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Studying intraprofessional and interprofessional learning processes initiated by an educational intervention applying a qualitative design with multimethod approach: a study protocol

Anh Thuc Truong ,[1] Thomas Winman,[2] Anette Ekström-Bergström[1,3]

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[1]Department of Health Science, University West, Trollhattan, Sweden
[2]Department of Economy and IT, University West, Trollhattan, Sweden
[3]Research Group Family Centerd Health (FamCeH), University of Skövde, Skovde, Sweden

Correspondence to
Dr Anh Thuc Truong;
anh.truong@hv.se

ABSTRACT

Introduction Interprofessional collaboration in education and practice has been highlighted as a premise for providing good care. Both the intraprofessional and interprofessional impacts have bearing on healthcare professionals' performance and learning. Likewise, from the perspective of work-integrated learning, intraprofessional and interprofessional learning play an enduring part in studies about the development of healthcare organisations and professional competence. Educational-intervention research has become significant, which may indicate challenges the healthcare, for example, the area of disabilities is confronting. Earlier studies on intraprofessional and interprofessional learning have often focused on the learning outcome, whereas the learning process remains unexplored. The learning process is complex and is normally influenced by several factors. Therefore, develop knowledge about the intraprofessional and interprofessional learning processes initiated by an educational-intervention and the factors influencing this process may contribute to educational-intervention research, which is also the aim of the forthcoming study.

Methods and analysis An inductive qualitative study design with interpretivism as the epistemological stand will be applied. Professionals in healthcare services for people with intellectual disabilities in four residential settings in Sweden are included in the educational-intervention based on web-based training and structured group reflections. Intended data collections are videorecordings of group reflections and individual interviews. An ethnomethodological approach will be applied for studying the details of conversation and interaction in group reflections. The interviews will be analysed using qualitative content analysis to gain participants' viewpoints of the intervention.

Ethics and dissemination Approval was obtained from the Swedish Ethical Review Authority, Dnr 35 517. In Addition, a supplemental application to the extended part of the intervention in the forthcoming study has been submitted and approval was received on 21 September 2021. Ethical principles following the Declaration of Helsinki will be strictly followed.

Trial registration number NCT03390868; Post-results.

Strengths and limitations of this study

- ► This forthcoming study has benefited from the knowledge produced by previous evaluations linked to the project.
- ► Applying multimethods in the forthcoming study can shed light on the research topic more multidimensionally.
- ► The checklist COREQ has served as a guide in establishing the study design and increasing the transparency and replicability of the research process.
- ► One limitation of the forthcoming study is that the number of participating resident facilities is restricted to four, which may imply a limited variation regarding groups in the group reflections.

INTRODUCTION

For the global health and education agenda, WHO has highlighted the role of interprofessional collaboration (IPC) in education and practice as a basic premise for providing the best patient care[1] as collaboration is considered a crucial part of healthcare.[2] Ohta *et al* stressed IPC as vital in successful healthcare especially when it comes to people with complex health problems related to both medical and psychosocial issues.[3] IPC defines as a process by which different health and social care professionals collaborate to positively impact care providing.[4] IPC also describes as a tool to counteract poor coordination across departments, insufficient collaboration and little shared work experience among professionals in healthcare delivery.[5] As a necessary step in preparing a collaborative practice WHO pinpointed interprofessional education (IPE).[1] IPE as phenomenon has been studied and discussed since the 1960s and became acknowledged and established as a concept when two reports from the WHO were published in the late 1980s.[6]

IPE defines in 1997 by Centre for the Advancement of IPE as occasions when two or more professions learn with, from and about each other to improve collaboration and the quality of care.[7] IPE is nowadays proposed as a necessary component of every healthcare professional's education.[1] Although IPC in education and practice often refers to becoming healthcare professionals, we still need more knowledge about its impact on healthcare professionals already in operation, particularly in the area of disabilities, where learning and knowledge are identified as highly essential.[8] Feller and Berendonk stated that in the daily work within healthcare, both intraprofessional and interprofessional impacts have a certain bearing on performance and learning.[9] Likewise, intraprofessional and interprofessional learning play an enduring part in studies on developing healthcare organisations and professional competence from a work-integrated learning perspective[10] whose area of interest is the relationship between working life and learning.[11] Intraprofessional learning defines as learning between individuals of different disciplines within the same profession.[12] Previous studies have shown that intraprofessional and interprofessional activities, such as collaboration, positively impact learning as the participants better understand their behaviour, professional roles and responsibilities, which are crucial for doing their job.[13 14] In addition, it leads to better collaboration and communication between healthcare professionals, which is a more favourable basis to meet the need for care and support in the care receiver. This applies especially to care receivers with complex caring needs such as the elderly population[3 15] and persons with intellectual disabilities (IDs).[16] This finding corresponds to the declaration of WHO that states the importance of effective collaboration to improve healthcare outcomes.[1] However, Pinho *et al* are in the opinion that the mechanisms involved in the collaboration and its dynamic with the context need to be further investigated in order to better understand the nature of collaboration in the daily operation, doing so future improvement in IPE thereby IPC both in education and in practice will be supported.[17] From this point of view, IPE and IPC are intertwined and mutually dependent in a continuous process where collaborative activities led to learning and learning enhance collaboration, in addition this process is to a greater or lesser degree affected by the context. Focusing on the process is equally pronounced within WIL in studying learning which is considered as a process that is influenced by factors in its environment, as those directly affect the learning outcome.[10 11] Not least important will this aspect be when it comes to learning that takes place at work.[18–20]

According to the Network on Nursing Intervention Research in Quebec, educational intervention is one of the three main domains in nursing research.[21] From that follows an increasing need for knowledge about designing an efficient educational intervention, especially as digitalisation and globalisation are changing historically established education settings.[22] In a progress report 2020, both the health and social care inspectorate (IVO), the government agency responsible for supervising healthcare, social services and activities in Sweden[23] and the Swedish National Board of Health and Welfare articulated a lack of knowledge among healthcare professionals working in the area of disabilities. In addition, the challenges in competence provision are likely to have a further negative impact on developing knowledge in professional teams. This runs the risk of negative consequences for the care receivers.[8] Hence, educational intervention to enhance professionals' possibility of learning and gaining knowledge is a concern that requires investment and exploration.

A recognised knowledge required for providing quality care is communication and interaction with the care receivers.[24–27] In care encounters with persons with IDs, even greater demands are placing the care provider as communication difficulties to varying degree commonly exist in the care receiver.[28–31] ID is identified by impairment of mental abilities that affect the intellectual and adaptive functioning of the individual, such as learning, problem-solving and judgement as well as communication and independent living which generate significant limitations in his/her everyday life.[32 33] The individual is consequently in need of care and support in daily life, this in turn presuppose a functioning communication and interaction the parties between. Communication difficulties are considered an underlying cause of challenging behaviour (CB) in persons with IDs.[34–36] CB is a term used to describe behaviours that have physical or social impacts on individuals who exhibit those behaviours and/or their surroundings such as physically hitting others, injuring oneself as well as destruction of property, persistent screaming or other disruptive behaviours.[37] From a functional viewpoint, CB is and should be considered as a means by which persons with ID communicate their will and intentions to those in their surroundings since other means may not be available to them due to impaired communication.[38 39] Lack of understanding among care providers who accordingly may fail in managing CB in the manner desired may cause stress, fear, anger and powerlessness, which increases the likelihood of burnout.[40–42] As a consequent, care providers tend to develop ineffective coping strategies, such as avoidance, which in turn adversely affecting interactions with persons with IDs and the quality of care.[43] Earlier studies have shown that training care providers' ability to communicate and interact with persons with IDs is desirable, particularly for those working in residential settings.[44 45] From the care receiver's viewpoint, it is valuable to spend time and integrate with the care provider.[46 47] Talking to someone and feeling listened to could help them manage difficult situations and emotions.[48] Therefore, improving care providers' understanding and knowledge about communication and interaction would directly impact the quality of care for persons with IDs.[49] Accordingly, communication and interaction and CB are topics that form the content of our educational intervention.

Development of the intervention

Developing educational intervention in this project is an iterative process. Originally, the intervention constituted a web-based training programme for staff working in a residential setting for persons with ID, who will from now on be referred to as the client, aiming to increase the staff's knowledge and understanding of the abovementioned topics to better meet the needs of the clients. The staff in about 20 residential settings within municipality healthcare in a medium-sized city in Sweden conducted the web-based training programme. The evaluation was conducted through semistructured individual interviews with the participants.[50] Many aspects of web-based training, including content, pedagogical arrangement and taking part in web-based training in the workplace, occurred. Findings showed that the web-based training triggered thoughts and reflections among the staff and increased the awareness of caring for and interacting with the clients. But it was also the expressions of thoughts that needed to be dedicated to additional issues to improve the training outcome. For instance, discussion and reflection with others was desirable, and clearer planning from the organisation and allocated resources for follow-up were longed for.

To summarise, the web-based training yielded some effects regarding learning and knowledge acquisition among the participants, but it could have been more effective if the pedagogical approach had been reinforced and strengthened. With this forthcoming study, we want to benefit from the previous evaluation to further develop the educational intervention that supports professionals' learning with the ultimate goal of achieving better-quality care for persons with IDs in health and social care settings. Accordingly, this coming study could be considered the second loop in developing an education intervention. A major part of the development in this step comprises building up a pedagogical structure and organisation to implement the education intervention to better support an iterative learning process in the participants.

Theoretical framework

In this further development of the intervention, more attention will be paid to the adult's learning in the design based on the andragogy theory from Knowles.[51] From Knowles' theory four principles derive that has been considered in the educational design:

1. Adults need to be involved in the planning and evaluation of their instruction.
2. Experience provides the basis for learning activities.
3. Adults are most interested in learning subjects that have immediate relevance and impact their jobs or personal lives.
4. Adult learning tends to be more problem-centred rather than content oriented.

We believe these principles would substantially improve the learning processes and consequently, the learning outcome. Additionally, we intend to increase the opportunity for intraprofessional and interprofessional activity for the participants to facilitate learning, as highlighted by WHO.[1] Besides, in the previous evaluation,[50] the participants strongly expressed the need for reflection and discussion with others, which can be understood as a longing for a similar kind of activity. Billett[52] and Pennbrant and Svensson[10] emphasised that learning occurs through collective dialogue and the exchange of experience. Research within WIL has its main interest in, among other studies, the relationship between education and work and the social conditions for learning in work.[10] Thus, understanding requires of the complex learning process at the workplace that is normally influenced by several factors, for example, the individual and structural factors, such as the conduciveness of the learning environment and organisational support, as these can both facilitate or impede individual or the collective learning.[18–20] In the pragmatic view of learning, conditions for learning should be considered in the pedagogical design to reach a practical goal in education.[53]

The role of reflection in learning

In agreement with Knowles,[51] Dewey[53] and Mezirow[54] underlined the opportunity to discuss and reflect together as a crucial part of learning, particularly adult learning, which is mainly based on the individual's lived experience. Through reflection, an in-depth understanding of the lived experience can be generated, which the individual can bring when entering the next experience. This process forms the basis for continuous learning in the individual.[53] Further, Dewey opined that the in-depth understanding of experience occurs through interaction with others, which implies that learning is essentially a social process.[55] Therefore, the educator should create conditions for this process to enhance learning in the individuals. As shown in the earlier study, interprofessional interaction generated a greater understanding of the participants' roles and knowledge areas and improved the individual's operational efficiency and, thereby, the group.[5 13 14] Thus, joint reflections and discussions are considered unavoidable beneficial activity. Reflection is also important, where the individual can look back and re-evaluate strategies that have been used and thereby learn lessons. It is especially valuable in professional practice, where learning is often task-oriented, focusing on performing and accomplishing practical tasks,[55] which can be related to the daily work in residential settings for persons with IDs. Reflecting with others can induce new thoughts and angles of approach in the individual, partly related to the narrative part and partly the response from the surrounding. This exchange of experiences can also be enriching for other participants.[56] Reflection with others is emphasised as one of the key elements of professional development.[57] Considering the aforementioned theoretical framework and the previous evaluation, structured group reflections are added as an expanding part of the pedagogical approach in the intervention in the forthcoming study.

The intended knowledge contribution

Earlier studies investigating intraprofessional and interprofessional learning have focused on the learning that occurs in daily collaboration.[13 14] Providing opportunity to support intraprofessional and interprofessional learning has not been the main point of these studies, nor has the process during which the subjects learn been the main focus. In a comparative study, Brennan *et al* compared the learning outcomes of two groups. Both groups completed online training to support developing the workforce. One of these groups attended additional group-based activities. The results show that, not surprisingly, the group that additionally participated in team-based practice activities reported better scores in measurements for learning outcome and improved collaboration.[18] The study was conducted among service providers in mental health, social and transition planning services. Even here, the focus is on the outcome of the intervention, whereas the processes initiated by the intervention during which learning occurs remain unexplored. Though, a recent study on an interventional education focusing on IPE was carried out based on transprofessional roleplay with the intention to enhance healthcare professionals' understanding of other professionals' challenges and difficulties to improve the IPC competence of the professionals in primary care settings. In the evaluation, both the learning context, mechanism and outcome have been taken into consideration. The result indicated the learning mechanisms, for example, reflection, realisation and understanding are facilitated by contextual factors and generated a positive learning outcome.[3] However, the main focus of the study[3] has been on interprofessional learning. Our opinion is, in line with WIL, that intraprofessional learning is equally valuable and needs to be taken into account. This viewpoint is supported by Feller and Berendonk at least when it comes to the healthcare context.[9] Accordingly, the educational intervention in the forthcoming study includes both the intraprofessional and interprofessional learning.

The learning process in the workplace is considered complex and is normally influenced by several factors. To understand this process, further knowledge about these factors is equally required. This can be related to Richards and Borglin statement about paying attention to the process of nursing research.[58] To contribute to the evidence for the practice, Richards and Borglin stated that the focus should not merely be on the outcome, but the researcher needs to be aware of the complexity in the process of the intervention, which usually includes several components that contribute to the dynamic process and impact the outcome.[58] Consequently, increasing knowledge and understanding of the intraprofessional and interprofessional learning processes initiated by an education intervention and the factors influencing these processes may therefore contribute to educational intervention research.

Aim

The aim of this study is to develop knowledge of the intraprofessional and interprofessional learning processes initiated by an educational intervention based on web-based training and group reflections for professionals working with persons with IDs and CB, including the factors influencing these processes.

Research team

The research group comprises five members: four females and one male. In addition to a doctoral student, the first author, four researchers from the faculties of health sciences, social sciences and WIL are involved. All the researchers have experience in qualitative research design, methodology, and intervention studies. In addition to working with research, the researchers are also involved in administrative tasks and university education.

METHODS

The checklist COREQ (Consolidated criteria for reporting qualitative research)[59] served as a guide to establish this study protocol and the study design of the forthcoming study to increase the transparency and replicability of the research process.

Study design

An inductive qualitative design with multimethod approach will be applied, as it is considered appropriate to respond to the research question to understand and gain knowledge of learning processes from the participants' perspective. Bryman described the epistemological position as interpretivism in qualitative research.[60]

Study setting

In the forthcoming study, the intervention will be offered to professionals whose work is associated with caring for adults (18 years and above) with IDs in residents within the municipality regimen. Those facilities are located in the medium size of a city in Sweden. The municipality's policy is that care and support for clients should be characterised by values, self-determination, integrity, volunteering, equality in living conditions, participation and independence. To incorporate these values, a certain degree of interaction with clients is demanded.

Study population

Four residential settings for persons with IDs were selected from the organisation. All professionals whose work is associated with caring for individuals in those facilities are included in the study. Those professionals are the front-line staff including staff in the facilities, the nurses, occupational therapists and physiotherapists. Likewise, the managers of the facilities and the educators of the facilities will be part of the study. All professionals linked to the same facility will be included in the same group in group reflections. The number of participants in each resident is estimated to be between twelve and fifteen. In total, there will be approximately 48–60 participants in this forthcoming study.

All the participants have, by this time, been verbally informed about the research in staff meetings. Written information is published on the learning platform, where

the web-based training is delivered. Also, verbal and written information is intended to convey in connection to group reflections to ensure that the information reaches out to all the participants.

Intervention

The intervention constitutes of a web-based training programme and structured group reflections.

Web-based training programme

The web-based training programme comprises three themes, each with a number of recorded lectures, as stated below.

Theme 1 contains six recorded lectures, length 4 min 51 s–13 min 21 s to cover the subject 'CB.'

Theme 2 contains four recorded lectures, length 4 min 15 s–13 min 3 s to cover the subject 'The physical and mental impact.'

Theme 3 contains three recorded lectures, length 5 min 26 s–9 min 45 s to cover the subject 'CB in everyday situations.'

Time will be allocated for the participants to participate in the training programme at work, and this will be planned in the work schedule for all the professionals. The training programme has been accessible for all participants since 4 October 2021.

Group reflections

Three sessions for group reflections for all professions operating in the same residential facility are planned, these at approximately 3-week intervals. Two educators will act as supervisors and lead the discussion, considering two main questions linked to the theme covered in the lectures and the participants' daily work. The time set aside for reflection is 1 hour 30 min. Group reflections will be conducted in a place outside the workplace in a conference room elsewhere in the organisation or in the university. Time will be allocated for the participants to attend the group reflections, this will be planned in the work schedule for all the professionals. The first group reflection among the facilities was on 12 October 2021.

Procedure

For the participants, the whole intervention begins with the participants, at their own pace, taking part in the recorded lectures linked to the first theme in the web-based training programme before attending the group reflection 1. Similarly, they will go through themes two and three. The researchers will be available for technical support for the web-based training programme during the whole intervention. The four residential settings have planned the intervention implementation independently.

Data collection

Data will be collected via videorecording of the group reflections approved by the participants. Videorecording as a data collection method is commonly used in, among others, nursing research.[61 62] According to Caldwell and Atwal, videorecording can be considered non-participant observation.[61] By using non-participant observation, participants' real-time reasoning can be recorded, which can reveal the latent mechanisms.[62] This is considered an appropriate approach for the aim of the forthcoming study. In addition, individual interviews with the participants will be conducted after completing the training to obtain the participant's experience of the intervention. Interviews give the individual the opportunity to make his/her voice about the lived life and the viewpoint heard,[63] which we think is relevant in finding the answer to the research question. The interviews will be audiorecorded with the participants' approval. The first author will conduct all data collection.

Data analysis

The videorecordings will be transcribed verbatim and analysed qualitatively using an ethnomethodology approach, where the details of conversation and interaction in both everyday and institutional environments can be the study objects.[64] Social interaction in conversation is seen as a systematically organised whole; even the smallest details can be an essential part of this. Conversations based on lived experiences are imperative in this regard.[65] The ethnomethodological approach is therefore considered suitable for analysing conversations and discussions that take place during group reflections, thus finding answers to the question linked to the forthcoming study.

Similarly, the audio records from the interviews will be transcribed verbatim and analysed using qualitative content analysis, as described by Graneheim and Lundman.[66] Qualitative content analysis is a method in which texts generated from data can be studied regarding similarities and differences. In the interpretation process, the parts and the whole may be weighed together with differences and similarities in codes and categories or themes.[66] The software program NVivo will be used in the analysis process.

Public involvement statement

Recurring meetings with the collaborative municipality organisation have been running, during which the research group has contact with several representatives from different departments in the organisation. In those meetings, the presentation of the members in the research group and the members from the collaborative municipality organisation was made. Also, the purpose of the research was declared follow-up with the presentation of the findings from the previous evaluation. In the discussion about possible collaboration, sensitivity has been dedicated to the needs of the organisation. The organisation expressed needs of competence development within the operation for persons with IDs. In those meetings, a framework for implementing the intervention was successively established. Box 1 provides more details about the meetings.

Box 1 The status and timeline of the forthcoming study

Fall 2020
Meetings between the research group and the management group from the organisation.
In these meetings, the results from the evaluation of the earlier web-based training were presented by the research group.
The management group conveyed the kind of knowledge that required replenishment in the operations.
Startup planning for continuation of the collaboration project that takes its starting point from the knowledge need of the operations. Based on the knowledge gained from the evaluation, a revised pedagogical design was needed to increase the opportunity for the participants to achieve the knowledge required.

Spring 2021
Meetings between the research group and the sector manager of the educator department, which will represent the organisation in this collaboration. Also, the educators (n=4) were present in the meetings.
In these meetings, further planning for the intervention took place. The pedagogical design of the intervention was presented by the research group.
Four residential facilities were chosen by the organisation where the intervention will be implemented.
Discussions and decisions about who should be included in the study were explored.
A discussion about the form of group reflection was explored.
A proposal for group reflections, as suggested by the research group, was discussed and accepted by the organisation.

Fall 2021
Meetings with the professionals in the different residential facilities.
Presentation of the research group. Information about the purpose of the intervention, content and that participation is voluntary is given by the researchers to the professionals. Also, information about written and oral consent is also included.
The web-based training programme becomes accessible for all the participants.
The training programme comprising some videorecorded lectures covers three themes: 'Challenging behaviour,' 'The physical and mental impact' and 'Challenging behaviour in everyday situations.'
Conduct web-based training interspersed with group reflections.
Each theme in the web-based training will be followed up with a group reflection. Therefore, three group reflections are planned for the professionals in each facility.
Data collection–videorecording of group reflections.
Data analysis.
December.
End of the intervention.
Data collection–semistructured individual interviews.

Spring 2022
Data collection–semistructured individual interviews.
Data analysis

Fall 2022
Writing up and report of the study as a scientific article.
Presenting the results and conclusions for the organisation.

ETHICS AND DISSEMINATION

Approval was obtained from the Swedish Ethical Review Authority, Dnr 35 517. In addition, a supplemental application to the extended part of the intervention in the forthcoming study has been submitted. Approval for this extended part was received on September 21, 2021. In the forthcoming study, ethical principles following the Helsinki Declarations will be strictly followed.[67] Both the facilities and the professionals have been provided with information about the research, both in written and verbally. Participation will be voluntary, and written consent from those who wish to participate will be collected. Attention will be paid to ensuring the confidentiality of the participant, for example, through the deidentification of all data material. Regardless of the professionals' wish to participate in the study, it will not affect their current work situation.

From the participants' viewpoint, engaging in the study may imply increased workload, even if time is allocated for it. Another predicable risk is that professionals, jointly with the group reflections, may experience discomfort from speaking in front of the group and possibly recount any incident about which the person feels guilt or shame about. Hence, the person may feel like being left out during the group reflection. The risk of this discomfort occurring can be reduced by support from supervisors during the group reflection. In their role, the supervisor has a supportive function towards all the participants and the group's dynamics in the learning process.

The forthcoming study will be reported as an article and published in scientific journals. The results will also be communicated to the targeted municipality organisation.

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Disclaimer The funders were uninvolved in the study design and will not be involved in data collection, data analysis, data interpretation, or report writing for the forthcoming study. The views expressed in this study protocol and the coming report are those of the authors.

Competing interests None declared.

Patient and public involvement Patients and/or the public were involved in the design, or conduct, or reporting, or dissemination plans of this research. Refer to the Methods section for further details.

Patient consent for publication Not applicable.

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ORCID iD
Anh Thuc Truong http://orcid.org/0000-0003-2586-1619

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