - policy and culture focuses on knowledge sharing

#### 4. Concept mapping incoming professionals (chapter 5)

<p>Five key strategies to stimulate knowledge application:</p> <ul style="list-style-type: none"> <li>• providing tailored learning opportunities</li> <li>• providing accessible sites, tools, and platforms to share knowledge</li> <li>• stimulating motivation and ownership</li> <li>• providing conditional resources such as time, space, and budget</li> <li>• providing a stimulating environment with an open and safe climate and supporting structures</li> </ul> <p>Collaborative partnerships: entering</p>	<p>Managers/team leaders: role</p> <p>Characteristics of:</p> <ul style="list-style-type: none"> <li>• office arrangements and ICT system (accessible sites, tools, and platforms to share knowledge)</li> <li>• organisation (structure)</li> <li>• culture: learning culture, open and safe climate to explore and innovate</li> <li>• policy: knowledge vision and knowledge policy</li> <li>• learning opportunities: formal and informal learning, individual and team development, supervision, internal and external courses, e-learning and live training courses, experiential learning, availability of learning and development paths, assignments</li> </ul>	<p>Incoming support staff: knowledge-related personal characteristics</p> <p>Incoming psychologists: knowledge-related personal characteristics</p> <ul style="list-style-type: none"> <li>• professional leadership</li> <li>• role: knowledge holder, work supervisor</li> </ul> <p>Incoming ID physicians: knowledge-related personal characteristics</p> <ul style="list-style-type: none"> <li>• professional leadership holder, work supervisor</li> </ul> <p>Service users: involvement</p> <p>Teams: multidisciplinary team meetings and cooperation, learning community</p>	<p>Incoming support staff: knowledge-related personal characteristics</p> <p>Incoming psychologists: knowledge-related personal characteristics</p> <ul style="list-style-type: none"> <li>• professional leadership</li> <li>• role: knowledge holder, work supervisor</li> </ul> <p>Incoming ID physicians: knowledge-related personal characteristics</p> <ul style="list-style-type: none"> <li>• professional leadership holder, work supervisor</li> </ul> <p>Service users: involvement</p> <p>Teams: multidisciplinary team meetings and cooperation, learning community</p>	<p>Registration with a professional association</p> <p>Role of vocational education: gap of knowledge</p> <p>Collaborative partnerships: entering partnerships with other organisations</p>
---	--	--	--	---

partnerships with other organisations

Availability of resources, time, staff (less turnover, greater continuity) and training

cooperation, learning community

- Characteristics of:
- office arrangements and ICT system (accessible sites, tools, and platforms to share knowledge)
  - organisation (structure)
  - culture: learning culture, open and safe climate to explore and innovate
  - policy: knowledge vision and knowledge policy
  - learning opportunities: formal and informal learning, individual and team development, supervision, internal and external courses, e-learning and live training courses, experiential learning, availability of learning and development paths, assignments

- Characteristics of:
- office arrangements and ICT system (accessible sites, tools, and platforms to share knowledge)
  - culture: learning culture, open and safe climate to explore and innovate
  - policy: knowledge vision and knowledge policy
  - learning opportunities: formal and informal learning, individual and team development, supervision, internal and external courses, e-learning and live training courses, experiential learning, availability of learning and development paths, assignments
- Availability of resources, time, staff (less turnover, greater continuity) and training

Availability of resources, time, staff (less turnover, greater continuity) and training

**5. Covid-19 study, survey based on chapter 2 and 4 (chapter 6)**

- Policy regarding:
- office arrangements and ICT system (e.g., on care records)
  - resources
  - interventions and tools

Factors included in the subscales:

- Practice leadership of management\*
- Role fulfilment of management and CEO toward professional
- Role of teams\*

Factors included in the subscales:

- Craftmanship of all professionals (e.g., leadership)
- Professional leadership of practitioners\*
- Role of teams\*

Factors included in the subscales:

- Craftmanship of all professionals (e.g., leadership)
- Professional leadership of practitioners\*
- Role of teams\*

Factor included in the scale role of the socio-political environment in knowledge sharing and application: presence of a professional association

Factors included in the scale role of the socio-political environment in knowledge sharing and application:

- presence of a national policy for the care of people with disabilities



<ul style="list-style-type: none"> <li>• training, supervision and feedback on performance</li> <li>• teams</li> </ul>	<p>Factors included in the subscales:</p> <ul style="list-style-type: none"> <li>• office arrangements and ICT system*</li> <li>• ICT systems: complete and up-to-date client-related information is available via electronic care records resources</li> <li>• resources are available for implementing the intervention</li> <li>• time needed to implement the intervention*</li> <li>• policy and culture of the organisation</li> <li>• available capacity of employees*</li> <li>• availability of tools for sharing information, collaboration, and understanding the way of working*</li> <li>• user-friendliness of the tools and intervention*</li> </ul> <p>Additional factor: providing opportunities for (online) knowledge exchange during the pandemic is vital (such as discussing observations of service users via video analytics and online consultations)</p>	<ul style="list-style-type: none"> <li>• Involvement of service users and relatives*</li> </ul> <p>Additional factors:</p> <ul style="list-style-type: none"> <li>• the pandemic's impact on support staff themselves</li> <li>• adhering to one's values</li> </ul> <p>Factors included in the subscales:</p> <ul style="list-style-type: none"> <li>• office arrangements and ICT system*</li> <li>• ICT systems: complete and up-to-date client-related information is available via electronic care records resources</li> <li>• resources are available for implementing the intervention</li> <li>• time needed to implement the intervention*</li> <li>• policy and culture of the organisation</li> <li>• available capacity of employees*</li> <li>• availability of tools for sharing information, collaboration, and understanding the way of working*</li> <li>• user-friendliness of the tools and intervention*</li> </ul> <p>Additional factor: providing opportunities for (online) knowledge exchange during the pandemic is vital (such as discussing observations of service users via video analytics and online consultations)</p>	<ul style="list-style-type: none"> <li>• Involvement of service users and relatives*</li> </ul> <p>Additional factors:</p> <ul style="list-style-type: none"> <li>• the pandemic's impact on support staff themselves</li> <li>• adhering to one's values</li> </ul> <p>Factors included in the subscales:</p> <ul style="list-style-type: none"> <li>• office arrangements and ICT system*</li> <li>• ICT systems: complete and up-to-date client-related information is available via electronic care records resources</li> <li>• resources are available for implementing the intervention</li> <li>• time needed to implement the intervention*</li> <li>• policy and culture of the organisation</li> <li>• available capacity of employees*</li> <li>• availability of tools for sharing information, collaboration, and understanding the way of working*</li> <li>• user-friendliness of the tools and intervention*</li> </ul> <p>Additional factor: providing opportunities for (online) knowledge exchange during the pandemic is vital (such as discussing observations of service users via video analytics and online consultations)</p>
<ul style="list-style-type: none"> <li>• guidelines provided by branch</li> <li>• availability of partnerships, such as academic workplaces and knowledge platforms</li> </ul>	<p>Factors included in the subscales:</p> <ul style="list-style-type: none"> <li>• office arrangements and ICT system*</li> <li>• ICT systems: complete and up-to-date client-related information is available via electronic care records resources</li> <li>• resources are available for implementing the intervention</li> <li>• time needed to implement the intervention*</li> <li>• policy and culture of the organisation</li> <li>• available capacity of employees*</li> <li>• availability of tools for sharing information, collaboration, and understanding the way of working*</li> <li>• user-friendliness of the tools and intervention*</li> </ul> <p>Additional factor: providing opportunities for (online) knowledge exchange during the pandemic is vital (such as discussing observations of service users via video analytics and online consultations)</p>	<ul style="list-style-type: none"> <li>• Involvement of service users and relatives*</li> </ul> <p>Additional factors:</p> <ul style="list-style-type: none"> <li>• the pandemic's impact on support staff themselves</li> <li>• adhering to one's values</li> </ul> <p>Factors included in the subscales:</p> <ul style="list-style-type: none"> <li>• office arrangements and ICT system*</li> <li>• ICT systems: complete and up-to-date client-related information is available via electronic care records resources</li> <li>• resources are available for implementing the intervention</li> <li>• time needed to implement the intervention*</li> <li>• policy and culture of the organisation</li> <li>• available capacity of employees*</li> <li>• availability of tools for sharing information, collaboration, and understanding the way of working*</li> <li>• user-friendliness of the tools and intervention*</li> </ul> <p>Additional factor: providing opportunities for (online) knowledge exchange during the pandemic is vital (such as discussing observations of service users via video analytics and online consultations)</p>	<ul style="list-style-type: none"> <li>• Involvement of service users and relatives*</li> </ul> <p>Additional factors:</p> <ul style="list-style-type: none"> <li>• the pandemic's impact on support staff themselves</li> <li>• adhering to one's values</li> </ul> <p>Factors included in the subscales:</p> <ul style="list-style-type: none"> <li>• office arrangements and ICT system*</li> <li>• ICT systems: complete and up-to-date client-related information is available via electronic care records resources</li> <li>• resources are available for implementing the intervention</li> <li>• time needed to implement the intervention*</li> <li>• policy and culture of the organisation</li> <li>• available capacity of employees*</li> <li>• availability of tools for sharing information, collaboration, and understanding the way of working*</li> <li>• user-friendliness of the tools and intervention*</li> </ul> <p>Additional factor: providing opportunities for (online) knowledge exchange during the pandemic is vital (such as discussing observations of service users via video analytics and online consultations)</p>

\* Factors more important during the COVID-19 pandemic

# Academic summary

This thesis examines the question of how the knowledge policy of care organisations for people with an intellectual disability can stimulate professionals to share and apply knowledge effectively in their practice. This is important because care organisations can contribute to both the quality of care and the quality of life of those with intellectual disabilities by utilizing the knowledge that they have. Although the primary responsibility for professional development and for sharing and applying new insights in practice lies with the professionals themselves, the care organisations involved also have a responsibility and a role to play in this. This responsibility is reflected in the organisational vision and policy around knowledge sharing and application, and involves focusing on designing a context that stimulates this. This exploratory PhD research explores the factors and strategies that influence the sharing and application of knowledge. The ultimate aim is to help improve and renew the knowledge policy of the care organisations for people with intellectual disabilities, in order to stimulate knowledge sharing and application among professionals.

## **General introduction**

The general introduction (**Chapter 1**) begins by exploring the background and historical context of the current knowledge policy. The period 2000-2014 is taken as a starting point because this period saw an increasing emphasis on knowledge processes, which led to the development of knowledge policy in care for those with intellectual disabilities in the Netherlands. Core concepts and theories around the sharing and application of knowledge are also discussed.

### **Background and context**

Three international developments have influenced the direction of knowledge policy in care for people with intellectual disabilities in the Netherlands. These are: the desire to stimulate evidence-based practice, the market dynamic and the support paradigm. Related policy developments at the Ministry of Health, Welfare and Sport (VWS) and the Ministry of Education, Science and Culture (OCW) have also influenced the development of knowledge policy, such as stimulating research, the bundling and dissemination of knowledge, quality policy, funding reform and the reform of the healthcare system. The policy of the Ministry of Education, Culture and Science has been aimed at reforming the occupational structure and the associated vocational education.

All these policy developments at the national and international level have resulted in a desire to define and strengthen professionalism in care for people with intellectual disabilities. In the strategy of the Dutch Association of Healthcare Providers for People with Disabilities (*Vereniging Gehandicaptenzorg Nederland*, abbreviated as: VGN),



strengthening the professional nature of disability care has been a core element, as well as the motivation for developing a knowledge policy. This was done in the hope that the sector would differentiate itself clearly from other care sectors: a 'unique selling point' at a time when market forces are increasingly important. This was informed by the service users themselves – the people with intellectual disabilities. Their wide-ranging and lifelong care needs are different from those of other groups that require long-term care. A clearer focus on the quality of care was another concrete ambition. The shortage of qualified professionals combined with the increased severity and complexity in the demand for care meant that there was a lack of adequate expertise. This posed a threat to the quality of care and the quality of life of those receiving care.

The knowledge policy pursued by the sector since its inception (in 2006) has been characterized by strategies designed to ensure the development, sharing and application of knowledge by professionals. Examples include the strengthening of knowledge infrastructure, a professionalization programme and the creation of competency profiles. Primary responsibility for knowledge policy lies with the individual care organisations for those with an intellectual disability. Their role is to facilitate knowledge sharing and the application of knowledge among their professionals. The role of the VGN is to encourage this process and to foster cooperation, based on its management model of stimulating, bundling and supporting what happens at the organisational level while accommodating the differences between VGN members and the context of the market dynamic, which leads to mutual competition and conflicts of interest.

### **Core concepts**

In this thesis, knowledge is defined as the personal capacity of professionals to carry out a particular task, based on information, experience, skills and attitude (Weggeman, 2007). This definition is consistent with the focus on professionals and the three sources of knowledge in intellectual disability care: evidence-based knowledge from scientific research, the practice-based knowledge of professionals, and the experiential knowledge of service users and members of their informal network, such as relatives (Embregts, 2017). The first of these sources of knowledge concerns explicit knowledge, or knowledge that is written down in the form of information, such as in an evidence-based training programme. In care for people with an intellectual disability, explicit knowledge, which is relatively easy to share, appears to be limited. Explicit knowledge mainly involves evidence-based knowledge but also, to a lesser extent, practice-based knowledge and experiential knowledge, such as methodologies that have been developed by specific professionals or a life story written by a relative. In care for people with an intellectual disability, most knowledge is implicit in nature. It takes the form of experiences, skills and attitude. When it comes to knowledge sharing, this implicit

knowledge requires alternative methods, such as externalization ('talking about what you do') and socialization ('adopting exemplary behaviour').

Knowledge sharing within organisations primarily requires knowledge sharing at the individual level. In order for an individual's knowledge to be shared, it first needs to be converted into a form that can be understood, assimilated and applied by other individuals, such as a document, video, training programme or input into a multidisciplinary team meeting. Knowledge sharing is influenced by factors such as internal and external motivation, the presence of channels for learning and the presence (or absence) of a culture of knowledge sharing. Context plays a role in both sharing and applying knowledge. This context is made up of various layers and levels: the primary process (micro level), the organisational level (meso level) and the national level (macro level). In this system, individual factors and environmental factors play a role at all three levels. To stimulate knowledge sharing and application in care organisations for people with intellectual disabilities, leadership is required at all levels in order to realize change: leadership from professionals, management and CEOs.

### **The aim of the research**

The overall aim is to help improve and renew the knowledge policies of organisations that provide care for people with intellectual disabilities, so that professionals are stimulated to share and apply knowledge. In order to do this, we need to better understand the factors and strategies that influence knowledge processes in these organisations. This is the overarching aim, which has also been split up into four smaller goals. The *first goal* is to determine which organisational factors are identified in the literature as being enabling or disabling. A systematic literature review (Chapter 2) reveals the important role played by management. The *second goal* therefore focuses on gaining a better understanding of the key role played by CEOs, who have the final responsibility in care organisations for people with intellectual disabilities. An exploratory qualitative study examines the motives and strategies of CEOs (Chapter 3), as well as the factors that facilitate and impede the execution of those strategies (Chapter 4). This study reveals the need for compatibility with the strategies adopted by professionals, and so the *third goal* is to understand the perspective of incoming professionals when it comes to how best to stimulate the application of knowledge. Because care organisations for people with intellectual disabilities employ professionals with a range of different educational backgrounds and positions, the concept mapping method was used to examine the perspectives of three different professional groups: incoming support staff, psychologists and intellectual disability (ID) physicians (Chapter 5). While this study was underway, in early 2020, the COVID-19 pandemic began and, as a result, care services for people with intellectual disabilities had to adapt to this changed context. This 'living experiment'

provided an opportunity to study a *fourth goal*: to understand the impact of the factors that influenced knowledge sharing and application before and during the pandemic. In a survey of support staff and practitioners (Chapter 6), the role and importance of the factors identified in previous sub-studies (Chapters 2 and 4) was explored.

## **Systematic literature review**

**Chapter 2** describes the results of a systematic literature review of the organisational factors that influence the sharing and application of knowledge among professionals in care organisations for people with intellectual disabilities. Five databases (PubMed, Cinahl, Psych info, Business Source Elite, Proquest) were consulted for this study. Publications were included if they met the following criteria: 1) they concerned professionals who provide care and support for (among others) people with intellectual disabilities; 2) they focused on the sharing and application of knowledge; 3) they were set in the context of care and services provided for people with intellectual disabilities, including both specialist residential facilities and community-based services, GP services, schools and workplaces; and 4) they were conducted in English-speaking countries and published between 2000 and 2015. Nineteen publications met these inclusion criteria.

The analysis revealed three primary clusters of factors:

1. the characteristics of the intervention, such as user-friendliness;
2. factors relating to individuals, i.e. personal factors, such as motivation, leadership, interest, involvement and attitude to the intervention;
3. factors relating to the organisational context, or environmental factors. These environmental factors can be divided into material factors and intangible factors. The material factors include the size and structure of the organisation, office and IT systems and the availability of time and resources. The intangible factors include the availability of training, and the organisational policy and culture.

Finally, an analysis of these results reveals an interplay between the three clusters. Management plays a conditional role by providing support and demonstrating practice leadership. The professionals themselves play a key role in sharing and applying knowledge within the primary process, with leadership also appearing to be a factor in this.

## **Qualitative interview study**

In the context of this exploratory study, extensive qualitative interviews were conducted with eleven CEOs working in Dutch care organisations for people with intellectual disabilities. These CEOs were all actively involved in the knowledge policies of their

respective organisations. The results are described in two publications, which form Chapters 3 and 4 respectively.

**Chapter 3** reports on the first part of the study. Open questions were used to explore the motives and strategies of CEOs for fostering knowledge processes, knowledge sharing and the application of knowledge among the professionals working for them. For this purpose, the interview reports were analysed using inductive thematic analysis. The analysis showed that the motives for stimulating knowledge processes arose mainly from the internal context, i.e. the CEOs own organisation. These motives appear to have been related to the CEOs as individuals and to their professionals. The individual factors include the CEOs' personal and professional background and the way in which they interpreted their duties as a CEO, such as identifying areas of concern. They demonstrated organisational knowledge leadership. Among the professionals, the individual-level factors concerned the required knowledge base and competencies, and their education and training. In addition to the internal context, there were also factors in the external context, such as socio-political factors. Here, examples include: the policy of national government and other care organisations regarding people with intellectual disabilities, the tight labour market and inadequate links between vocational education and professional practice.

Furthermore, the analysis identified four main types of strategies by which CEOs stimulate the sharing and application of knowledge among professionals. These are:

1. creating the organisational conditions for effective knowledge processes, using online platforms, consultation and meetings;
2. a targeted focus on talent development, such as stimulating the development of individual care professionals by, for example, offering workplace learning and coaching;
3. acknowledging and deploying knowledge holders (care professionals, experts by experience and researchers), and cooperation with them on an equal footing;
4. knowledge-driven participation in collaborative partnerships.

These four strategies are applied in combination and appear to reinforce one another. It is notable that the majority of the strategies involve knowledge *sharing*, with less focus on stimulating the *application* of knowledge. Finally, it is clear that in their knowledge management strategies, CEOs focus a great deal on knowledge regarding the service users, and that they also focus on social and digital networks.

**Chapter 4** concerns the second part of the study, which focuses on the contextual factors that influence the execution of CEOs' knowledge strategies for stimulating knowledge sharing and application among the professionals working for them. The

influence of the organisational factors identified in the systematic literature review (see Chapter 2) was examined primarily through semi-structured questions, supplemented with factors identified in other literature. Respondents were also asked to explain any other relevant factors. A thematic analysis was carried out on the data obtained using a deductive approach, which was followed by bottom-up clustering.

Many contextual factors were identified that can influence the execution of CEOs' knowledge strategies. These appear to include both internal factors (the specific organisation) and external factors (the socio-political environment). With respect to the internal context, the factors appear to concern individuals and groups, but also include environmental factors inside the organisation. The individual-level factors are the knowledge-related characteristics of those involved – namely service users, professionals, management, CEOs and relatives. Leadership appears to be a factor for both professionals (support staff and psychologists), as well as management and CEOs. The group factors concern teams of professionals, the management team, the supervisory board and relatives. Environmental factors inside the organisation include the size and structure of the organisation, the office and IT system, policy and culture.

With respect to the external context, environmental factors include national policy, the role of the sector, professional associations, other care organisations for people with intellectual disabilities and vocational education. Other relevant factors concern partnerships concerning knowledge, such as the policy on and culture around knowledge sharing. Finally, these contextual factors also appear to influence one another.

## Concept mapping

**Chapter 5** describes a study into the factors which, according to incoming professionals, stimulate the application of new knowledge. Concept mapping was applied with three groups of participants from Dutch care organisations for people with intellectual disabilities: incoming support staff or support staff joining from other professions ( $n=5$ ), incoming psychologists ( $n=9$ ) and incoming ID physicians ( $n=6$ ). A total of 15 women and 5 men took part, with an average age of 34.1 years (age range 22-54 years). The work experience of the participants varied between six months and three years. All the incoming professionals were working with people with an intellectual disability and high care needs, such as clients with challenging behaviour and those with severe multiple disabilities.

The concept maps for the incoming support staff, psychologists and ID physicians show some similarities. In addition to factors relating to individual learning, they all include factors that relate to collective learning, both with their own professional group (i.e. monodisciplinary) and with other professional groups (multidisciplinary). All the

incoming professionals also mentioned both formal learning (such as training) and informal learning (workplace learning). As well as these similarities, however, the concept maps also show differences. The three professional groups communicated different needs when it comes to stimulating the application of knowledge. For example, they indicated a need for tailored learning opportunities (see below). It was also observed that the incoming support staff characterized their role as 'receivers of knowledge', and did not demonstrate ownership of their knowledge. By contrast, the incoming psychologists and ID physicians did consider themselves 'knowledge holders'. These practitioners demonstrated their ownership of knowledge by sharing that knowledge with the support staff.

The factors identified can be summarized in five different strategies to stimulate the application of new knowledge:

1. provide tailored learning opportunities, such as experiential learning for incoming support staff and a work supervisor for incoming psychologists;
2. provide accessible sites, tools, and platforms to share knowledge;
3. stimulate motivation and ownership;
4. provide preconditional resources, such as time, space and budget;
5. provide a stimulating environment with a safe, open learning climate and supportive structures.

## **Questionnaire study**

The study in **Chapter 6** examined the impact of the COVID-19 pandemic on knowledge sharing and application. The need for new knowledge (such as how to prevent and treat infections) was very high in the context of this health crisis. At the same time, the way in which day-to-day work was carried out changed; for example, practitioners began to work remotely wherever possible, rather than being on location. This new context was a very good opportunity to investigate which environmental factors influence knowledge sharing and the application of knowledge by professionals providing care for people with intellectual disabilities during the COVID-19 pandemic. This was done by means of an online survey carried out among 160 professionals (69 support staff and 91 practitioners) working in Dutch care organisations for people with intellectual disabilities. The online survey was developed on the basis of the results of study 1 (Chapter 2) and study 3 (Chapter 4), with items based on the contextual factors identified previously. This included factors associated with individuals, teams, the characteristics of the intervention and tools, the organisational context and the socio-political environment. Respondents were asked to indicate the role and importance of each item.

According to most support staff and practitioners, the factors that influenced knowledge sharing and application before the COVID-19 pandemic also did so during the pandemic. Some factors appeared to play a more prominent role during the COVID-19 pandemic, such as the involvement of clients and their relatives and professional leadership on the part of practitioners. According to the majority of respondents, the two most important factors during this crisis were practice leadership from management and office and IT systems (up-to-date and complete electronic client files, email and intranet). Support staff and practitioners appeared to evaluate some factors differently. For instance, during the COVID-19 pandemic, support staff found the user-friendliness of tools and interventions and the available staff capacity more important than practitioners. Meanwhile, practitioners considered the role of practitioner skills, professional leadership among practitioners and office and IT systems to be more important than support staff did.

## **General discussion**

To conclude, **Chapter 7** summarizes the findings of this thesis and presents four key insights. Following a discussion of the strengths and weaknesses of the research presented in this thesis, some possible directions for future research and implications for policy and practice are outlined.

This thesis demonstrates that individual-level factors, environmental factors and strategies influence the sharing and application of knowledge in care organisations for people with intellectual disabilities. An overview of the most important of these factors is presented in Table 1 (appendix). As the table shows, these factors and strategies are largely positioned internally – i.e. within the care organisation. The strategies of CEOs, individual factors and environmental factors influence the sharing and application of knowledge by professionals. Additionally, their sharing and application of knowledge, as well as the strategies pursued by CEOs, are also influenced by external environmental factors: the socio-political environment.

### **Key insights**

This thesis has yielded four key insights:

*Firstly*, there appears to be a link between strategies, people, individual factors and environmental factors within a layered system (including the micro, meso and macro levels). The pursuit of multiple strategies for optimizing knowledge sharing and application in care organisations for people with intellectual disabilities therefore has added value. These strategies can then respond to individual and environmental factors

at every layer in the system, i.e. at the level of the primary process, the organisation and the sector.

*Secondly*, when developing and deploying strategies, it is important to take into account the dynamic nature of individual and environmental factors within the system as a whole. While some of the factors are changeable, others are not, such as learning style (at the individual level) and the COVID-19 pandemic (an environmental factor). Where appropriate, strategies that are effective in the face of unchangeable factors can be chosen – for example, tailoring the learning offer to the learning style of the relevant professionals.

*Thirdly*, leadership appears to be a crucial factor in stimulating the sharing and application of knowledge. This involves leadership at different levels: that of the CEOs (organisational knowledge leadership), managers (practice leadership) and professionals (professional leadership). In all these roles, leadership appears to be the motivating factor in learning, and in the sharing and application of knowledge. It also stimulates a culture of knowledge-driven practices. Encouraging the right kind of leadership is a valuable factor in any strategy to stimulate the sharing and application of knowledge.

*Fourthly*, this thesis underscores the importance of distinguishing between explicit knowledge and implicit knowledge. This is consequential for the way in which knowledge can be shared. Explicit knowledge is knowledge which can easily be documented and shared digitally – by means of electronic client files, for example. However, providing care for people with an intellectual disability is characterized by a large amount of implicit knowledge when it comes to the skills and experiences of professionals and relatives, for example. This requires alternative forms of knowledge sharing, such as demonstrating and telling. When developing and executing knowledge-sharing strategies, it is vital to focus on the nature of the knowledge being shared.

### **Strengths and weaknesses**

Chapter 7 also discusses a number of strengths and weaknesses of the studies presented. One strength is the use of a contextual approach. This made it possible to focus on the unique characteristics of care for people with intellectual disabilities. Multidisciplinary teams provide care and support at a range of locations and to a diverse group of service users with lifelong and wide-ranging support needs. A second strength is that the perspective of both the CEOs and of the professionals was taken into account. During the course of the research, the involvement of other stakeholders also turned out to be important, both within the organisation (such as service users and their relatives) and in the wider socio-political environment (such as policymakers and the leaders of academic collaborative centres). However, no research was carried out into their perspective. Another weakness is the low generalizability of the results to other settings



and countries, because all the studies were conducted in the context of care for people with intellectual disabilities in the Netherlands.

### **Suggestions for future research**

Based on this study, four suggestions for future research are presented.

First, future research should focus on exploring the role of leadership in knowledge processes in care for people with intellectual disabilities in other settings, such as small-scale residential facilities and social care, both in the Netherlands and abroad. It is recommended to apply 'organisational knowledge leadership' in this regard.

Furthermore, in addition to the leadership of CEOs, it is also important to explore the practice leadership of management and the professional leadership and special expertise of practitioners. This appeared to play an important role in care organisations for people with intellectual disabilities, especially during the COVID-19 pandemic.

Secondly, further research is required into stimulating individual and collective learning among professionals, both during their training as professionals and their time in professional practice. It is essential to gain a better understanding of how to reinforce motivation and ownership of knowledge among professionals, as well as how to create more informal learning opportunities and stimulate a culture of 'lifelong learning'.

Thirdly, it is important to investigate the influence of stakeholders on knowledge processes, both within the organisation and in the wider socio-political environment. These stakeholders include service users, relatives and policy makers, for example. This can provide a better insight into the dynamics surrounding knowledge processes and additional environmental factors such as demographic developments. Research into the phenomenon of 'knowledge hiding', whereby knowledge is consciously withheld, is also recommended. This could occur if specific treatments were to become a 'unique selling point' in the market, so that a particular care organisation could develop a competitive edge.

The fourth research recommendation concerns evaluating the effects of improved knowledge sharing and application. The study into CEOs has provided an insight into their perception that knowledge processes help to enhance organisational performance, quality of care and quality of life. However, this research did not investigate the impact of improved knowledge sharing and application of knowledge on service users. Future research into the impact of such an improvement in the quality of care and quality of life of service users, and on the quality of work and job satisfaction of professionals, is therefore recommended.

### **Implications for policy and practice**

The final chapter discusses four key implications for policy and practice.

The first of these concerns the promotion of leadership around knowledge at all levels: among CEOs, managers and professionals and policymakers – both within the organisation and at the national policy level. It is important that all stakeholders recognize the value of informed decision-making that is based on knowledge and knowledge-based actions in policy and practice. This leads us to the principle that professionals involved in the primary process base their judgments on a broad and pluralist perspective and that they work according to evidence-based or practice-based methodologies. For this, it is important to create an environment that nurtures and supports this way of thinking: creating a climate of knowledge and learning at every level of the organisation can help to achieve this. It is important that there is room for experimentation, that mistakes can be made, opinions can be aired and questions can be asked. It is also important that in this kind of knowledge and learning climate, there is a focus on strengthening knowledge-related competencies such as reflection and giving feedback, and that an attitude of curiosity is valued and encouraged. For example, it may be possible to make use of the outsider's perspective of newcomers ('wonderment') inside the organisation at all levels, from CEO to support worker. Currently, care for people with intellectual disabilities involves major challenges due to a scarcity of staff and resources. While an increase in the demand for complex care implies an increased need for appropriate care from professionals with adequate skills, there is also a shortage on the labour market. In addition, information technology is increasingly being used to exchange and disseminate knowledge, yet the digital skills of some professionals are insufficient. In order to use the available staff and resources effectively, it is essential to prioritize digital leadership within management roles, too.

The second implication for policy and practice concerns evaluating, improving and renewing strategies in order to optimize knowledge sharing and the application of knowledge. The recommendation is to prioritize knowledge management that centres on service users, with a focus on improving the quality of care and quality of life of service users. In addition to using the national quality framework, the strategies identified in this research may provide further inspiration. Opportunities for improvement include: a) motivating all professionals to acquire and apply knowledge; b) designing strategies that focus specifically on the application of knowledge; c) integrating and combining strategies that are mutually reinforcing; and d) executing the strategy of 'acknowledging and deploying knowledge holders' on a larger scale. The latter involves recognizing and utilizing three sources of knowledge: the evidence-based knowledge from scientific research, the practice-based knowledge of professionals and the experiential knowledge of service users and their informal network.

The third implication for policy and practice is that within the internal context of care organisations for people with intellectual disabilities, it is important to create

conditions that are conducive to knowledge sharing and knowledge application among professionals. This means both stimulating a climate of knowledge and learning (see the first implication) and improving knowledge infrastructure. It is also about robust IT facilities, effective registration systems and the secure exchange of health information within organisations and with partners in the care system. In this context, knowledge-driven participation in collaborative partnerships is also recommended; these could involve knowledge institutes, knowledge networks and platforms and educational institutions, by means of academic collaborative centres and professorships, for example. It is also necessary to give professionals the resources they will need to share and apply knowledge, such as time and access to a diverse range of sources of knowledge (from e-learning to (online) meetings), and to stimulate an open and safe culture of innovation.

The fourth implication for policy and practice concerns ensuring favourable external conditions. This explicitly concerns the stimulating and facilitating role of national stakeholders such as the Ministry of Health, Welfare and Sport and the Ministry of Education, Culture and Science. It is important to address the gap that exists between vocational education at all levels and the field of professional practice, especially at a time when the numbers of people with expertise in a different field is rising. This requires the further development of curricula and changes to the design of vocational education. In addition, an effort on the part of national stakeholders to strengthen knowledge infrastructure is essential, in order that the information that is available – which these days is growing exponentially – can be found and accessed easily. Creating the right conditions also requires providing adequate resources and support for knowledge-sharing activities, such as team coaching and multidisciplinary consultations, and for the implementation of newly developed knowledge. The introduction of appropriate fees for the provision of complex care is also important, because this will make it possible to spend the time that is required on knowledge sharing and application.

## Conclusion

This thesis focuses on the question of how to improve knowledge sharing and application among professionals in care organisations for people with intellectual disabilities. It has highlighted the vital role of the context in which these knowledge processes occur. This context is a dynamic and layered system that involves many stakeholders. It has also been demonstrated that when sharing and applying knowledge, it is necessary to focus on the three different sources of knowledge which together form the knowledge base for the actions of professionals in the context of this field of care: evidence-based knowledge from scientific research, practice-based knowledge of professionals, and experiential knowledge of service users and their informal network. Each source of knowledge yields

unique perspectives and insights. Recognizing the nature of these forms of knowledge (explicit or implicit) and taking this into account when designing knowledge processes is essential if we are to unlock the value of this knowledge.

It has been shown that the sharing and application of knowledge are influenced by a combination of individual and environmental factors. Improving knowledge processes requires a good interplay between these factors, with a key role for professionals. The sharing and application of knowledge requires craftsmanship, professional leadership, and motivation from all professionals. Additionally, organisational knowledge leadership of CEOs and the practice leadership of management are also necessary. These play an additional facilitating role that consists of putting in place the right learning strategies, the required resources, and a stimulating learning environment in which all three sources of knowledge can be utilized. It is only through this kind of interplay between individual and environmental factors that will make knowledge work effectively. Working knowledge will, in turn, lead to an improvement in the quality of care and quality of life for service users in care organisations for people with intellectual disabilities.

# Wetenschappelijke samenvatting

In dit proefschrift staat de vraag centraal hoe het kennisbeleid van zorgorganisaties voor mensen met een verstandelijke beperking professionals kan stimuleren tot effectieve kennisdeling en -toepassing in hun praktijk. Dit is van belang omdat zij met de inzet van hun kennis bijdragen aan kwaliteit van zorg en kwaliteit van leven van mensen met verstandelijke beperkingen. Weliswaar zijn professionals in de zorg voor mensen met een verstandelijke beperking primair zelf verantwoordelijk voor hun eigen professionele ontwikkeling en voor het delen en toepassen van nieuwe inzichten in hun werk, echter ook de betrokken zorgorganisaties hebben hierin een rol en verantwoordelijkheid. Deze rol en verantwoordelijkheid vindt zijn weerklank in de organisatievisie en het organisatiebeleid ten aanzien van kennisdeling en -toepassing en richt zich op het creëren van een context die dit stimuleert. In dit exploratieve promotieonderzoek is onderzocht welke factoren en strategieën het delen en toepassen van kennis beïnvloeden. Het doel is om daarmee bij te dragen aan de verbetering en vernieuwing van het kennisbeleid van zorgorganisaties voor mensen met een verstandelijke beperking om kennisdeling en -toepassing door professionals te stimuleren.

## **Algemene inleiding**

De algemene inleiding (**Hoofdstuk 1**) start met een verkenning van de achtergrond en context van het huidige kennisbeleid in de zorg voor mensen met een verstandelijke beperking in historisch perspectief. Daarbij is uitgegaan van de periode 2000-2014 omdat de groeiende aandacht voor kennisprocessen in deze tijdspanne heeft geleid tot de ontwikkeling van het kennisbeleid in de zorg voor mensen met een verstandelijke beperking in Nederland. Ook worden kernconcepten en theorieën rond kennisdeling en -toepassing besproken.

### **Achtergrond en context**

Het bevorderen van evidence-based practice, marktwerking en het ondersteuningsparadigma zijn drie internationale ontwikkelingen die van invloed zijn geweest op de vorming van het kennisbeleid in de Nederlandse zorg voor mensen met een verstandelijke beperking. Daarnaast zijn hieraan verbonden beleidsontwikkelingen van de ministeries van Volksgezondheid, Welzijn en Sport (VWS) en Onderwijs, Wetenschappen en Cultuur (OCW) aanleiding voor het te vormen kennisbeleid, zoals het stimuleren van onderzoek alsook het bundelen en verspreiden van kennis, kwaliteitsbeleid, de hervorming van de bekostiging en de transformatie van het zorgsysteem. Vanuit het ministerie van OCW was het beleid gericht op de herziening van de beroepenstructuur en het beroepsonderwijs.

Deze internationale en nationale ontwikkelingen resulteerden in meer aandacht voor het expliciteren en versterken van professionaliteit in de zorg voor mensen met een verstandelijke beperking. In de strategische koers van de branchevereniging Vereniging Gehandicaptenzorg Nederland (VGN) vormde het versterken van het eigen professionele karakter van de gehandicaptenzorg een kernelement en was dit aanleiding om kennisbeleid te ontwikkelen. Want daarmee wilde deze zorgsector in een tijd van marktwerking haar onderscheidende karakter ten opzichte van andere zorgsectoren zichtbaar maken, als een 'unique selling point'. Dit werd ingegeven door haar zorgvragers: mensen met verstandelijke beperkingen. Hun levenslange en levensbrede zorgvragen onderscheiden zich van die van andere doelgroepen in de langdurige zorg. Aandacht voor de kwaliteit van zorg vormde tevens een concrete aanleiding. Door het tekort aan goed gekwalificeerde professionals in combinatie met de toegenomen ernst en complexiteit van de zorgvraag ontbrak het aan voldoende deskundigheid. Deze discrepantie vormde een bedreiging voor de kwaliteit van zorg en kwaliteit van leven van de zorgvragers.

Het kennisbeleid dat vanaf de start (in 2006) door de branche wordt gevoerd kenmerkt zich door de inzet van strategieën gericht op de ontwikkeling, deling en toepassing van kennis door professionals. Voorbeelden zijn het versterken van de kennisinfrastructuur, een programma professionalisering en het opstellen van competentieprofielen. Het primaat van het kennisbeleid ligt bij de individuele zorgorganisaties voor mensen met een verstandelijke beperking. Hun rol is het faciliteren van de kennisdeling en -toepassing van hun professionals. De rol van de VGN is om dit aan te moedigen en samenwerking te organiseren, met als sturingsmodel stimulering, bundeling en begeleiden van wat op organisatieniveau gebeurt en passend bij de verschillen tussen VGN-leden en de context van marktwerking, die leidt tot onderlinge concurrentie en belangentegenstellingen.

### **Kernconcepten**

In dit proefschrift wordt kennis gedefinieerd als het persoonlijk vermogen van professionals om een taak uit te voeren, gebaseerd op informatie, ervaring, vaardigheden en attitude (Weggeman, 2007). Deze definitie sluit aan bij de focus op professionals en de drie kennisbronnen in de gehandicaptenzorg: evidence-based kennis uit wetenschappelijk onderzoek, practice-based kennis van professionals en ervaringskennis van de zorgvragers en hun informele netwerk, zoals hun naasten (Embregts, 2017). Bij de eerstgenoemde kennisbron gaat het om expliciete kennis, oftewel kennis die uitgeschreven is als informatie, bij voorbeeld een evidence-based training. In de zorg voor mensen met een verstandelijke beperking blijkt expliciete kennis, die relatief gemakkelijk te delen is, beperkt beschikbaar. De expliciete kennis

betreft vooral de evidence-based kennis en in geringere mate practice-based kennis en ervaringskennis, zoals een door professionals ontwikkelde methodiek of een door een naaste geschreven levensverhaal. In de zorg voor mensen met een verstandelijke beperking heeft het merendeel van de kennis echter een impliciet karakter. Het gaat daarbij om ervaringen, vaardigheden en attitude. Deze impliciete kennis vraagt andere manieren van kennisdeling, zoals externalisatie ('vertellen wat je doet') en socialisatie ('overnemen van voorbeeldgedrag').

Kennisdeling binnen organisaties vraagt in eerste instantie kennisdeling op individueel niveau. Om de kennis van een individu te delen is het nodig dat deze kennis wordt omgezet in een vorm die door andere individuen wordt begrepen, opgenomen en toegepast, bijvoorbeeld als document, filmpje, training of inbreng in een multidisciplinair teamoverleg. Kennisdeling wordt beïnvloed door factoren als interne en externe motivatie, de aanwezigheid van kanalen om te leren en een cultuur van wel of geen kennisdelen. Zowel bij het delen als bij het toepassen van kennis speelt de context een rol. Deze context wordt gevormd door een gelaagd systeem dat bestaat uit meerdere niveaus: het primaire proces (microniveau), het organisatieniveau (mesoniveau) en het landelijk niveau (macroniveau). In dit systeem spelen op alledrie de niveaus persoonlijke en omgevingsfactoren een rol. Om kennisdeling en toepassing van kennis in zorgorganisaties voor mensen met een verstandelijke beperking te stimuleren, wordt op alle niveaus leiderschap gevraagd om verandering te realiseren: leiderschap van de professionals, het management en de bestuurders.

### **Onderzoeksdoel**

Het algemene doel is bij te dragen aan de verbetering en vernieuwing van het kennisbeleid van zorgorganisaties voor mensen met een verstandelijke beperking opdat professionals gestimuleerd worden tot kennisdeling en -toepassing. De verbetering en vernieuwing van het kennisbeleid vraagt inzicht in de factoren en strategieën die deze kennisprocessen in zorgorganisaties voor mensen met een verstandelijke beperking beïnvloeden. Dit algemene doel is uitgewerkt in vier subdoelen. Het *eerste doel* is vaststellen welke bevorderende en belemmerende organisatiefactoren in de literatuur bekend zijn. Een systematische review (hoofdstuk 2) laat de belangrijke voorwaardelijke rol van het management zien. Het *tweede doel* richt zich dientengevolge op het verkrijgen van meer inzicht in de sleutelrol van de bestuurders, met eindverantwoordelijkheid voor de zorgorganisaties voor mensen met een verstandelijke beperking. In een exploratieve kwalitatieve studie zijn de aanleidingen en strategieën van bestuurders onderzocht (hoofdstuk 3), evenals de bevorderende en belemmerende factoren die de uitvoer van hun strategieën beïnvloeden (hoofdstuk 4). Omdat uit deze studie de noodzaak blijkt van een goede aansluiting van de strategieën bij de startende



professionals is het *derde doel* het verkrijgen van inzicht in het perspectief van startende professionals op hoe kennistoepassing aangemoedigd kan worden. Vanwege het gegeven dat in zorgorganisaties voor mensen met een verstandelijke beperking professionals met verschillende opleidingsachtergronden en functies werkzaam zijn, is met de methode concept mapping het perspectief van drie verschillende beroepsgroepen onderzocht, namelijk startende begeleiders, gedragsdeskundigen en artsen VG (hoofdstuk 5). Ten tijde van deze studie vond begin 2020 de uitbraak van de COVID-19 pandemie plaats, waardoor de zorg- en dienstverlening in zorgorganisaties voor mensen met een verstandelijke beperking te maken kreeg met een veranderde context. Dit 'levend experiment' bood gelegenheid voor het *vierde doel*, het verkrijgen van inzicht in de impact van de factoren die kennisdeling en -toepassing beïnvloeden vóór en tijdens de COVID-19 pandemie. In een vragenlijstonderzoek onder begeleiders en behandelaren (hoofdstuk 6) werd de rol en het belang onderzocht van factoren die in de eerdere deelstudies (hoofdstuk 2 en 4) waren vastgesteld.

## Systematische review

**Hoofdstuk 2** beschrijft de resultaten van een systematische review over de organisatiefactoren die het delen en toepassen van kennis door professionals in zorgorganisaties voor mensen met een verstandelijke beperking beïnvloeden. Vijf databases (PubMed, Cinahl, Psych info, Business Source Elite, Proquest) werden voor deze studie geraadpleegd. Publicaties werden geïnccludeerd als ze voldeden aan de volgende criteria: 1) het betreft professionals die zorg en ondersteuning bieden aan (o.a.) mensen met verstandelijke beperkingen, 2) de studies richten zich op kennisdeling en -toepassing, 3) de context betreft de zorg- en dienstverlening aan mensen met een verstandelijke beperking: zowel gespecialiseerde woonvoorzieningen als wijkgerichte diensten, huisartsenpraktijken, scholen en werkplekken, 4) studies werden uitgevoerd in Angelsaksische landen en zijn gepubliceerd tussen 2000 en 2015. Negentien publicaties voldeden aan deze inclusiecriteria.

Uit de analyse komen drie primaire clusters van factoren naar voren:

4. kenmerken van de interventie, zoals de gebruiksvriendelijkheid;
5. factoren gerelateerd aan de mensen, dus persoonlijke factoren, waaronder motivatie, leiderschap, interesse, betrokkenheid en attitude tegenover de interventie;
6. factoren gerelateerd aan de organisatorische context, oftewel omgevingsfactoren. Deze omgevingsfactoren zijn onder te verdelen in materiële factoren en immateriële factoren. Materiële factoren zijn bijv. omvang en structuur van de organisatie, kantoor- en ICT-systemen en beschikbaarheid van hulpbronnen en

tijd. Tot de immateriële factoren behoren het trainingsaanbod, het organisatiebeleid en de cultuur.

Tenslotte blijkt uit de analyse van deze uitkomsten een samenspel tussen de drie clusters. Daarbij vervult het management een voorwaardelijke rol via het bieden van ondersteuning en het tonen van vakinhoudelijk leiderschap. De professionals zelf vervullen een sleutelrol bij het delen en toepassen van kennis in het primaire proces, waarbij ook hun leiderschap een factor blijkt.

## **Kwalitatieve interviewstudie**

In het kader van deze exploratieve studie werden uitgebreide kwalitatieve interviews gehouden met elf bestuurders van Nederlandse zorgorganisaties voor mensen met een verstandelijke beperking met actieve betrokkenheid bij het kennisbeleid van hun organisatie. De resultaten zijn beschreven in twee publicaties, respectievelijk weergegeven in hoofdstuk 3 en 4.

**Hoofdstuk 3** rapporteert over het eerste deel van deze studie. Hierin zijn aan hand van open vragen de aanleidingen en strategieën van bestuurders onderzocht om de kennisprocessen kennisdeling en -toepassing van hun professionals te stimuleren. Hiervoor is op de interviewverslagen een inductieve thematische analyse uitgevoerd. Uit deze analyse blijkt dat de aanleidingen voor het stimuleren van kennisprocessen vooral voortkomen uit de interne context, oftewel de eigen organisatie. Deze aanleidingen blijken gerelateerd aan de bestuurders zelf en aan hun professionals. Daarbij gaat het bij de bestuurders om persoonsfactoren zoals hun persoonlijke en beroepsmatige achtergrond en om hun taakopvatting als bestuurder, zoals het identificeren van aandachtsgebieden. Zij geven blijk van leiderschap dat gericht is op organisatiekennis. Bij de professionals betreffen de persoonsfactoren hun benodigde kennisbasis en competenties en hun opleiding en training. Behalve in de interne context zijn er ook aanleidingen in de externe context, dus factoren in de socio-politieke omgeving. Voorbeelden hiervan zijn: het beleid van de nationale overheid en van andere zorgorganisaties voor mensen met een verstandelijke beperking, de krappe arbeidsmarkt en onvoldoende aansluiting van het beroepsonderwijs bij het werkveld. Verder worden op basis van de analyse vier hoofdcategorieën van strategieën geïdentificeerd waarmee bestuurders kennisdeling en -toepassing door professionals stimuleren. Deze betreffen:

5. het voorzien in organisatorische voorwaarden voor effectieve kennisprocessen, via online platforms, overleggen en bijeenkomsten;

6. gerichte aandacht voor talentontwikkeling, zoals het faciliteren van de ontwikkeling van individuele zorgprofessionals door bijvoorbeeld het aanbieden van werkplekleren en coaching;
7. erkenning en inzet van kennishouders (zorgprofessionals, ervaringsdeskundigen en onderzoekers) en hun gelijkwaardige samenwerking;
8. participatie in samenwerkingsverbanden die gericht zijn op het uitwisselen van kennis.

Deze vier strategieën worden in combinatie toegepast en blijken elkaar te versterken. Opvallend is dat het merendeel van de strategieën kennisdeling betreft en er hierbij minder aandacht is voor het stimuleren van kennistoepassing. Tenslotte wordt duidelijk dat de bestuurders in hun kennismanagement veel aandacht geven aan kennis over de zorgvragers en dat ze sterk inzetten op sociale en digitale netwerken.

**Hoofdstuk 4** betreft het tweede deel van deze studie, dat zich richt op de contextuele factoren die de uitvoer van de kennisstrategieën van bestuurders om kennisdeling en -toepassing van hun professionals te stimuleren beïnvloeden. Primair werd via semigestructureerde vragen de invloed onderzocht van de organisatiefactoren die op basis van de systematische review (zie hoofdstuk 2) waren vastgesteld, aangevuld met factoren op basis van andere literatuur. Ook werd gevraagd om eventuele andere factoren te noemen. Op de verkregen data is een thematische analyse uitgevoerd met een deductieve benadering, die gevolgd werd door een bottom-up clustering.

Er zijn vele contextuele factoren geïdentificeerd die de uitvoer van de kennisstrategieën van bestuurders beïnvloeden. Daarbij blijkt het zowel te gaan om factoren in de interne context (de eigen organisatie) als om factoren in de externe context (de socio-politieke omgeving). In de interne context blijkt het te gaan om persoonsfactoren gerelateerd aan individuen en aan groepen maar ook om interne omgevingsfactoren binnen de organisatie. De individuele persoonsfactoren betreffen kennisgerelateerde kenmerken van de betrokken personen, namelijk zorgvragers, professionals, management, bestuurders en verwanten. Hierbij blijkt leiderschap een factor zowel bij de professionals (begeleiders en gedragsdeskundigen), als bij management en bestuurders. De groepsfactoren betreffen teams van professionals, het management team, de raad van toezicht en verwanten. Omgevingsfactoren binnen de organisatie zijn onder meer: de omvang en structuur van de organisatie, het kantoor- en ICT systeem, het beleid en de cultuur.

In de externe context hebben omgevingsfactoren onder meer betrekking op het nationale beleid, de rol van de branche, beroepsverenigingen, andere zorgorganisaties voor mensen met een verstandelijke beperking en het beroepsonderwijs. Ook zijn factoren gerelateerd aan de samenwerkingsverbanden rond kennis, zoals hun beleid en

kennisdeelcultuur. Tenslotte blijkt er eveneens sprake te zijn van een samenspel van contextuele factoren.

## Concept mapping

**Hoofdstuk 5** beschrijft een studie naar de factoren die volgens startende professionals de toepassing van nieuwe kennis bevorderen. De methode concept mapping werd daarbij ingezet met drie groepen participanten uit Nederlandse zorgorganisaties voor mensen met een verstandelijke beperking: instroom en zijinstroom van begeleiders ( $n=5$ ), instroom van gedragsdeskundigen ( $n=9$ ) en instroom van artsen VG ( $n=6$ ). Het ging om 15 vrouwen en 5 mannen met een gemiddelde leeftijd van 34,1 jaar (range 22-54 jaar). Hun werkervaring varieerde tussen een half jaar en drie jaar. Alle startende professionals werkten met mensen met een verstandelijke beperking en een intensieve zorgbehoefte, zoals mensen met moeilijk verstaanbaar gedrag en mensen met ernstige meervoudige beperkingen.

De concept maps van de startende begeleiders, gedragsdeskundigen en artsen VG vertonen overeenkomsten. Naast factoren die gerelateerd zijn aan individueel leren bevatten ze allemaal factoren gerelateerd aan collectief leren, zowel met de eigen beroepsgroep (dus monodisciplinair) als met andere beroepsgroepen (multidisciplinair). Ook wezen alle startende professionals zowel op vormen van formeel leren (zoals een training) als op informeel leren (werkplekleren). Naast deze overeenkomsten laten de concept maps ook verschillen zien. De drie beroepsgroepen uiten verschillende behoeftes waarop hun kennistoepassing kan worden gestimuleerd. Zo vragen ze om leermogelijkheden op maat (zie hieronder). Ook is vastgesteld dat de startende begeleiders hun rol omschreven als kennisontvangers en dat ze geen eigenaarschap over hun kennis laten zien. Daarentegen beschouwen startende gedragsdeskundigen en artsen VG zichzelf wel als kennishouders. Deze behandelaren tonen hun eigenaarschap van kennis door hun kennis te delen met de begeleiders.

De geïdentificeerde factoren zijn samen te vatten in vijf verschillende strategieën om de toepassing van nieuwe kennis te stimuleren:

6. zorgen voor leermogelijkheden op maat, zoals ervaringsleren voor startende begeleiders en een werkbegeleider voor startende gedragsdeskundigen;
7. zorgen voor toegankelijke sites, tools en platforms om kennis te delen;
8. stimuleren van motivatie en eigenaarschap;
9. zorgen voor randvoorwaardelijke hulpbronnen zoals tijd, ruimte en budget;
10. zorgen voor een stimulerende omgeving met een open en veilig leerklimaat en ondersteunende structuren.

## Vragenlijstonderzoek

In de studie uit **hoofdstuk 6** is de impact van de COVID-19 pandemie op kennisdeling en -toepassing onderzocht. In de context van deze gezondheids crisis was de behoefte aan nieuwe kennis (zoals over infectiepreventie en behandeling) heel groot. Tegelijkertijd veranderde de uitvoering van het dagelijks werk, zoals dat behandelaren zo veel mogelijk digitaal gingen werken in plaats van op locatie. Deze veranderde context maakte het zeer relevant te onderzoeken welke omgevingsfactoren tijdens de COVID-19 pandemie het kennis delen en toepassen van professionals in zorgorganisaties voor mensen met een verstandelijke beperking beïnvloeden. Dit gebeurde via een vragenlijstonderzoek onder 160 professionals (69 begeleiders en 91 behandelaren), werkzaam in Nederlandse zorgorganisaties voor mensen met een verstandelijke beperking. Hiervoor werd op basis van de uitkomsten van studie 1 (hoofdstuk 2) en studie 3 (hoofdstuk 4) een online vragenlijst ontwikkeld, met items die waren afgeleid van de eerder vastgestelde contextuele factoren. Het ging hierbij om factoren die samenhangen met personen, teams, kenmerken van de interventie en hulpmiddelen, de organisatorische context en de sociaal-politieke omgeving. De respondenten werd gevraagd om bij ieder item de rol en het belang aan te geven.

Volgens de meeste begeleiders en behandelaren blijven factoren die kennisdeling en -toepassing vóór de COVID-19 pandemie beïnvloeden, dat ook tijdens de COVID-19 pandemie doen. Een deel van de factoren blijkt tijdens de COVID-19 pandemie een grotere rol te spelen, zoals de betrokkenheid van cliënten en hun naasten en professioneel leiderschap van behandelaren. De twee meest belangrijke factoren tijdens deze crisis zijn volgens de meeste respondenten vakinhoudelijk leiderschap van het management en kantoor- en ICT-systemen (complete en actuele elektronische cliëntdossiers, email en intranet). Sommige factoren blijken verschillend te worden gewaardeerd door begeleiders en behandelaren. Begeleiders vinden de gebruiksvriendelijkheid van hulpmiddelen en interventies en de beschikbare capaciteit aan medewerkers belangrijker tijdens de COVID-19 pandemie dan behandelaren. Behandelaren vinden de rol van vakmanschap van behandelaren, professioneel leiderschap van behandelaren en kantoor- en ICT systemen juist belangrijker dan begeleiders.

## Algemene discussie

Tot slot, in **hoofdstuk 7**, worden de bevindingen van dit proefschrift samengevat en geïntegreerd tot vier kerninzichten. Na een bespreking van de sterktes en zwaktes

worden richtingen voor toekomstig onderzoek en de implicaties voor beleid en praktijk aangegeven.

Dit proefschrift laat zien dat persoonsfactoren, omgevingsfactoren en strategieën het delen en toepassen van kennis in zorgorganisaties voor mensen met een verstandelijke beperking beïnvloeden. Een overzicht van de belangrijkste factoren wordt gepresenteerd in Tabel 1 (appendix). Zoals deze tabel laat zien, zijn deze factoren en strategieën voor een belangrijk deel gepositioneerd in de interne context, dus binnen de zorgorganisatie voor mensen met een verstandelijke beperking. Daar beïnvloeden de strategieën van bestuurders, persoonlijke factoren en omgevingsfactoren de kennisdeling en -toepassing door professionals. Aanvullend hierop wordt hun kennisdeling en -toepassing, evenals de strategieën van bestuurders, ook beïnvloed door externe omgevingsfactoren: de sociaal-politieke omgeving.

### **Kerninzichten**

De resultaten van dit proefschrift leiden tot vier kerninzichten:

*Ten eerste* blijkt er een samenhang tussen strategieën, mensen, persoonlijke factoren en omgevingsfactoren binnen een gelaagd systeem (micro-, meso- en macroniveau). Daarom heeft het voor de optimalisatie van kennisdeling en -toepassing in zorgorganisaties voor mensen met een verstandelijke beperking meerwaarde om meerdere strategieën in te zetten. Deze strategieën kunnen dan inspelen op persoonlijke en omgevingsfactoren in alle lagen van het systeem, dus op het niveau van het primair proces, de organisatie en de sector.

*Ten tweede* is het belangrijk om bij het ontwikkelen en inzetten van strategieën rekening te houden met het dynamische karakter van persoonlijke en omgevingsfactoren binnen het hele systeem. Terwijl een deel van de factoren veranderbaar is, geldt dat voor andere factoren niet, zoals de persoonlijke factor leerstijl en de omgevingsfactor COVID-19 pandemie. In dat geval kan de keuze worden gemaakt voor strategieën die effectief inspelen op onveranderbare factoren, bijvoorbeeld door het leeraanbod af te stemmen op de leerstijl van de betreffende professionals.

*Ten derde* blijkt leiderschap een cruciale factor bij het stimuleren van kennisdeling en -toepassing. Daarbij gaat het om leiderschap op verschillende niveaus: dat van de bestuurder (leiderschap gericht op organisatiekennis), managers (vakinhoudelijk leiderschap) en professionals (professioneel leiderschap). Leiderschap blijkt bij al deze rollen de motivator om te leren, kennis te delen en toe te passen. En daarmee een cultuur van kennis gedreven praktijken te bevorderen. Het stimuleren van leiderschap is een element van waarde in de strategieën om het delen en toepassen van kennis te stimuleren.

*Ten vierde* onderstreept dit proefschrift het belang van het maken van onderscheid tussen expliciete en impliciete kennis. Dit heeft consequenties voor de wijze waarop kennis kan worden gedeeld. Expliciete kennis kan gemakkelijk worden gedocumenteerd en digitaal worden gedeeld, zoals via elektronische cliëntdossiers. De zorg voor mensen met een verstandelijke beperking kenmerkt zich echter doordat een groot deel van de kennis een impliciet karakter heeft, bijvoorbeeld vaardigheden en ervaringen van professionals en naasten. Dit vraagt andere manieren van kennis delen, zoals door voordoen en vertellen. Bij het ontwikkelen en uitvoeren van strategieën om kennis te delen is het cruciaal om ook aandacht te geven aan de aard van de kennis die wordt gedeeld.

### **Sterktes en zwaktes**

In hoofdstuk 7 worden ook een aantal sterktes en zwaktes van de studies besproken. Een sterkte is het hanteren van een contextuele benadering. Deze benadering heeft het mogelijk gemaakt om aandacht te geven aan de unieke kenmerken van de zorg voor mensen met een verstandelijke beperking. Aan een heterogene groep zorgvragers met levenslange en levensbrede ondersteuningsbehoeften bieden multidisciplinaire teams op een veelheid aan locaties zorg en ondersteuning. Een tweede sterkte is dat zowel het perspectief van de bestuurders als dat van de professionals is onderzocht. In de loop van het onderzoek bleek ook de betrokkenheid van andere stakeholders van belang, zowel binnen de organisatie (zoals zorgvragers en hun naasten) als in de sociaal-politieke omgeving (zoals beleidsmakers en leiders van academische werkplaatsen). Naar hun perspectief is echter geen onderzoek gedaan. Een andere zwakte vormt de generaliseerbaarheid van de uitkomsten naar andere settings en landen omdat alle studies uitgevoerd zijn in de Nederlandse context van zorg voor mensen met een verstandelijke beperking.

### **Richtingen voor toekomstig onderzoek**

Op basis van het huidige onderzoek worden voor toekomstig onderzoek vier richtingen voorgesteld.

Allereerst een verdere verkenning van de rol van leiderschap in kennisprocessen in de zorg voor mensen met een verstandelijke beperking in andere settings, zoals kleinschalige woonvoorzieningen en maatschappelijke zorg, zowel in Nederland als daarbuiten. Aanbevolen wordt hierbij 'leiderschap gericht op organisatiekennis' in te zetten. Verder is het van belang om naast het leiderschap van bestuurders ook het vakinhoudelijk leiderschap van management en het professioneel leiderschap en vakmanschap van behandelaren verder te onderzoeken. Dit bleek met name tijdens de

COVID-19 pandemie een belangrijk rol te spelen in zorgorganisaties voor mensen met een verstandelijke beperking.

Ten tweede is vervolgonderzoek nodig naar het stimuleren van individueel en collectief leren van professionals, zowel tijdens hun beroepsopleiding als in hun professionele praktijk. Het is essentieel om meer inzicht te krijgen in de wijze waarop de motivatie en eigenaarschap over kennis bij professionals versterkt kunnen worden, evenals in de manier waarop meer informele leermogelijkheden gecreëerd kunnen worden en een cultuur van 'een leven lang leren' kan worden bevorderd.

Ten derde is het van belang om de invloed van stakeholders op kennisprocessen te onderzoeken, binnen de organisatie en in de sociaal-politieke omgeving. Zoals zorgvragers, naasten en beleidsmakers. Hiermee kan meer inzicht worden verkregen in de dynamiek rond kennisprocessen en over aanvullende omgevingsfactoren zoals demografische ontwikkelingen. Bovendien wordt aanbevolen ook onderzoek te doen naar het fenomeen 'kennis verbergen', waarbij bewust kennis wordt achtergehouden. Dit zou het geval kunnen zijn als specialistische behandelingen een 'unique selling point' zouden worden in het marktdenken van gehandicaptenzorgorganisaties.

De vierde richting betreft het evalueren van de effecten van verbeterde kennisdeling en -toepassing. De studie naar de bestuurders geeft inzicht in hun perceptie dat kennisprocessen bijdragen aan verbeterde prestaties van de organisatie en de kwaliteit van zorg en kwaliteit van leven verbeteren. Echter de impact van verbeterde kennisdeling en -toepassing voor de zorgvragers is in dit promotieonderzoek niet onderzocht. Daarom wordt aanbevolen onderzoek te doen naar de impact van zo'n verbetering voor de kwaliteit van zorg en kwaliteit van leven van de zorgvragers en voor de kwaliteit van arbeid en werktevredenheid van de professionals.

### **Implicaties voor beleid en praktijk**

Tenslotte worden in het slothoofdstuk vier implicaties voor beleid en praktijk besproken.

De eerste daarvan betreft het bevorderen van leiderschap rond kennis op alle niveaus: bij bestuurders, managers en professionals en bij beleidsmakers, zowel binnen de organisatie als op nationale beleidsniveau. Het is daarin van belang dat alle stakeholders de waarde erkennen van geïnformeerde besluitvorming op basis van kennis en van op kennis gebaseerd handelen in beleid en praktijk. Dit leidt dan tot het hanteren van het uitgangspunt dat professionals in het primaire proces hun beeldvorming baseren op breed meervoudig kijken en dat ze werken volgens evidence-based of practice-based methodieken. Hiervoor is het belangrijk om een omgeving te creëren die deze manier van denken ondersteunt en voedt; een kennis- en leerklimaat op alle organisatieniveaus draagt hieraan bij. Het is belangrijk dat er ruimte is voor experimenteren, dat fouten gemaakt mogen worden, meningen gegeven en vragen gesteld mogen worden. Ook is



het belangrijk dat in zo'n kennis- en leerklimaat aandacht gegeven wordt aan het versterken van kennisgerelateerde competenties zoals reflectie en feedback geven en dat een houding van nieuwsgierigheid gewaardeerd en gestimuleerd wordt. Zo kan bijvoorbeeld gebruik gemaakt worden van de blik van buiten ('verwondering') van nieuwkomers binnen de organisatie op alle niveaus, dus van bestuurder tot begeleider. De huidige context van de zorg voor mensen met een verstandelijke beperking kent grote uitdagingen door schaarste aan mensen en middelen. Terwijl de toename van complexe zorgvragen vraagt om passende zorg door voldoende competente professionals, is er tegelijk sprake van krapte op de arbeidsmarkt. Daarnaast wordt ICT steeds vaker ingezet voor de kennisuitwisseling terwijl de digitale vaardigheden van professionals tekort kunnen schieten. Voor een doelmatige inzet van de beschikbare menskracht en middelen is het essentieel om ook digitaal leiderschap binnen managementrollen te prioriteren.

De tweede implicatie richt zich op het evalueren, verbeteren en vernieuwen van strategieën om het delen en toepassen van kennis te optimaliseren. Aanbevolen wordt het prioriteren van zorgvrager-gericht kennismanagement, met als focus het verbeteren van de kwaliteit van zorg en kwaliteit van leven van die zorgvragers. Naast de inzet van het nationale kwaliteitskader kunnen de in dit promotieonderzoek geïdentificeerde strategieën inspiratie bieden. Verbetermogelijkheden betreffen: a) het motiveren van alle professionals om kennis te verwerven en toe te passen, b) het ontwerpen van strategieën die zich specifiek richten op *kennistoepassing*, c) het integreren en combineren van strategieën die elkaar wederzijds versterken, en d) het op grotere schaal implementeren van de strategie '*erkennen en inzet van kennishouders*'. Bij dit laatste gaat het om het erkennen en gebruiken van drie kennisbronnen: evidence-based kennis uit wetenschappelijk onderzoek, practice-based kennis van professionals en ervaringskennis van de zorgvragers en hun informele netwerk.

De derde implicatie is het voorzien in bevorderende omstandigheden in de interne context van zorgorganisaties voor mensen met een verstandelijke beperking om kennisdeling en -toepassing van professionals te faciliteren. Dit betreft zowel het bevorderen van een kennis- en leerklimaat (zie de eerste implicatie) als het verbeteren van de kennisinfrastructuur. Daarbij gaat het om robuuste ICT-faciliteiten, effectieve registratiesystemen en een veilige uitwisseling van gezondheidsinformatie binnen de organisatie en met haar ketenpartners. In dit kader wordt ook de participatie in kennisgedreven samenwerkingsverbanden rond kennis aanbevolen: met kennisinstututen, kennisnetwerken en -platforms en onderwijsinstellingen, bijvoorbeeld in academische werkplaatsen en lectoraten. Verder is het nodig om aan professionals voldoende hulpbronnen te verschaffen die nodig zijn voor kennisdeling en -toepassing, zoals tijd en

toegang tot een diversiteit aan kennisbronnen (van e-learnings tot (online) bijeenkomsten), evenals het bevorderen van een open en veilige innovatiecultuur.

De vierde implicatie betreft het voorzien in bevorderende omstandigheden in de externe context. Daarbij gaat het nadrukkelijk om de stimulerende en faciliterende rol van nationale stakeholders zoals het ministerie van VWS en het ministerie van OCW. Het is van belang dat er aandacht is voor de bestaande kloof tussen het beroepsonderwijs op alle niveaus en het werkveld, waarin bovendien het aandeel zijinstromers toeneemt. Dit gegeven maakt doorontwikkeling van curricula en van de vormgeving van het beroepsonderwijs nodig. Daarnaast is de inzet van nationale stakeholders voor het versterken van de kennisinfrastructuur essentieel, zodat de informatie, die in het huidige tijdperk exponentieel groeit, ook vindbaar blijft. Het creëren van bevorderende omstandigheden vraagt bovendien om het voorzien in voldoende middelen en ondersteuning voor kennisdeelactiviteiten, zoals team coaching en multidisciplinaire consultaties, en voor implementatie van nieuw ontwikkelde kennis. Ook is de allocatie van passende tarieven voor complexe zorgvragen van belang, omdat dit het mogelijk maakt om voldoende tijd aan kennisdeling en -toepassing te besteden.

## Conclusie

Dit proefschrift richt zich op de vraag hoe de kennisdeling en -toepassing door professionals in zorgorganisaties voor mensen met een verstandelijke beperking verbeterd kan worden. De cruciale rol van de context waarin deze kennisprocessen zich afspelen wordt duidelijk. Deze context vormt een dynamisch en gelaagd systeem met vele stakeholders. Ook blijkt het nodig om bij het delen en toepassen van kennis aandacht te geven aan de drie verschillende kennisbronnen die gezamenlijk de kennisbasis vormen voor het handelen van professionals in de context van deze zorgsector: evidence-based kennis uit wetenschappelijk onderzoek, practice-based kennis van professionals en ervaringskennis van de zorgvragers en hun informele netwerk. Elke kennisbron biedt unieke perspectieven en inzichten. Het erkennen van hun aard (expliciet of impliciet) en hierop inspelen bij het inrichten van kennisprocessen is essentieel om hun waarde effectief te benutten.

Kennisdeling en -toepassing blijken te worden beïnvloed door een combinatie van persoonlijke factoren en omgevingsfactoren. Het verbeteren van deze kennisprocessen vraagt om een goed samenspel tussen deze factoren waarbij een sleutelrol is weggelegd voor de professionals. Kennisdeling en -toepassing vraagt van henzelf vakmanschap, professioneel leiderschap en motivatie. Daarnaast zijn leiderschap gericht op organisatiekennis van bestuurders en vakinhoudelijk leiderschap van management nodig. Hun aanvullende rol is faciliterend en stimulerend en bestaat uit het bieden van passende

leerstrategieën, noodzakelijke hulpbronnen en een stimulerende leeromgeving waarin gebruik kan worden gemaakt van alle drie de kennisbronnen. Alleen door een dergelijk samenspel tussen persoonlijke en omgevingsfactoren kan kennis werkend worden. Werkende kennis zal op zijn beurt de kwaliteit van zorg en kwaliteit van leven van zorgvragers in zorgorganisaties voor mensen met een verstandelijke beperking bevorderen.



Public summary /  
Publiekssamenvatting

## Public summary

### Background

In the context of caring for people with intellectual disabilities, knowledge (scientific, professional, and experiential) is of profound importance for care professionals to be able to provide sufficiently good care. Through their knowledge policies, care organisations for people with intellectual disabilities seek to stimulate their care professionals to share and apply the knowledge they have acquired. However, it often takes a long time for the most up-to-date scientific knowledge is acquired by care professionals and properly applied within the care and support for people with intellectual disabilities. In addition to this, professional knowledge and experiential knowledge are also insufficiently shared and utilised. If care professionals do not have the requisite knowledge, then this can negatively impact upon their ability to provide professional support, and, in turn, lead to poorer quality of care and quality of life for service users. This thesis focuses on how care professionals in care organisations for people with intellectual disabilities can be stimulated to effectively share and apply knowledge within their practice.

### Research question and method

Five sub-studies investigated what factors and strategies influence both the sharing and application of knowledge within the context of care and support for people with intellectual disabilities. The *first sub-study* identified organisational factors that had been identified in extant scientific literature in this field. This revealed the important contingent role of management. Based on this, the *second and third sub-studies* focused on the key role of CEOs. Through interviews with CEOs, we found out which strategies they deploy in their knowledge policies, what motivated this, and which factors influence the subsequent execution of these strategies. These studies showed, amongst other things, that establishing a good fit between their strategies and incoming professionals is vitally important. Building on this, the *fourth sub-study* investigated how, according to incoming support staff, psychologists and ID physicians, the use of new knowledge can be encouraged. The fourth sub-study coincided with the COVID-19 pandemic in early 2020. This 'living experiment' provided an opportunity in the *fifth sub-study* to understand the factors that influenced knowledge sharing and application during the pandemic.

### Conclusion

Knowledge sharing and application appear to be influenced by a combination of personal factors and environmental factors. Improving these processes requires the effective interplay between these factors, in which care professionals have a key role to play. First and foremost, knowledge sharing and application require professionalism, leadership and

The complementary role to be played by CEOs and managers comprises facilitating, encouraging and providing appropriate learning strategies, resources, such as time, space and budget, as well as a stimulating learning environment that utilises knowledge from research, practice and from people with intellectual disabilities themselves and their relatives. When the combined efforts of care professionals, CEOs, and managers generate working knowledge, then this will in turn enhance both the quality of care and quality of life of service users.

## Publiekssamenvatting

### Aanleiding

In de zorg voor mensen met een verstandelijke beperking is kennis (wetenschappelijke-, professionele- en ervaringskennis) van groot belang om als zorgprofessional goede zorg te kunnen bieden. Met hun kennisbeleid stimuleren zorgorganisaties voor mensen met een verstandelijke beperking dat zorgprofessionals kennis delen en toepassen. Het kost echter veel tijd voordat onderzoekskennis de professionals bereikt en goed ingezet kan worden bij de zorg en ondersteuning van mensen met verstandelijke beperkingen.

Daarnaast worden praktijkkennis en ervaringskennis onvoldoende gedeeld en gebruikt. Als zorgprofessionals niet beschikken over de juiste kennis kan dit leiden tot handelingsverlegenheid. En tot minder goede kwaliteit van zorg en kwaliteit van leven. Dit proefschrift richt zich op de vraag hoe zorgprofessionals in zorgorganisaties voor mensen met een verstandelijke beperking gestimuleerd kunnen worden tot effectieve kennisdeling en -toepassing in hun praktijk.

### Onderzoeksvraag en -methode

In vijf deelstudies is onderzocht welke factoren en strategieën het delen en toepassen van kennis in de zorg en ondersteuning van mensen met verstandelijke beperkingen beïnvloeden. In *de eerste deelstudie* is in kaart gebracht welke organisatiefactoren er op dit gebied uit reeds bestaande wetenschappelijke literatuur bekend zijn. Hieruit kwam de belangrijke voorwaardelijke rol van het management naar voren. Daarom richtten de *tweede en derde deelstudie* zich op de sleutelrol van de bestuurders. Via interviews met bestuurders is achterhaald welke strategieën ze inzetten in hun kennisbeleid, wat de aanleidingen hiervoor zijn en welke factoren de uitvoer van deze strategieën beïnvloeden. Uit deze studies bleek onder andere dat een goede aansluiting van hun strategieën bij de startende professionals cruciaal is. Daarom is in de *vierde deelstudie* onderzocht hoe volgens startende begeleiders, gedragsdeskundigen en artsen VG het gebruik van nieuwe kennis aangemoedigd kan worden. Ten tijde van de vierde deelstudie vond begin 2020 de uitbraak van de coronapandemie plaats. Dit 'levend experiment'

bood gelegenheid om in de *vijfde deelstudie* inzicht te krijgen in de factoren die kennisdeling en -toepassing beïnvloedden tijdens deze pandemie.

### **Conclusie**

Kennisdeling en -toepassing blijken te worden beïnvloed door een combinatie van persoonlijke factoren en omgevingsfactoren. Voor het verbeteren van deze processen is een goed samenspel nodig tussen deze factoren, waarbij de zorgprofessionals een sleutelrol hebben. Kennisdeling en -toepassing vraagt van hen vakmanschap, leiderschap en motivatie. Daarnaast zijn leiderschap van bestuurders en management nodig. De aanvullende rol van bestuurders en managers is faciliterend en stimulerend en bestaat uit het bieden van passende leerstrategieën, hulpbronnen zoals tijd, ruimte en budget en een stimulerende leeromgeving waarin gebruik wordt gemaakt van kennis uit onderzoek, praktijk en van mensen met een verstandelijke beperking zelf en hun naasten. Wanneer de gezamenlijke inzet van zorgprofessionals, bestuurders en managers leidt tot werkende kennis zal dit op zijn beurt de kwaliteit van zorg en de kwaliteit van leven van zorgvragers bevorderen.



Dankwoord  
Curriculum Vitae  
Publications

## Dankwoord

Om tot dit proefschrift te komen heb ik een lange reis afgelegd. Reflectie maakt me ervan bewust dat het om een leerproces ging, waarbij de stimulerende en ondersteunende rol van mijn omgeving een belangrijke succesfactor vormde. Daarom wil ik bij het voltooiën van mijn proefschrift stilstaan bij mijn omgeving en de personen bedanken die hierin een belangrijke rol speelden.

Allereerst geldt mijn dank mijn beide promotoren, prof. dr. Petri Embregts, verbonden aan de Academische Werkplaats 'Leven met een Verstandelijke Beperking' van Tilburg University, en prof. dr. ir. Mathieu Weggeman van Technische Universiteit Eindhoven. Jullie beiden boden mij, elk op een eigen wijze, een goed voorbeeld van vakinhoudelijk leiderschap!

Petri, jouw gedreven inzet voor kennisontwikkeling over de ervaringskundigheid van mensen met verstandelijke beperkingen en menslievende professionalisering vormde voor mij een grote inspiratiebron. Ik ben je erg dankbaar voor de mogelijkheid die je me bood om als science practitioner mijn promotieonderzoek uit te voeren bij AWVB. En voor je vertrouwen en ondersteuning om dit tot een goede einde te brengen. Mathieu, de inspirerende wijze waarop je jouw expertise rond kennismanagement deelt, raakte bij mij een snaar. Ook jouw feedback, met name over concepten, heeft me aangezet tot verdere ontwikkeling van mijn denken en zo te komen tot wetenschappelijke scherpte.

Verder wil ik de vertegenwoordigers van de academische wereld bedanken die de beoordeling van dit proefschrift op zich hebben genomen en deel uitmaken van de oppositie: Prof. dr. Tine Buyl, Prof. dr. Ien van de Goor, Prof. dr. Henk Nies, Prof. dr. Wilma van der Scheer en Prof. dr. Carlo Schuengel.

Vervolgens wil ik ingaan op mijn onderzoeksomgeving, de al eerder genoemde Academische Werkplaats 'Leven met een Verstandelijke Beperking' (AWVB) van Tilburg University. Bij de daar gehanteerde visie en aanpak voelde ik me erg thuis. Het gaat om gelijkwaardige samenwerking tussen wetenschap en praktijk, de aanstelling van 'science practitioners' en co-onderzoekers die hun eigen praktijk met wetenschap verbinden en gebruik maken van alle drie de kennisbronnen uit de gehandicaptenzorg: kennis uit onderzoek, kennis van professionals en kennis van ervaringskundigen. In deze werkplaats heb ik enorm veel geleerd. Met jullie samenwerken in deze 'learning community' bracht daarnaast ook veel inspiratie en energie. Dank daarvoor!

In het bijzonder wil ik mijn kamergenoten Tess Tournier, Kim van den Bogaard, Marloes Thalen en Cathelijn Oudshoorn (ook paranimf) en kennismanager Lucienne Heerkens bedanken voor alle uitwisseling, adviezen en meeleven op mijn reis.

Heel veel dank ook aan mijn dagelijkse begeleider Noud Frielink voor zijn onvermoeibare inzet en geduld om mij te scholen in de kneepjes van het vak van onderzoeker. Een oprecht compliment aan jou, Noud, voor de wijze waarop je aansluiting wist te maken bij mijn leerstijl. Verder wil ik ook Elsbeth Taminiau en Vincent Peeters bedanken, die in de eerste respectievelijk laatste fase een belangrijke bijdrage leverden aan mijn ontwikkeling als onderzoeker.

Tenslotte wil ik hier de inbedding noemen van AWVB in Tranzo, het onderzoeksdepartement van de Tilburg School of Social and Behavioral Sciences, van Tilburg University, die ruimte biedt aan vele academische werkplaatsen. Deze vormen even zovele bruggen tussen de academische en de zorgwereld. Dank aan prof. dr. Henk Gerretsen en prof. dr. Dike van der Mheen hiervoor.

Ten tweede noem ik mijn werkomgeving bij de Vereniging Gehandicaptenzorg Nederland (VGN) in Utrecht, waar mijn kennisbeleidswerk de basis vormde voor de vraagstelling van dit proefschrift. Dat de VGN bereid bleek om mijn promotieonderzoek langdurig en ruimhartig te faciliteren heb ik ervaren als een groot cadeau. Zeer veel dank daarom aan de opeenvolgende VGN-directeuren Hans Schirmbeck, Frank Bluiminck en Theo van Uum.

Op mijn werkplek op het VGN-bureau heb ik veel geleerd van de open uitwisseling met vele (oud-)collega's en managers. Voor dit proefschrift heb ik daarin essentiële inzichten opgedaan. Daarnaast heb ik vanuit de VGN-collega's ook steeds veel interesse en steun ervaren. Oprechte dank aan collega-beleidsadviseurs Alice Dallinga (ook paranimf), Marieke van Noort, Hans Timmermans, Devie Rusch, Minie Eising, Bianca Roos, Gera van der Woude en aan mijn managers Yvonne Heijnen-Kaales, Ditte van Vliet en Peter Kruithof. Deze laatste drie bedank ik ook voor de faciliterende rol die zij vervulden.

Daarnaast werd ik in mijn VGN-werkomgeving verrijkt door vele stimulerende ontmoetingen, met name in het netwerk van kennismanagers. Specifiek heeft ook een klankbordgroep met veel expertise op het terrein van kennismanagement meegedacht met mijn zich ontwikkelde promotieonderzoek. Hanneke Kooiman, Han van Esch, Henk Kouwenhoven, Hilair Balsters, Yvonne-Heijnen-Kaales, Jan-Willem Schuurman, Lucienne Heerkens en Suzanne Verdonschot: heel veel dank voor de inspirerende sessies! Verder was de kennis die alle participanten van de verschillende deelstudies zo rijkelijk en open

met mij deelden voor mij niet alleen van belang als informatiebron, maar ook als een krachtige stimulans. Dank daarom aan alle deelnemende bestuurders, startende professionals, begeleiders en behandelaren.

De derde omgeving die in grote mate heeft bijgedragen aan het voltooien van mijn reis is mijn eigen vertrouwde kring van vriend(inn)en en familie. Het delen van lief en leed met hen en ervaren hoe ze met mij meeleven is altijd vanzelfsprekend geweest. Dit heeft me steun en kracht geboden op momenten dat ik dat nodig had. Bedankt daarvoor! Een belangrijke bron van ontspanning bij al mijn hoofdwerk vond ik door deelname aan het wekelijkse beeldhouwatelier in Zeist, dat begeleid wordt door Anne-Marijke van Dijken. Door haar bezielende coaching kon mijn eigen creativiteit zich daar blijven ontwikkelen.

Op deze plaats wil ik vervolgens speciaal mijn ouders bedanken. Zelf waren ze een voorbeeld van 'een leven lang leren'. In mijn jeugd- en studiejaren maakten ze het mogelijk om mijn horizon te verbreden. Ze stimuleerden me om mijn nieuwsgierigheid en leeshonger te bevredigen en ondersteunden onvoorwaardelijk mijn eigen ontwikkeling op vele terreinen. Ik had me geen beter ontwikkelklimaat kunnen wensen! Wat zou het mooi geweest zijn als zij die me in mijn loopbaan altijd met veel interesse en trots zijn blijven volgen, deze mijlpaal hadden kunnen meevieren.

Tenslotte heel erg veel dank aan mijn gezinsleden: mijn man Martin en dochters Suzanne en Irene. Mijn gezin heeft mijn leven verrijkt en biedt voortdurend een enorme bron van levenslust en kracht. Wat een rijkdom om met elkaar als gezin op pad te zijn, van elkaar te leren en de wereld te exploreren! Hun betrokkenheid, ondersteuning en liefde waren essentieel op mijn reis om tot dit proefschrift te komen. Lieve Suzanne en Irene, in de tijd die we samen doorbrachten – van uitstapjes tot verhuizingen - relativeerden jullie op een goede manier mijn wetenschappelijke werk. Daarnaast wil ik graag Suzanne bedanken voor het uittypen van interviews voor dit proefschrift. En lieve Martin, mijn steun en toeverlaat op alle fronten, jou dank ik voor jouw uithoudingsvermogen en dat jij mij steeds alle ruimte bood voor mijn (onderzoeks)werk.

## Curriculum Vitae

Marion Kersten is op 13 september 1961 in Roermond geboren en groeide op in Haelen (gemeente Leudal). Ze behaalde in 1980 haar VWO diploma op de Scholengemeenschap St. Ursula te Horn en startte datzelfde jaar haar studie geschiedenis aan de Radboud Universiteit te Nijmegen. Naast haar studieprogramma bood vrijwilligerswerk haar veel verrijking en ook de mogelijkheid om haar maatschappelijke betrokkenheid vorm te geven. Zo zette ze zich jarenlang in als begeleider voor rolstoelers op vakanties van de Stichting Recreatie Gehandicaptten. Deze ontmoetingen bepaalden mede de richting van haar loopbaan. Na haar afstuderen in 1988 doceerde Marion enkele jaren geschiedenis aan het Stedelijk Gymnasium te Nijmegen. Om haar kansen op de arbeidsmarkt te vergroten volgde ze in diezelfde periode ook enkele modules beleidskunde aan de Open Universiteit.

Tussen 1991-2001 vervulde Marion verschillende functies bij het toenmalige Bisschop Bekkers Instituut (BBI), dat zich richtte op kennis en onderzoek in de verstandelijk gehandicaptenzorg. Ze startte er als stafmedewerker ter ondersteuning van de Adviesgroep Onderzoeksbeleid, een gremium van veldpartijen dat het ministerie van VWS adviseerde over de subsidiëring van onderzoeksvoorstellen. Ook nam ze deel aan de gezamenlijke kennisactiviteiten van het BBI en het NGBZ, de multidisciplinaire vereniging voor deskundigheidsbevordering, zoals de onderzoekcongressen '*Focus op Onderzoek*'. Als onderzoeker voerde ze deskresearch en empirisch onderzoek uit. Verder was ze vanaf de start, in 2001, een van de coördinatoren van het *Landelijk KennisNetwerk Gehandicaptenzorg* (LKNG), een samenwerkingsverband van BBI en Nederlands Instituut voor Zorg en Welzijn (NIZW) om kennis uit wetenschap en praktijk beter te verbinden via 'werkplaatsen'.

Het einde van het BBI, in 2001, leidde voor Marion tot haar overstap naar het NIZW. Daar bleef ze zich van 2002 tot 2006 als innovatiemedewerker inzetten voor het LKNG, dat de landelijke functies van het BBI had overgenomen. Zo organiseerde ze vanuit het LKNG samen met NGBZ in 2004 en 2006 strategische werkconferenties over kennisbeleid met vertegenwoordigers van alle veldpartijen.

In 2006 maakte Marion ook de overstap naar de Vereniging Gehandicaptenzorg Nederland (VGN), waar ze als aandachtfunctionaris aan de slag ging met de uitvoer en doorontwikkeling van het strategisch kennisbeleid van de VGN. Onder meer leverde ze een grote bijdrage aan het *Kennisplein Gehandicaptensector*, een nieuwe kennisinfrastructuur waarin de functies opgingen van de NGBZ, het LKNG en de Kennisportal Gehandicaptenzorg van de VGN. Daarnaast was ze intensief betrokken in de

samenwerking met ZonMw rond onderzoeksprogrammering. Zo nam ze deel aan het Traject 'Krachten bundelen' waarin VGN en hoogleraren de basis legden voor het kennisprogramma 'Gewoon Bijzonder. Nationaal Programma Gehandicapten'.

Vanaf 2015 was Marion als science practitioner in deeltijd gedetacheerd bij de Academische Werkplaats 'Leven met een Verstandelijke Beperking' aan Tilburg University. Ook continueerde ze haar beleidswerk voor de VGN. Buiten het domein van integraal kennisbeleid richtte ze zich daarbij vooral op beleidsvraagstukken rond kwaliteit, informatie en complexe zorgvragen, zoals die van ouderen met een verstandelijke beperking.

*Marion Kersten was born in Roermond (the Netherlands) on 13<sup>th</sup> September 1961 and grew up in Haelen (within the municipality of Leudal). In 1980, she graduated from pre-university education at Scholengemeenschap St. Ursula in Horn and started her history studies at Radboud University Nijmegen. Alongside her undergraduate studies, volunteering provided her with profound personal enrichment as well as inspiring her ongoing commitment to social causes. Amongst other things, for years she dedicated herself to being a companion for wheelchair users on holidays organised by the Foundation for the Recreation of the Disabled (Stichting Recreatie Gehandicapten). These experiences helped to shape and determine the direction of her career. Upon graduating in 1988, Marion taught history at the Stedelijk Gymnasium in Nijmegen for several years. To enhance her employability in the labour market, she also took a few policy studies modules at the Open University during this period.*

*Between 1991-2001, Marion held various positions at the former Bishop Bekkers Institute (BBI), which focused on knowledge and research in the context of care for people with intellectual disabilities. She started there as a staff member supporting the Research Policy Advisory Group, a body of field parties that advised the Ministry of Health, Welfare and Sport (VWS) on grants. She also participated in the joint knowledge activities of the BBI and the NGBZ, the multidisciplinary association for expertise development, which included, amongst other things, the Dutch research conferences 'Focus on Research'. In her capacity as a researcher, she conducted both desk-based research and empirical research. Furthermore, from the outset, in 2001, she was one of the coordinators of the National Knowledge Network for Care for the Disabled (LKNG), a partnership between BBI and the Netherlands Institute for Care and Welfare (NIZW) that seeks to better connect knowledge from science and practice through so-called 'workshops'.*

*The end of the BBI, in 2001, ultimately led to Marion transferring to NIZW. Between 2002-2006 she continued to work within that knowledge institute as an innovation officer*

*for the LKNG, which had taken over the national functions of the BBI. For instance, in 2004 and 2006, along with the coordinator of NGBZ, she organised strategic conferences on knowledge policy in which all stakeholders participated.*

*In 2006, Marion also switched to the Dutch Association of Healthcare Providers for People with Disabilities (VGN). There she was appointed as a senior policy advisor responsible to execute and further develop the VGN's strategic knowledge policy. Within this context, she made a major contribution to the Knowledge Square for the Disability Care Sector (Kennisplein Gehandicaptensector), a new knowledge infrastructure that merged the functions of the NGBZ, the LKNG and the Knowledge Portal of the VGN.*

*She was also involved in the collaboration with ZonMw on research programming. For instance, she took part in the program 'Joined Force's in which VGN and academic leaders of consortia of research institutes and care organisations for people with intellectual disabilities provided the building blocks of 'Simply special', which is a knowledge program of ZonMw.*

*From 2015, Marion was a part-time science practitioner seconded to the Academic Collaboration Centre 'Living with an Intellectual Disability' at Tilburg University. She also continued her policy work for the VGN. Besides the domain of integral knowledge policy, she also focused on policy issues related to quality, information, and complex care (e.g., elderly people with intellectual disabilities).*

## Publications

Kersten, M.C.O., Frielink, N., Weggeman, M.C.D.P & Embregts, P.J.C.M. (2023). Incoming professionals' perspectives on the application of new knowledge in care organisations for people with intellectual disabilities: A concept mapping study. *International Journal of Developmental Disabilities*.  
<https://doi.org/10.1080/20473869.2023.2216033>

Kersten, M.C.O., Frielink, N., Weggeman, M.C.D.P. & Embregts, P.J.C.M. (2023). Contextual factors influencing knowledge sharing and application in the care and support for people with intellectual disabilities during the COVID-19 pandemic. *Knowledge and Process Management*. <https://doi.org/10.1002/kpm.1759>

Kersten, M.C.O., Taminiau, E.F., Schuurman, M.I.M., Weggeman, M.C.D.P. & Embregts P.J.C.M. (2018). How to improve sharing and application of knowledge in care and support for people with intellectual disabilities? A systematic review. *Journal of Intellectual Disability Research* 62, 496-520. <https://doi.org/10.1111/jir.12491>

Kersten, M.C.O., Taminiau, E.F., Weggeman, M.C.D.P. and Embregts, P.J.C.M. (2022). Motives and strategies of CEOs for stimulating sharing and application of knowledge in the care and support for people with intellectual disabilities. *Journal of Knowledge Management* 26(11), 114-141. <https://doi.org/10.1108/JKM-06-2021-0463>

Kersten, M.C.O., Taminiau, E.F., Weggeman, M.C.D.P. and Embregts, P.J.C.M. (2022). Contextual factors related to the execution of knowledge strategies in intellectual disabilities organizations. *Knowledge and Process Management* 29, 242-254.  
<https://doi.org/10.1002/kpm.1700>





