Contextual factors influencing knowledge sharing and application in the care and support for people with intellectual disabilities during the COVID-19 pandemic.
Kersten, M.C.O.; Frielink, N.; Embregts, P.J.C.M.

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

Marion Kersten[1,2] | Noud Frielink[1] | Mathieu Weggeman[3] | Petri Embregts[1]

[1]Department of Tranzo, Tilburg School of Social and Behavioural Sciences, Tilburg University, Tilburg, Netherlands

[2]Dutch Association of Healthcare Providers for People with Disabilities (VGN), Utrecht, The Netherlands

[3]Department of Industrial Engineering and Innovation Sciences, Eindhoven University of Technology, Eindhoven, Netherlands

Correspondence
Marion Kersten, Tilburg School of Social and Behavioral Sciences, Tranzo Scientific Center for Care and Wellbeing, Tilburg University, Tilburg, Noord-Brabant, Netherlands.
Email: m.c.o.kersten@uvt.nl

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 69 being support workers and 91 being 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 the 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.

1 | 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.

2 | METHODS

2.1 | 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 ID

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%)

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 ID (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.

2.2 | 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

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).[a]

Scales and subscales	A[b]	Does the item play a role for you as a professional during the COVID-19 pandemic?						Compared to the pre-pandemic period, for me the item during the COVID-19 pandemic is …					
		Support workers			Health professionals			Support workers			Health professionals		
		Yes	No	N.A.[c]	Yes	No	N.A.[c]	<	=	>	<	=	>
1. The role of individual persons in knowledge sharing and application	0.70	69.3[d]	24.7	5.7	81.5	12.9	5.4	3.0	58.1	35.4	2.2	59.2	36.7
1.1 Involvement of service users and relatives (e.g., the knowledge of relatives is accessible to professionals)	0.35	86.5	7.7	8.7	89.0	5.8	5.1	1.4	64.8	32.8	0.4	71.4	27.1
1.2 Craftsmanship of all professionals (e.g., I exhibit leadership in my tasks)	0.63	85.0	13.2	0.7	94.1*	4.7	1.0	2.0	71.7	24.5	1.9	73.9	23.5
1.3 Professional leadership of health professionals (e.g., health professionals, like ID physicians and psychologists, introduce a new way of working)[e]		49.3	34.8	15.9	65.9***	19.8	14.3	7.2	58.0	26.1	6.6	50.5	38.5***
1.4 Practice leadership of management (e.g., managers communicate unambiguously about the way in which the work is carried out)	0.73	64.9	32.6	1.1	82.7*	14.9	1.9	1.1	40.9	54.7	0.3	42.9	56.3
1.5 Role fulfillment by management, and CEOs toward professional (e.g., CEOs encourage me to provide appropriate care and support)	0.67	60.9	35.4	2.3	75.8**	19.4	4.8	3.4	55.1	38.8	2.0	57.5	38.0
2. The role of teams in knowledge sharing and application	0.70	95.2	4.8	-	98.5	1.5	-	1.9	64.7	32.8	1.1	65.5	32.6
3. The role played by specific characteristics of the intervention and tools in knowledge sharing and application	0.58	75.4	16.8	7.9	77.6	13.2	8.8	0.3	64.5	30.8	2.2	49.1	42.3
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)	0.23	76.8	15.4	7.7	77.7	12.1	9.9	0.5	60.9	34.8	2.2	48.7	42.1
3.2 User-friendliness of the tools and intervention (e.g., the way of working is easy to apply for me)	0.81	73.9	18.1	8.0	77.4	14.3	7.7	-	68.1	26.8	2.2	49.4	42.4
4. The role of the organizational context in knowledge sharing and application	0.69	68.7	27.8	3.0	71.6	24.6	3.4	1.8	62.8	37.8	1.1	66.8	29.3
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)	0.44	91.8	5.3	2.4	94.9	4.8	0.4	2.4	40.1	56.0	-	42.2	57.5
4.2 ICT systems: complete and up-to-date client-related information is available via electronic care records (e.g., I have access to the complete electronic client files of my clients)	0.69	71.5	24.1	2.9	75.4	21.3	3.3	0.5	70.6	27.0	0.4	70.3	26.4
4.3 Resources are available for implementing the intervention (e.g., I have [scientific] substantiation of the way of working)	0.36	79.7	15.4	4.8	84.2	10.6	5.1	1.9	76.3	18.7	1.1	80.9	15.0

TABLE 2 (Continued)

Scales and subscales	A^{b}	Does the item play a role for you as a professional during the COVID-19 pandemic?						Compared to the pre-pandemic period, for me the item during the COVID-19 pandemic is …					
		Support workers			Health professionals			Support workers			Health professionals		
		Yes	No	N.A.[c]	Yes	No	N.A.[c]	<	=	>	<	=	>
4.4 Time needed to implement the intervention (e.g., I have sufficient time to perform my tasks)	0.73	53.6	45.9	0.2	58.6	39.8	1.7	1.9	61.6	34.7	1.3	69.4	27.5
4.5 Policy and culture of the organization (e.g., the way of working fits well with day-to-day business, such as offering daytime activities in homes)	0.66	65.1	30.9	3.7	67.3	27.2	5.4	4.3	69.1	19.0	3.2	74.3	18.2
4.6 Available capacity of employees (e.g., my team consists of enough people)	0.63	50.7	45.3	4.0	51.4	44.0	4.7	-	59.1	71.4	0.6	63.5	31.4
5. The role of the socio-political environment in knowledge sharing and application	0.69	59.8	9.4	30.8	82.7	7.4	9.9	9.4	70.3	15.6	1.7	73.6	21.7

Abbreviation: ID, intellectual disability; ICT, Information and Communication Technology.

[a]The average scores are calculated based on all available data.

[b]Cronbach's alpha.

[c]N.A.

[d]For readability we have underlined the scores of the support workers.

[e]Some of the items were only submitted to ID physicians and psychologists and therefore Cronbach's alpha could not be calculated.

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

female ($N = 143$), and most were aged over 36 years ($N = 110$) and had over 10 years of 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.

2.3 | 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.

2.4 | 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 intermediaries), 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.

2.5 | 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 analyzed 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 to 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 authors executed a final check.

3 | 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.

3.1 | 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, 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: "Craftsmanship 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 fulfillment 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, $N = 153$) $= 26.243$, $p < 0.001$).

3.2 | 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.

3.3 | 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.

3.4 | 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.

3.5 | 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 10% rated this subscale as less important. No significant differences were found between support workers and health professionals.

3.6 | 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.

4 | 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 fulfillment 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 IDCOs 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 (de Veer et al., 2021; Embregts et al., 2021a). 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 explain 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 IDCOs 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 IDs 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 specialized 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 sectors or countries, where primarily mainstream organizations provide services to their citizens with IDs (Wood et al., 2014). Conducting similar research in other sectors and in other countries is important to test to what extent the present insights 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.

CONFLICT OF INTEREST STATEMENT

The authors declare no conflicts of interest.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are, on the basis of a Data Transfer Agreement and in consultation with the Ethics Review Board of Tilburg University, available from the corresponding author upon reasonable request.

ORCID

Marion Kersten https://orcid.org/0000-0002-8844-9632

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APPENDIX A: SURVEY KNOWLEDGE SHARING AND APPLICATION DURING THE COVID-19 PANDEMIC

A.1 | 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 takes place along with the vaccination programe). 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
Scale 1 The role of individual persons in knowledge sharing and application						
1.1 Involvement of service users and relatives[a]						
(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.						
1.2 Craftsmanship of all professionals (support workers, ID physicians, psychologists and therapists)						
(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.						
1.3 Professional leadership of health professionals						
(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.						

(Continues)

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

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, for example, 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 via tools.

(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.

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
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.	No information available					
(61) The VGN offers me guidelines that enable me to carry out my work properly.	No information available					
(62) There are professional associations I can turn to if I have questions.						
(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.						

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
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						

[a] The titles of the subscales are in italics.