Master's thesis

NTNU
Norwegian University of Science and Technology
Faculty of Medicine and Health Sciences
Department of Neuromedicine and Movement Science

Maryam Haghshenas

"Feeling like a powerful occupational therapist" The experience of community-based occupational therapists from implementing the Perceive, Recall, Plan and Perform (PRPP) system of task analysis in practice

Master's thesis in Physical Activity and Health, Occupational Science
Supervisor: Linda Stigen
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Abstract

Background: Occupational Therapists' (OTs') experience with the use of the Perceive, Recall, Plan, and Perform (PRPP) system of task analysis in practical settings is a little explored area. The aim of this study was to investigate the experience of community-based OTs in Norway from implementing the PRPP approach in practice.

Method: Four individual interviews with OTs working with clients with cognitive impairment and using PRPP in their practice were conducted. Thematic analysis using coding was performed.

Results: The results revealed three themes: upsides of using PRPP, downsides of using PRPP, and potential enablers for a more efficient use of PRPP. The participants valued the use of PRPP as an occupation-based approach in practice and mentioned how to encourage and facilitate the use of such methods in practical settings.

Conclusion: This study highlighted the importance of applying occupation-based methods such as the PRPP within occupational therapy. Although applying new methods can be challenging, OTs mentioned facilitating factors for implementing PRPP in community-based services such as prior knowledge about cognitive field, holding the course in the native language, having a gap between the two parts of the course, and making a knowledge sharing network while using the method.

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Content

1.0 Introduction

Individuals are considered as occupational beings in occupational therapy, whose well-being are dependent on participation and involvement in different occupations. *Occupation*, as the central concept of occupational therapy, is defined as groups of tasks or activities in which people engage across their lifespan with the purpose of self-care, rest, leisure, and productivity (Chappro, Ranka, & Nott, 2017). Occupations can include both ordinary parts of people's lives that might not usually be known, such as grooming or getting dressed, and more extraordinary activities such as preparing a meal or fishing. It is critical to recognize that subjectivity is an important aspect of occupations and their meanings can vary according to individual perceptions and are influenced by cultural or environmental contexts (Pierce, 2001). For example, "eating breakfast" can be perceived differently by each individual depending on the context in which the occupation occurred, and the perceptions people had about the occupation, such as how they felt and who they were with while performing it. It has been demonstrated that participation in a variety of meaningful occupations can improve individuals' quality of life, overall well-being, and sense of competence (Law, 2002). Furthermore, effective participation requires a balance between individuals' abilities and the level of demand of occupations. The chosen occupations should be the "just right" challenge for individuals to feel both a sense of difficulty and mastery, which can also lead to being in control over the occupation, and as a result, a more meaningful participation (Law, 2002). However, certain factors, such as injuries and impairments, can limit people's participation throughout their lives. Cognitive impairment, as one of those factors, can arise as a result of a variety of different injuries, one of which is acquired brain injury (ABI). ABI can be caused by an injury to the brain happening after birth for several reasons, among which stroke and traumatic brain injuries are the most dominant ones (Chan, Zagorski, Parsons, & Colantonio, 2013; Kamalakannan, Gudlavalleti, Gudlavalleti, Goenka, & Kuper, 2015). ABI can lead to both physical deficits and cognitive impairments and is known to be one of the leading causes of chronic disabilities in individuals' lives (Holmqvist, Kamwendo, & Ivarsson, 2009). Although participation in different activities of daily living requires both physical and cognitive skills, cognitive impairments possibly have greater influence on the occupational performance of individuals with ABI. They may have difficulty performing even the most basic daily activities, and as a result, their quality of life might be significantly diminished (Piccenna, Lannin, Gruen, Pattuwage, & Bragge, 2016). Therefore, functional cognition, which emphasizes on the occupational performance aspect of cognition and

how individuals would be able to perform their occupations despite cognitive impairments, should be emphasized in the rehabilitation process of patients after an ABI and in occupational therapy (Goodchild, Fleming, & Copley, 2021). Occupational Therapists (OTs) as one of the key specialists in this process seek to identify the factors that contribute to decreased occupational performance and assist individuals in overcoming the obstacles they may face through various interventions (Law & Baum, 2005).

To ensure effective occupational therapy interventions, it is critical to perform effective and thorough assessments throughout the treatment process such as initial assessments to define the problems and identify therapeutic goals, and ongoing assessments to examine individuals' progress/not progress and to monitor the effect of chosen interventions (Fawcett, 2013). These assessments help OTs to gather information about interactions between people and occupations they wish/have to participate in and appropriately address individuals' occupational needs (Hocking & Hammell, 2017). Although assessments in occupational therapy must contribute to evaluating individuals' occupational performance (Law & Baum, 2005), the multifaceted aspect of assessments should be taken into account by OTs. It implies that it is important not only to understand where individuals struggle while performing a task, but also to determine why they struggle and to find out the reasons for having difficulties because different reasons for struggling requires a distinct intervention process (Fawcett, 2013). Additionally, the complexity of measuring function in individuals, the influence of environment, the severity of individuals' impairments, and the level of task demand for performing different occupations should also be considered in the assessment process (Fawcett, 2013). According to the International Classification of Functioning, Disability and Health (ICF) (Organization, 2007) and in order to provide an appropriate assessment for patients with cognitive impairment, OTs can use various assessment tools which are based on two categories: bottom-up and top-down approaches. Bottom-up approaches are based on "body function and body structure" in the ICF and they evaluate the cognitive elements required for successful occupational performance, such as attention and memory (Organization, 2007; Stigen, Bjørk, Lund, & Cvancarova Småstuen, 2018). Standardized assessments are those that are administered through specified protocols and the findings gathered from these methods are acquired by asking individuals specific questions or requiring them to perform specific tasks (Hocking & Hammell, 2017). Most frequently used standardized assessment tools within cognitive field like Mini-Mental State Examination (MMSE) or Clock Drawing are bottom-up approaches

(Holmqvist, Ivarsson, & Holmefur, 2014; Sansonetti & Hoffmann, 2013; Stigen et al., 2018). The second category, top-down approaches, are inspired by "activity and participation" in the ICF, which focus on assessing individuals in regard to the ability to perform occupations and in relation to their environment (Organization, 2007; Sansonetti & Hoffmann, 2013). This category includes interviews, structured or unstructured observations, and occupation-based assessment tools, which are standardized or non-standardized methods that involve observing individuals' performance of daily activities (Sansonetti & Hoffmann, 2013). Structured observations are the ones taking place in structured environments such as training kitchens in which the OT could control the contextual factors. Whereas unstructured observations, which take place in naturalistic environments and reveal individuals' natural occupational performance (Stigen, Bjørk, & Lund, 2020).

On one hand, according to the notion of occupational therapy which focuses on occupations, OTs are encouraged to use more occupation-based assessments. As it has also been emphasized by many OTs that occupation is the core of occupational therapy and enabling occupations in everyday life should be the focus of OTs (Stigen, Bjørk, & Lund, 2019). Many reasons for utilizing occupation-based approaches have been demonstrated, including the flexibility they provide therapists in adapting assessments to each individual, focusing on individuals' occupational performance rather than their disability, therapists' unwillingness and lack of time to devote to administering standardized tools, and lack of management support for making change in workplace (Hocking & Hammell, 2017). Furthermore, literature has revealed that OTs are more likely to use top-down occupation-based approaches in their practice including informal observations and interviews (Pilegaard, Pilegaard, Birn, Kristensen, & Morgan, 2014; Sansonetti & Hoffmann, 2013; Stigen et al., 2018). However, in a study conducted in Norway, OTs expressed their concern regarding the reliability and validity of the results gathered from using these unstructured top-down occupation-based assessments (Stigen et al., 2018). On the other hand, with the growing demand of implementing evidence-based practice in health care (Fawcett, 2013; Law & Baum, 2005; Pilegaard et al., 2014), as well as highlighting the use of standardized approaches in literature (Law, 1987), the value of using standardized tools has become more prominent in occupational therapy. However, most standardized tools are bottom-up, which contradicts the notion of occupational therapy (Holmqvist et al., 2014; Holmqvist et al., 2009). Additionally, not providing interventions based on occupations, as well as requiring considerable amount of time for being able to administer these methods have been identified to be hindering factors for using

standardized assessment tools (Hocking & Hammell, 2017). Despite the limitations, OTs have revealed several reasons regarding using standardized tools including getting more valid and reliable results, better guidance for decision making in the intervention process, and providing a baseline for comparing individuals' performance throughout the treatment process (Hocking & Hammell, 2017; Stigen et al., 2018). Although it has been demonstrated that interventions at the impairment level, for example memory, can be beneficial for improving that particular cognitive domain, there is not enough evidence that these approaches can assist individuals in generalizing the skills they learn into their everyday life and transforming them into abilities (Cicerone et al., 2019). In addition, it is believed that functioning related to cognition can better be facilitated by concentrating on the occupational performance of individuals (Tina Champagne, OTD, Barbara Nadeau, Izel Obermeyer, & OTD, 2013). As a result, a greater emphasis on standardized occupation-based methods would lead to more reliable and valid results in occupational therapy.

1.1 The Perceive, Recall, Plan and Perform (PRPP) system of task analysis

The Perceive, Recall, Plan and Perform (PRPP) system of task analysis is an important standardized occupation-based assessment, which identifies cognitive strategy use in the context of occupational performance. The needs of OTs for a standardized method which would also fit within the notion of occupational therapy was the reason of developing the PRPP. This approach is a top-down standardized occupational therapy assessment and intervention tool that can be used in any settings and for individuals at any age, gender or sociocultural background with difficulties performing everyday activities due to cognitive impairment (Ranka, 2017). PRPP has been constructed based on the Occupational Performance Model (Australia) (OPM(A)). The OPM(A) is one of the frameworks used in occupational therapy which focuses on individuals' occupational performance and how it can be influenced by people's contexts or the occupations they wish to perform (Chapparo & Ranka, 1997). *Occupational performance* is defined as the observable aspects of individual's doing in different occupations or more specifically in relation to the OPM(A), "the ability to perceive, desire, recall, plan and carry out roles, routines, tasks and subtasks in response to demands of the internal and/or external context" (Chapparo & Ranka, 1997). OPM(A) demonstrates that individuals' daily activities are classified into four occupational performance areas: work/productivity, leisure, rest, and self-maintenance, and they are dependent on individuals' occupational roles, such as being a "friend" while talking with someone with whom

they have a close relationship or being a "worker" in the workplace (Chapparo & Ranka, 1997). Additionally, occupational performance capabilities including motor (physical aspects such as muscle strength and range of motion), sensory (sensory aspects such as color and texture), cognitive (mental aspects such as problem solving and learning), intrapersonal (internal psychological aspects such as self-esteem and mood), and interpersonal capabilities (communication such as interacting with family and friends) have been shown to have a significant influence of individuals' occupational performance (Chappro et al., 2017). Along with the internal contexts, external context also plays an important role in participating in occupations. Indeed, as Chappro et al. (2017) explained, there can be a significant difference between a context-base performance, which refers to what individuals actually do in their own context, and clinic-based capacity, which refers to how individuals would be able to perform a task in a test situation. Several assessment tools have been developed within the context of the OPM(A), and PRPP is one of those.

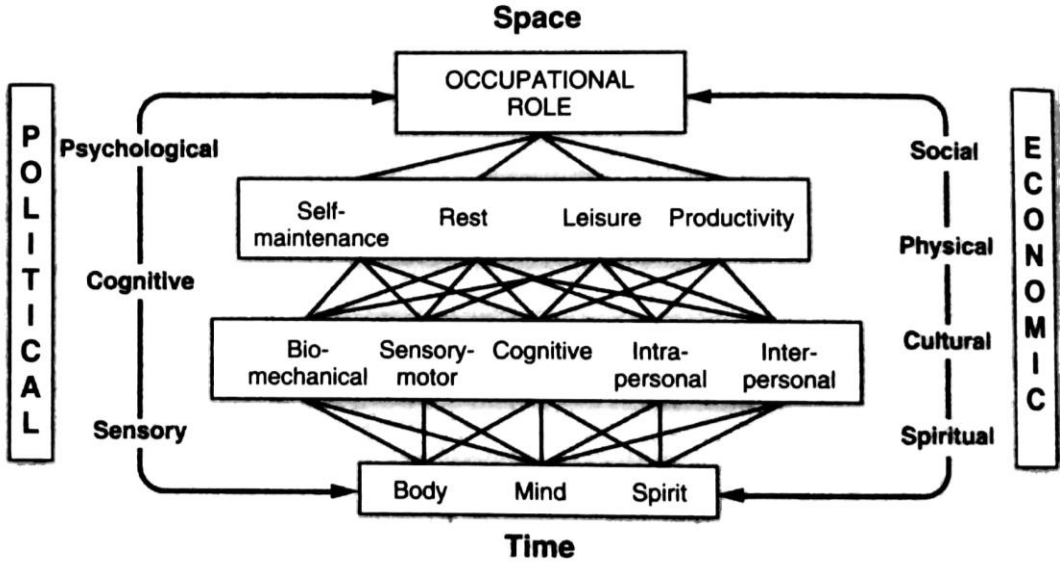

Figure 1. Illustration of The Occupational Performance Model (Australia) (Chappro et al., 2017)

The PRPP assessment aims to demonstrate areas and reasons that resulted in ineffective or insufficient occupational performance and to indicate challenges in specific information processing strategies while performing a task. Therefore, an intervention at body structure and

function level, as well as activity and participation level aiming for occupational performance mastery can be offered based on this assessment (Nott, Chapparo, & Heard, 2009). This assessment is performed in two stages: stage one assesses occupational performance mastery using activity analysis and demonstrate whether the person can perform the occupation or not, and to what extend the occupation can be done without difficulties. Moreover, it identifies errors in occupational performance such as errors of emission (if any steps of the occupation were not performed), repetition (if any steps were repeated unnecessarily), accuracy (if any steps were done inaccurate), and timing (if any steps took unreasonable time to perform) (Ranka, 2017). Stage two focuses on information processing strategies and demonstrates the reasons of making mistakes in the assessed occupation (Nott et al., 2009; Ranka, 2017). In this stage, information processing dimensions that are necessary for performing occupations will be assessed including perceive (attention and perception), recall (learning and memory), plan (generating ideas, thinking, problem solving), and perform (putting intentions into actions) (Ranka, 2017).

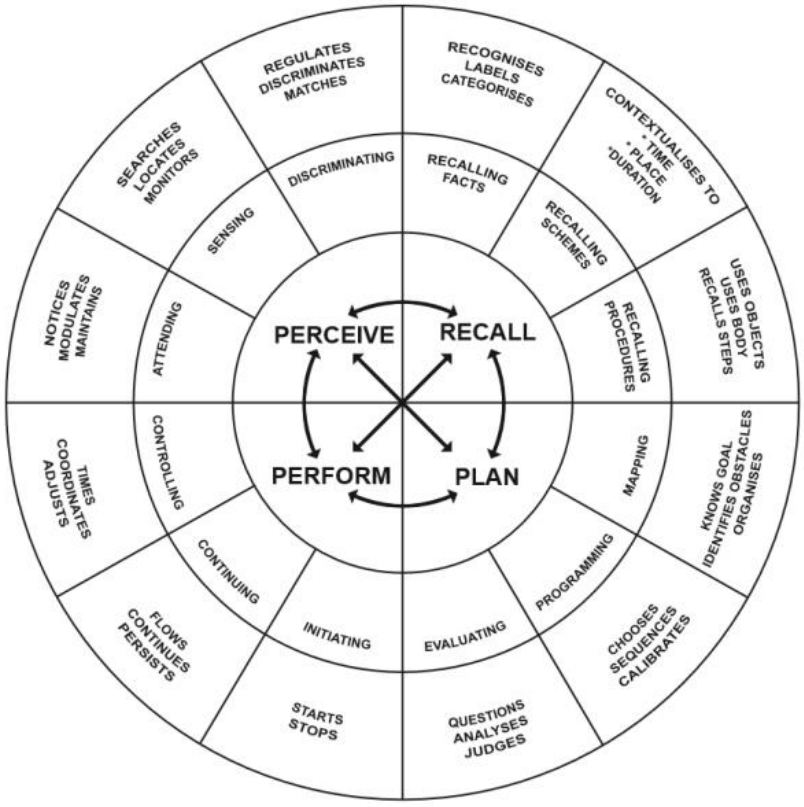

Figure 2. Perceive, Recall, Plan and Perform (PRPP) system of task analysis, stage 2 conceptual model (Ranka, 2017)

Information gathered from these two stages can be used to provide an occupation-embedded intervention emphasizing on performance mastery and developing behaviors needed to improve mastery (Ranka, 2017). For using PRPP in practice, OTs should participate in a PRPP course. The course is divided into two parts: the assessment part and the intervention part, and each part lasts for five days. In the assessment part of the course, participants gain understanding about the theoretical foundation of the method, in addition to neuroscience evidence supporting it. Additionally, they will be taught how to evaluate the errors and information processing in stage 1 and 2, and to set goals for mastery from the findings. Furthermore, theoretical foundations for intervention will be covered in the intervention part of the course and participants will learn how to design interventions focusing on mastery as well as methods to prompt perceive, recall, plan and perform strategies required for occupational mastery (Ranka, 2017).

The PRPP approach has been investigated in patients with traumatic brain injuries (Nott & Chapparo, 2008), Parkinson disease (Van Keulen-Rouweler et al., 2017), schizophrenia (Aubin, Chapparo, Gélinas, Stip, & Rainville, 2009), dementia (Steultjens, Voigt-Radloff, Leonhart, & Graff, 2012) and breast cancer (Lewis, Chapparo, Mackenzie, & Ranka, 2016), and has been shown to have feasibility and usefulness in these group of patients. Additionally, a study conducted in New Zealand investigated OTs' experience from using PRPP in practice. It showed that PRPP was a preferred method for OTs to use in practice and explained OTs' satisfaction of having an occupational therapy tool which increased their confidence (Burrows, Hocking, & Chapparo, 2021). Although the PRPP approach has been indicated to be highly valid (Nott & Chapparo, 2012) and reliable (Nott et al., 2009) for using in patients with brain injuries, there is still limited amount of research considering the usefulness of this approach in clinical settings. Moreover, the need for research in implementing evidence-based occupational therapy assessments and interventions has been mentioned in previous research (Pilegaard et al., 2014; Stigen et al., 2018).

1.2 Community-based occupational therapy in Norway

Occupational therapy has been a part of community-based services in Norway since 1987, and the importance of occupational therapy in community-based services has increased since then due to several reasons such as aging population and changes in regulations (Maass et al., 2021). Norway's population is rapidly increasing, and the number of Norwegian's over 70 is expected to be doubled by 2060 (Statistisk Sentralbyrå, 2020). Additionally, according to the Coordination Reform Act,

community-based health services have been given new responsibilities regarding providing services at the right time and place for individuals and focusing the services on where people live and work (Meld. St. 47 (2008-2009), 2008). As a result, community-based occupational therapy has been a mandatory component of community-based health services since 2020. To achieve coordinated health services, community-based health care providers, including OTs, must engage in increased interdisciplinary collaborations (Arntzen et al., 2019). To be considered, however, is the fact that interdisciplinary work can present OTs with some challenges, such as the risk of role blending with other professions and the difficulty in developing professional competencies (Gramstad & Nilsen, 2016; Horghagen, Bonsaksen, Sveen, Dolva, & Arntzen, 2020). In addition to interdisciplinary work, Norwegian OTs revealed several challenges while working in community-based services, including difficulty to communicate occupational therapy competence and the fact that others' expectations of occupational therapy do not align with the OTs' understanding (Gramstad & Nilsen, 2016). However, Norwegian community-based OTs stated that being more than one OT in their workplace empowers them to emphasize their competences and define themselves more clearly, as well as having the opportunity to be more specialized and move towards professional development (Horghagen et al., 2020). Although it has been stated that there is a need for OTs to be more specialized in various fields such as cognitive function following the Coordination Reform Act (Horghagen et al., 2020), it has been demonstrated that being specialized is more prevalent in larger municipalities in Norway (Arntzen et al., 2019). Moreover, further research regarding cognitive impairment and OTs' contribution to the field has been identified as a priority for community-based OTs in Norway (Gramstad & Nilsen, 2017). However, according to a survey conducted in Norway (Stigen et al., 2018), community-based OTs are more likely to use informal interviews, observations and standardized tools such as Clock Drawing test and MMSE while working with patients with cognitive impairment. Although Norwegian OTs emphasized the importance of doing unstructured observations in regard to cognitive impairments, they also highlighted the need for implementing more standardized occupation-based methods in order to increase structure within the profession and facilitate evidence-based practice (Stigen et al., 2020).

As such, this study will investigate occupational therapists' experiences from using the PRPP approach in community-based services for patients with cognitive impairment following an ABI. Specific research questions for this study were:

- What are the benefits of using the PRPP method in community-based services in Norway?
- What are the challenges that OTs may encounter while using the PRPP in practice?
- What could be done to facilitate the use of the PRPP method in community-based services in Norway?

2.0 Method

A qualitative descriptive design was applied for this study to investigate the experience of community-based OTs in Norway from implementing the PRPP approach in practice. Qualitative research has been shown to be a beneficial research evidence for building thorough understanding of specific topics in their natural settings, as well as the meaning people bring to different phenomena and how they perceive that phenomena (Stanley, 2015). Therefore, since this study was carried out with an occupational science perspective and aimed to discover OTs' perceptions from using the PRPP approach in community-based services, qualitative research was chosen to be applied.

2.1 Recruitment process and participants

Four OTs from four different municipalities in Norway participated in this study. The invitation of the study was sent out to nine OTs who have participated in PRPP course and have been using this method in their workplace. One of the OTs did not wish to participate in the study, and four of them were not able to participate due to hectic workdays and lack of time. Finally, the study was conducted with four participants. The inclusion criteria for the study were: participating in PRPP course, having experience from working in cognitive field, working in community-based services, and working with patients with ABI. The study was part of an ongoing PhD project, and the original project has been approved by Regional Ethics Committee (REK) with the project number 215391 before the data collection.

Four female OTs participated in the study. All of them have been working in community-based services with different work experience varied between 10 to 19 years. They all work within an interdisciplinary team with other healthcare professionals such as nurses and physiotherapists. The participants had different responsibilities including working with rehabilitation team in homebased rehabilitation, working in nursing homes, and working with patients living in their own home. The participants' descriptive data is presented in Table 1.

Sex	Work experience (year)	Working condition	Size of municipality
Female: 4	10-19 years	Working with physiotherapist: 4 Working with other OTs: 1 Working with activity specialist: 1 Working with nurse: 4	Big municipalities: 3 Medium municipalities: 1 Small municipalities: 0

Table 1. Participants' descriptive data

Big municipalities: more than 20000 inhabitants. Medium municipalities: 5000-20000 inhabitants. Small municipalities: less than 5000 inhabitants.

2.2 Data collection

Since the study aimed to investigate meanings and challenges certain individuals experience in response to social or interpersonal situations, interviews have been chosen for data collection. Semi-structured interviews were conducted using an interview guide (Kvale & Brinkmann, 2009). The interview guide consisted of open-ended questions in order to enable the participants to broadly describe their experience regarding implementing PRPP for patients with cognitive impairment. It contained questions regarding background and working experience, experience from participating in PRPP course and implementing it, and any challenges or limitations OTs might have faced. Moreover, Probing questions for clarifying, asking for examples, extending the narrative and accuracy were used throughout the interviews (Stanley, 2015). The intension for conducting the interviews was to do them in person. However, due to limited availability of the participants and different working places, it was not possible for the researcher to travel and therefore, all interviews have been conducted digitally through Zoom. The interviews were conducted in English, lasted 40-60 minutes, audio-taped and transcribed verbatim by the researcher.

Prior to the interviews, participants were informed that participation was voluntary and that they could withdraw from the study at any time without explanation. Additionally, they signed a consent form before the interview.

2.3 Data analysis

The analysis was conducted based on Stanely's description of thematic analysis (Stanley, 2015). The analysis was inductive, and the focus was on participants' statements throughout the analysis process. The researcher read the interviews carefully several times to be familiar with the topics discussed in the interviews before starting the analysis process. According to Stanley (2015), open coding can be a starting point for conducting thematic analysis. This was applied by line-by-line coding of each interview and facilitated in deeply investigating the data. At this stage, codes were kept as close to the participants' original statements as possible to avoid misinterpretation. The data were imported into NVivo for the following step, which was categorizing the codes. To begin with this step, codes that were found to be irrelevant to the research aim were excluded and among the remaining codes, the similar ones were brought together to form potential categories. NVivo was chosen because it allowed for more fluid movement of codes across different categories as the

analysis continued. For the final step of the analysis, similar categories were combined, and different themes arose from the categories in order to best answer the research question. This step involved a more conceptual level of analysis, and the researcher was more reflective about emergent themes and their interpretation. Additionally, relevant quotations were extracted from the interviews for explaining and elaborating the themes broadly. An example of the analytic process is illustrated in table 2.

Original statement	Open coding	Category	Theme
Before PRPP it was "I know it's something, but I don't know what or why. I have an idea but I'm not sure and I don't have a very good feeling, when you are supposed to be the expert". So now I got the answers, and I can better deal with others, the patient itself, relatives.	Getting answers and being able to find where the problem is can help in dealing with colleagues, as well as patients and relatives	Precise results	Upsides of using PRPP
I have to find a task that is problematic and if they say the only time I have a problem is when I have worked for 6 hours and the problem is in the last 2 hours or something. That's hard to test because I can't be with them 9 hours.	Finding a challenging enough task for some patients was problematic	Difficulty in finding the right task to assess	Downsides of using PRPP
When discussing the patients with other OTs, they would ask "but why does she do that? That's a wrong pattern." And that's accuracy issue so it was good to have someone else see on the ones that I was so used to looking at.	Having other OTs to discuss the cases with was a good opportunity for her to see the things she was used to seeing in her patients	Knowledge sharing network	Potential enablers for a more efficient use of PRPP

Table 2. Example of the analysis from statements to final themes

The analysis of the results revealed three themes: upsides of using PRPP, downsides of using PRPP, and potential enablers for a more efficient use of PRPP, which explain that OTs experienced both beneficial and challenging aspect while implementing the PRPP in practice. In addition, they expressed their opinions on how to encourage other OTs and facilitate the use of PRPP in community-based services.

3.0 Main Results

Participants discussed their experiences regarding participating in the PRPP course and subsequently implementing it in their practice. Three major themes emerged from the analysis, including upsides of using PRPP, downsides of using PRPP, and potential enablers for a more efficient use of PRPP.

3.1 Upsides of using PRPP

Participants were generally satisfied with the use of PRPP, and they addressed several advantages that they experienced from using this method in their work. As mentioned by all the participants, all the beneficial aspects act as motivations to continue using PRPP.

3.1.1 Results are more intertwined with everyday life

Participants expressed a desire to include occupation-based strategies into their practice. They discussed their prior experience with standardized tools and highlighted the areas where those tools fell short, such as being too rigid and limited to specific tasks and areas. They complained that they were unable to connect the results of those tools to patients' daily lives, and thus did not perceive the results to be as effective as they could be. As a result, PRPP was a great choice for them to utilize in order to be able to assess variety of tasks in different contexts and get more generalizable results. They indicated that by using PRPP they are more capable of focusing on tasks that are important for the patients, which enables them to be more client centered. In addition, they can find the areas that needs improvements, emphasize the intervention on those areas and assist patients to reach the mastery level in any desired occupation. The range of these occupations can vary from usual tasks such as making a meal to more demanding and specific tasks like chopping woods in forest. Furthermore, having freedom to choose the context for performing the PRPP assessment enabled OTs to assess the patients in familiar environments such as their homes, which can benefit both the patients and the OTs. Being in a familiar setting helps patients feel more comfortable, which decreases the risk of allowing the stress of a new environment affect their performance and therefore, leads to a more natural occupational performance. Additionally, it helped reduce the pressure on OTs since when the test is conducted in a familiar environment, the patient is familiar with the location of relevant items, and OTs did not need to be concerned with interfering with the process of the assessment for showing items to patients.

"You can do it on every task, I have even chopped wood in the forest with a guy with an ax, I didn't know anything about that activity, but you will see what you need to do in the activity and then you actually can see a lot of cognition going on there."

PRPP being occupation-based has also helped the participants to be able to have more details on patients' situations when it comes to living independently in their homes. They believed that assessing individuals' occupational performance helped them to make really sure if patients are safe enough to stay at home and if not, what issues should be considered for them in order to be able to live by themselves.

"it's very important when you work with making elderly live at their home longer. It's an occupational therapy thing, we are the people that are good at making sure everyone can stay at home and independent and PRPP has helped me a lot with this."

3.1.2 Precise and structured results

The participants were also satisfied with PRPP being standardized and they believed it helped them to be more structured in their work. They have been able to pinpoint specific cognitive problems in their patients and they believed that by getting more precise answers in the assessment part, they were also able to a plan a more precise intervention that could help patients to work specifically on areas that might need improvement. Indeed, one of the participants mentioned that prior to PRPP she was aware that there was something wrong with the patient, but she was not sure where the problem was, and the treatment process was vague for her. Moreover, participants are able to obtain more reliable results and also measure progress/ not progress in treatment process of their patients in a more structured manner.

"It works like when we started working together with the patient the mastery level was at 30%, and now it's 60%" and then I also can actually find out what kind of help the person should get to do the tasks that are important for the patient."

3.1.3 Better interdisciplinary work

Another benefit from using PRPP that was highlighted by the participants was the contribution to better interdisciplinary work, since all the participants of the study were closely working with other health care professionals in their community services. They believed that by using PRPP, they could use normal/ usual words which are not only limited to occupational therapy and therefore,

are easily understandable for other health care providers. This can help participants to indicate how different cognitive elements can affect patients' everyday life and how to address them in the intervention process. Moreover, they also indicated that they have been able to guide other health care providers on different steps of the treatment in a way that patients would benefit the most from it.

"When you do the intervention, you can be very precise on what should the nurses say to this patient, what should a PT say and do with this patient. Clear verbal prompts like "stop, look around, plan, go" can be provided. Intervention gets much more precise for the patient and it's much more likely to succeed."

Moreover, all the participants mentioned receiving good feedbacks from their colleagues regarding the results they get from using PRPP and believed that these positive feedbacks would motivate them to continue implementing PRPP in their practice. The feedbacks mainly stated that OTs were possible to address some specific and important issues in patients' performance regarding the mastery level and that they rely on the results that OTs provide. In addition, PRPP helped the participants to be more descriptive about patients' situations regarding cognitive issues and therefore, resulted in better communication with colleagues, as well as the patients and their relatives. Moreover, as participants mentioned, PRPP has brought common understanding to their teams and enabled them to engage with other health care providers on a broader scale, which was previously missing in their work setting.

3.1.4 Providing a perspective for OTs

Aside from the previous advantages, the participants stated that using PRPP has highlighted a perspective by which they have been able to look at cognition in a different way. They believed that implementing PRPP in practice is like obtaining a lens, which let them see things differently. For instance, some participants stated that they have been able to notice cognitive problems in their patients by observing their activities, even if they were not specifically looking for them.

"After the course I got this patient that the priority was to get better at hand function, and I was like "ok, let me just observe her in different areas where she is during the day". So, when I started observing her, I immediately understood that this is not hand function, this is cognition."

This change of perspective has also helped some participants in having more proper communications with their patients, giving prompts, and trying to reshape their way of thinking while doing tasks. Indeed, not only regarding patients with cognitive impairment, but also with all kinds of patients, as long as their impairment has caused them to think differently for doing their activities. Additionally, doing the assessment part of the PRPP has helped some participants in highlighting the importance of activity analysis and also to get better at finding the right task for the patients in a way that both properly challenges the cognitive skills of the patients and creates the opportunity for learning.

"You know it (The PRPP) is not a motor physical assessment, but I think in every task that there is a problem in how you think, then you can use it. And usually there are, if you have physical impairment, you should actually think differently, you should plan differently."

3.1.5 Increasing OTs' confidence

All the participants, except for one, believed that using PRPP gave them confidence and helped them to become better at their job as an OT. They even referred to participating in PRPP course and implementing it as a "turning point" in their professional life. They also mentioned that it motives them when they can specify where the problem is, why there is a problem, and how it can be solved. However, they acknowledged the fact that like every other new method, learning and implementing PRPP was also frustrating at some point. What helped OTs was perseverance, trying to find the right patients and use PRPP as much as possible. Most of the participants stated that if they prioritize using PRPP after the course and ask their questions where struggling, despite not getting everything right, they will improve gradually and become more comfortable and confident in using PRPP as time goes by.

"I would recommend all the OTs to take the course also to feel like a really powerful OT at the end of the week, at least for me it felt like this is really on our subject and it's ours."

3.2 Downsides of using PRPP

In addition to all the beneficial aspects of using PRPP, the participants have also noted some difficulties while using it in their practice. The most challenging issue about using PRPP, which all the participants agreed on, was that the PRPP is a time-consuming approach. They mentioned due to hectic workdays at their community-based services, it can be hard for them to find the time

and prioritize using PRPP. In addition, as one of the participants mentioned, being the only OT in the workplace sometimes leads to sudden changes in the work schedule and as a result, the OT has to prioritize some other urgent tasks that might happen instead of what she wanted to do. Some of the participants also noted that because of the large number of patients, sometimes they might not be able to do both the assessment and the intervention part of PRPP in a row, which might cause them to wonder about how the patient did in the assessment part and doubt themselves for scoring the items of the test. Moreover, some participants addressed the importance of dedicating time to do the interventions in the treatment process, in addition to the assessments, and they mentioned that due to busy workdays, sometimes they might not be able to spend time on following up the patients properly.

"We use a lot of assessments to see what's wrong with the person, but we are not given the time to do the intervention afterwards because then you have booked your whole morning or the whole day because of new patients. Then how are you going to follow up those patients when the next week is full?"

Another issue reported by participants was selecting the appropriate task for the assessment that would be sufficiently challenging for the patient. This is particularly true when they have individuals with a higher cognitive level who experience cognitive difficulties only in very specific circumstances. Additionally, participants demonstrated a potential risk while selecting an appropriate task for patients. They stated that sometimes their perceptions of the importance of various stages of a task may differ from the patients', which could influence how they expect the patient to perform the task, whereas in reality, those stages might not be as important for the patient as they believed.

"I have to find a task that is problematic and if they say the only time I have a problem is when I have worked for 6 hours and the problem is in the last 2 hours or something. That's hard to test because I can't be with them 9 hours."

Not having a proper level of interdisciplinary work within the workplace has been another challenge for some of the participants. Although they agreed that PRPP gives precise and useful information for a structured intervention, they believed that as long as other health care providers don't acknowledge and follow that intervention plan, it will not be useful enough for patients. In addition, they stated that if they advocate the role and the importance of OTs within the

interdisciplinary work regarding patients with cognitive impairment, they can get others on board and therefore, they can provide the most effective treatment.

"The teamwork isn't working, because I can make a plan for how this morning routine should be and when the nurses don't think that this is important, you will not get the treatment that is important for the patient to be able to do the task."

Another challenge mentioned by the participants was that since interventions using PRPP can be very precise and repetitive, patients might lack motivation and get tired soon. This issue can affect the treatment process of the patients and can have negative influence of the use PRPP, and as a result, some OTs might decide not to use PRPP so often. Moreover, some of the participants claimed that most patients tend to prioritize physical treatment over cognitive treatment because cognitive treatment is more abstract and can be harder for them. Therefore, they emphasized the importance of acknowledging patients' situations and considering motivation as an important factor throughout the process. Doing so can result in more efficient interventions for patients.

The participants experienced the PRPP course to be very intensive with a lot of information and getting back to workplace and trying to use that information in practice has been a challenge for all of them. However, they experienced this challenge to varying degrees. All the participants agreed on feeling alone in their workplace and not having someone to discuss PRPP with, which made the implementation process harder for them. They also indicated not feeling confident at the beginning of using PRPP resulted in obsessing about every small detail of the test and stocking in the process, which consequently resulted in lack of motivation for using PRPP. The participants mentioned they had a knowledge sharing network for PRPP where they gathered together with other OTs who have also participated in the course and discussed different aspects of the method. Most of the participants were satisfied with this knowledge sharing network and found it a great opportunity to exchange practice experience and ask questions throughout the way. However, one participant noted that despite having this network and gaining valuable knowledge from it, implementing PRPP remained extremely difficult for her. She believed the reason was constant concern about the outcome of the test and that she did not feel comfortable admitting she was not good at something, which resulted in not using PRPP as frequently as she anticipated. Additionally, she expressed her preference to have more colleagues from her workplace participate in the course with her so that she could have the opportunity to discuss the same patients with them. However,

she also mentioned that most OTs in community-based services might not be so motivational to take time and resources to learn a method such as PRPP. She believed that most of them are too comfortable in their roles as they are now and are not willing to change their working situation.

"I think it's much harder to learn PRPP when you are in work already because you are drilled in what you should do and it takes time, you have to feel that it's uncomfortable to fail or to take time to just not be as good as you want to be."

3.3 Potential enablers for a more efficient use of PRPP

Despite the challenges of PRPP implementation, participants concluded that the benefits outweighed the difficulties. As a result, they identified several points to improve the experience of taking the PRPP course and implementing it in the workplace. These factors may help OTs make a more seamless transition from theory to practice when it comes to the PRPP.

3.3.1 The language of the course

The fact that PRPP course was held in English made some challenges for all the participants. They believed that if the course was in their native language, they would have probably been more engaged in the course and asked more questions if they had any. Some of them also stated that due of the language of the course, they were unable to express effectively when they were struggling during the course, which could have resulted in difficulties in understanding some of the topics discussed in the course. Furthermore, they anticipated that by offering the training in the participants' native language, more OTs would be inspired to participate in the course.

3.3.2 Prioritizing the course

The participants believed that OTs should be motivated to prioritize taking the time to participate in the course and therefore, implementing it afterwards. They mentioned two types of motivations that can affect OTs' consideration for using PRPP: internal motivations and external motivations. Internal motivations have been addressed by mentioning interest for cognitive field and willingness to gain deeper knowledge in the field, being passionate about working more evidence-based, and getting more reliable results. External motivations included being encouraged by other OTs who participated in the course before, having supportive managers at workplace, and having the opportunity to participate in the course. Participants stated that it is very important to be aware of others' experiences regarding PRPP and when words get spread, there is a chance to motivate

more people to take the course. Additionally, they indicated the importance of being in a supportive work environment where professional development is prioritized, and managers are willing to investigate in their employees. More importantly, they mentioned that being the only OT in the work environment can hinder having the opportunity to take the time off and participate in the course.

3.3.3 Prior knowledge about cognitive field

All participants agreed that prior knowledge of cognitive field was necessary before attending the course. However, they mentioned that simply a fundamental understanding of the principles would suffice, and that no in-depth knowledge of the subjects is required. Due to the intensive nature of the course and lack of time to master the ideas, this can assist OTs in avoiding confusion during the course. Additionally, some participants stated that it would be beneficial to work with patients with cognitive impairment prior to attending the course because this enables OTs to relate the course topics to the patients they had worked with and facilitates comprehension of the concepts of the course. Furthermore, some participants recommended to include videos presentations in the assessment part of the course, where participants would have the opportunity to rewatch them. This was stated as an additional component that could facilitate learning and understanding the theoretical concepts of the course.

3.3.4 Gap between two parts of the course

It has been mentioned by the participants that the efficient way for OTs to participate in PRPP course is to take a gap between the assessment and the intervention part of the course. The participants suggested that six months until one year could be suitable. They stated that because of the amount of information provided in the assessment course, it is not a good idea to have the intervention part of the course right after the assessment part. Additionally, they believed that having this period can help OTs to process the information and get familiar with the concepts to a reasonable degree. Most of the participants had a three-year gap between the two parts, which they believed was too long. One of the participants took both parts of the course together and she also emphasized the importance of having this gap. However, she believed that having the opportunity to participate in the course is more important than participating in them separately.

3.3.5 Knowledge sharing network

Having a knowledge sharing network consists of other OTs who also participated in the PRPP course has been identified as one of the factors that can help to have a better transition from theory (the course) to practice (workplace). Indeed, all participants expressed gratitude towards the knowledge sharing network they had following the course. They referred to the network as one of the most important parts that help them to use PRPP in their practice in better ways. The feeling of "not being alone when struggling" was a valuable point for them, as was the opportunity to exchange experience within the network They believed they have got new perspectives while discussing the topics with other OTs and also developed confidence in implementing PRPP as a result of this network. Furthermore, this network has also been a place for OTs to reflect on their own work regarding use of PRPP and to identify the areas that might need to be considered or improved. They also had the chance to see their improvement throughout their use of PRPP and how their journeys have been from the start.

"I also filmed one of the clients that I worked with. And we saw the fil together (with other OTs) and that was a client I had been working with many years, so I didn't think of all the things she was doing because she always does that and then the other OTs asked "but why does she do that? That's a wrong pattern." And that's accuracy issue so it was good to have someone else see on the ones that I was so used to looking at."

In summary, the results of this study indicate OTs' experiences from using the PRPP approach in their practice. They valued beneficial aspects of the PRPP including the results being more intertwined with everyday life and more precise and structured, contributing to better interdisciplinary work within community-based services, and increasing OTs' confidence. However, challenging aspects such as time-consuming process of learning and implementing PRPP, difficulty in finding the right task for the assessment, lack of interdisciplinary work within the workplace, patients' motivations, and fear of failure were also mentioned by the OTs. In addition, the participants shared their opinions on how to make the learning and implementation process of the PRPP in community-based services more efficient.

4.0 Discussion

The study provides insights on how OTs experience the use of the PRPP system of task analysis in their practice and the challenges arise from using this method, as well as efforts that could be done for a better use of PRPP in Norwegian community-based services. In this section, the results will be discussed in relation to previous research and occupational science perspective and under the following topics: the importance of an occupation-based approach to assessment, a need for OTs to focus on occupational performance in context, and OTs becoming confident through occupation-based practice.

4.1 The importance of an occupation-based approach to assessment

The participants underlined the importance of applying an occupation-based approach to assessment. A lot of assessment tools used in occupational therapy such as MMSE (Folstein, Folstein, McHugh, & Fanjiang, 2001) are not occupational therapy specific and stem from other professions. However, in the past decades more emphasize has been given to developing occupational therapy specific tools which could reflect on different domains of occupational therapy to more extend for better outcomes (Asaba, Nakamura, Asaba, & Kottorp, 2017). The PRPP, as an occupational therapy assessment and intervention method, provided the opportunity for OTs to link cognition with occupational performance perspective and contributed to increasing OTs' confidence both while working individually and in teams, which supports the trending emphasis on occupational therapy specific tools. In accordance to highlighting the occupational performance perspective within practice, previous research indicated that OTs in Norway are more likely to use unstructured occupation-based approaches such as interviews and observations when working with individuals with cognitive impairment (Stigen et al., 2018). In order to obtain more scientific results, they also reported the need to use a standardized tool in addition to other methods (Stigen et al., 2019). The findings of this study, however, showed that the participants were generally satisfied with the use of the PRPP approach in their practice. The results of the PRPP approach were perceived as reliable for participants and they did not report the need for using any additional tools. Additionally, in line with previous research (Burrows et al., 2021; Stigen et al., 2020), participants of this study also appreciated the PRPP for providing the freedom in choosing the context for assessing individuals' occupational performance and they preferred to perform the PRPP in individuals' homes, where the environment is familiar. Assessing individuals in their

homes has been shown to be more effective and accurate while examining the independence of patients with cognitive impairment (Bottari, Dutil, Dassa, & Rainville, 2006). It is essential to note, however, that not every individual can be evaluated in their home, and that there are prerequisites for choosing individuals' homes as a testing environment, including the absence of major safety risks and the absence of acute illness (Bottari et al., 2006). The PRPP, as a method that allows therapists to select the environment of the test rather than being restricted to home or clinic settings, could allow OTs to take these considerations into account while implementing it. Aside from general satisfaction of the PRPP as an occupation-based approach, some participants expressed concern about the possibility of bias occurring during the task selection and assessment phase of the test, which emphasizes the importance of considering the subjectivity of occupations in these types of approaches (Pierce, 2001). In order to reduce the risk of OTs' perception influencing the assessment process, considering variety of factors affecting occupations, such as context, individuals' occupational role and occupational performance capabilities should be a priority (Chapparo & Ranka, 1997). Thus, OTs should be willing to truly listen to individuals and they could also engage the individuals in the process of finding the relevant task to be able to better address their occupational needs. In addition, finding appropriate tasks for individuals with higher cognitive level was mentioned to be a challenge for some of the participants. Even though using the PRPP is not limited to a specific context, which provides OTs the opportunity to use the tasks that are challenging enough for assessing individuals (Law, 2002), it might not always be possible to simulate and perform the "just right challenge" for individuals in an occupational therapy session. The question that arises is that is the PRPP only most beneficial for patients with severe and moderate cognitive impairment where assessing the challenged task is possible for the OT? How OTs can adjust their practice when it comes to individuals with higher level of cognition can be investigated more deeply in regard to the use of occupation-based approaches in occupational therapy practice.

4.2 A need for OTs to focus on occupational performance in context

The expected growth in older population of Norway and consequently, the increasing number of chronic diseases within the population has resulted in changes in regulations in Norway including the implementation of the Coordination Reform Act (Meld. St. 47 (2008-2009), 2008; Statistisk Sentralbyrå, 2020). Therefore, government focuses on having more independent citizens who can

stay longer at their homes and have a meaningful life. Increasing quality of life of individuals and having a more meaningful life can be achieved by participating in different daily occupations and that individuals would be able to perform the activities they desire to or are required to do in order to act according to their occupational roles they have in their lives (Chapparo & Ranka, 1997; Law, 2002). As a result, there is a need for OTs to adapt the profession to the upcoming changes. According to previous research, community-based OTs in Norway prefer the role of "innovator" in practice, which entails moving towards greater autonomy and professional development within occupational therapy, as well as marketing the profession and contributing to the introduction of new methods (Arntzen et al., 2019). However, the results of this study indicated that community-based OTs are more likely to be reluctant to apply new approaches and make changes in their workplace. This difference may be attributable to the varied municipal characteristics and priorities in Norway, which might affect the performance of OTs and the opportunities provided for them, as well as municipalities' low rate of investment on OTs (Arntzen et al., 2019). In addition, time-consuming process of implementing new knowledge into practice, which has also been mentioned as a barrier into using standardized approaches (Hocking & Hammell, 2017), as well as fear of failure could be the reasons for reluctance in implementing new changes in workplace. . As also mentioned by one of the participants, she did not use PRPP as frequently in her practice because she was concerned about the outcome of the test and whether she was performing it correctly. This could be justified with two potential reasons. First, OTs' feeling alone in their workplace when implementing new methods may be the cause of their self-doubt because they have no one to discuss their struggles with. It has also been suggested that taking the PRPP course with a colleague could result in a more effective implementation (Burrows et al., 2021). Second, the years of experience of OTs may influence how they view the implementation of new methods. Although this study only included participants with more than 10 years of work experience, new graduates or OTs with less work experience might feel differently when it comes to implementing new methods for moving towards becoming more occupation-based in practice. The reason could be that when OTs have been working for a long time, others' expectations from them to be "good at their work" may inhibit the freedom they could have had to take the time for understanding that method and making mistakes during their learning process. However, it is important to note that being innovator should not be perceived as changing the whole way of working, rather it could mean that to use the new methods and tools as an assistant to emphasize the occupational

performance perspective within the profession and try to implement that perspective more often. As it has also been mentioned by the participants of this study that using PRPP as a new occupation-based method assisted them in rediscovering the significance of activity analysis as a foundation of the occupational therapy profession (Creighton, 1992). Understanding the concept of innovation in occupational therapy and the fact that OTs can be innovative in different ways and to varying degrees, as well as being in a supportive work environment, as mentioned by the participants, could motivates OTs to work towards being more innovative. Further research, however, could shed more light on underlying reasons for the difference between what OTs want and what they actually do in practice, as well as various approaches to enhance innovation within the profession. It is, however, also important to note that becoming more occupation-based in practice and implementing new methods such as the PRPP can have its challenges such as language aspects and cultural aspects of the methods. The PRPP course that the participants took was held in English, which was a second language for all the participants, and they expressed some difficulties regarding the language of the course. Although all of them were able to understand the teaching materials in the course, they mentioned that if the course was in their mother tongue, they would have been more active during the course and asked questions for more clarification throughout the course if they were struggling with some parts. In addition, according to a study investigated the cognitive assessment tools used by community-based OTs in Norway (Stigen et al., 2018), it could be assumed that OTs are more likely to use the tools that are developed in their own language and their own country. Therefore, it could be recommended and beneficial to have the PRPP course held in Norwegian for OTs in Norway in order to get better outcomes of the course, as well as considering the cultural aspects of living in Norway. Additionally, if developing a Norwegian course was not possible, getting deeper understanding about the challenges individuals faced throughout this course and taking them into account for holding courses in a second language in future could result in better engagement of participants in the course. Doing so might possibly lead to less struggle with the transition of the information from theory to practice for OTs.

4.3 OTs becoming more confident through occupation-based practice

Literature has revealed that occupation-centered practice can help OTs in increasing their professional identity (Walder, Bissett, Molineux, & Whiteford, 2022), and it has been stated that

implementing occupation-based methods and empowering the occupational performance perspective within practice eventually contribute to an occupation-centered practice within occupational therapy (Fisher, 2014). Therefore, applying occupation-based methods such as the PRPP will help OTs improve their professional identity, as well as increasing OTs' confidence in practice, as also stated by the participants of this study. Moreover, the results indicated that in order to fully benefit from using the PRPP approach in community-based services, interdisciplinary work is a critical aspect, as OTs have hectic workdays and follow-up might not always be possible. However, the participants noted that common understanding provided by the PRPP, which was previously a missing part in community-based services in Norway (Gramstad & Nilsen, 2016), helped them to guide other health care professionals throughout treatment processes. This, consequently, contributed to increasing the quality and quantity of interdisciplinary work within the community-based services. Although it has been stated previously that the effect of such guidance is more likely to be short-term (Gramstad & Nilsen, 2016), being precise in the instructions given to other health care professionals, as well as seeing the impact of those instructions on the treatment process of the patients might help in better collaboration within the interdisciplinary team. On the other hand, challenging aspects of interdisciplinary work within these settings have also been mentioned. In line with previous research stating OTs' struggles with communicating occupational therapy competence within the interdisciplinary environment (Gramstad & Nilsen, 2016), this study showed that utilization of occupation-based approaches, such as the PRPP, that increases the confidence of OTs can help emphasizing the important role of OTs in teamwork. Doing so, additionally, would lead to improved professional identity (Walder et al., 2022) and better understanding of occupational therapy contributions by other health care professionals. So why is that despite the coordination reform act and increasing number of OTs in community-based services in Norway (Meld. St. 47 (2008-2009), 2008), there is still little understanding of the profession between other health care professionals? Can this only be related to how OTs perform in their workplace? Or are there any fundamental reasons for this issue? Additionally, the findings revealed high workload and time pressure in community-based services as challenging factors for OTs regarding using the PRPP and in general, as also stated in a previous study (Gramstad & Nilsen, 2016). Not being able to dedicate adequate time to each patient due to time restrictions, as well as not being able to prioritize following up the patients can result in OTs working as "fire distinguisher", which is not a preferred

type of work within the community-based services (Arntzen et al., 2019). This finding is in contrast with the goal of coordination reform act which was offering health services to individuals when and where they are required (Meld. St. 47 (2008-2009), 2008). Therefore, there is a need to further investigate the effect of this change and whether it facilitated or hindered occupational therapy services.

4.4 Strengths and limitations of the study

The study only included female participants, which could have affected the results. However, the majority of OTs working in community-based services in Norway are female. Therefore, it was not possible to make a balance between the sexes of the study participants. However, having also male participants and exploring their experiences could have brought new insights to the results. Additionally, although the aim of the study was not to find generalizable results, rather it was to gain a deeper understanding on how community-based OTs in Norway experienced the PRPP course and implementing it in practice, the study would have benefited from larger sample size in order to investigate the issue in greater depth. Moreover, all participants of the study were Norwegian and the fact that interviews were conducted in a second language (English) may have had an impact on the results, as participants may have not been able to express themselves in the same way they would have been able to in their mother tongue.

4.5 Implications for practice and further research

This study's findings provide insight on OTs' experiences from implementing the PRPP, a standardized occupation-based approach, within community-based services in Norway, which might motivate other OTs to consider the use of such approaches in practice. In addition, they presented the perspectives of OTs regarding aspects of the PRPP course and implementation of this approach that may have been altered, improved, or addressed. If researchers wish to consider designing a Norwegian version of the PRPP course, having this information will assist them to acquire insight into OTs' expectations and therefore, structure a more efficient course.

This study also invites further research within the following topics:

- How can OTs adjust their practice when it comes to individuals with higher level of cognition while using occupation-based approaches?

- How to improve innovation within occupational therapy profession and help OTs to better market themselves?
- The reasons for lack of understanding occupational therapy competence by other health care professionals
- How coordination reform act and occupational therapy becoming a mandatory part of community-based services in Norway affected OTs' work within this context?

5.0 Conclusion

The aim of this study was to investigate the experience of community-based OTs from implementing the PRPP method for patients with cognitive impairment. The overall conclusion of this study is that the PRPP system of task analysis is both beneficial and challenging to use in practical settings in Norwegian community-based services. However, the OTs indicate that the benefits outweigh the challenges, and they are satisfied with using this method in their practice. They valued utilizing an occupational therapy tool which helped them to become more confident in their work and to perform better in interdisciplinary works. In addition, they mentioned factors that could be considered or changed in order to improve the learning and implementation process of the PRPP into practice, as well as beneficial aspects of designing a PRPP course in Norwegian, which would encourage more OTs to participate in the course and use the method in order to become more occupation-based in practice. As the need to implement more standardized occupation-based approaches in practice has been previously mentioned by community-based OTs in Norway (Stigen et al., 2020), it is important to consider designing a Norwegian version of the PRPP course in near future for encouraging more evidence-based practice in occupational therapy. Additionally, it is important to conduct more research on how to use the PRPP method in practice, as well as the effect of this method on clients in various contexts in order to promote the use of occupation-based approaches and move towards working more evidence-based within occupational therapy.

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Appendix 1: Interview guide

"Interview guide"

English version

1. Would you please introduce yourself and tell me a little about how you work and which clients you work with?
    - Your background and education
    - How long have you been working as an OT?
    - Your role in the municipality service
    - How long have you been working with cognitive impaired patients?

2. How was your experience from participating in the PRPP course?
    - Have you been familiar with PRPP before attending the course?
    - How do you feel about necessity of having prior knowledge about cognitive impairments before attending the course?

3. After the course, you went back to your workplace and started using PRPP, can you tell me about how that was?
    - How did you experience the implementation of the PRPP intervention within municipal services?
    - How do you feel about using a standardized occupation-based approach while working interdisciplinary?
    - How did this approach affect working with other health professionals?
    - Did you even feel the need for using a standardized tool?

4. What are your opinions about benefits/limitations of using the PRPP?
    - Do you have any positive or negative experience regarding using PRPP, in general or specifically for patients with cognitive impairment?
    - Have you experienced any specific barriers or motivations for implementing PRPP approach in your work?
    - What factors do you think can influence (positively or negatively) on the practicality of the PRPP in municipal services?
        - Patients' characteristics
        - the condition of municipality
        - OTs' characteristics

5. You are part of a research project where you are evaluating the effect of the PRPP intervention. What are you experiences with that?
    - Based on what you know now, are there anything that could be done/organized differently?

- Would you do it again if you knew what it entailed to be part of it?
- Are you going to continue using PRPP after the intervention study is over? Why/why not?

6. Suggestions for other OTs in the same context:
   - If you were to encourage other OTs to use PRPP for cognitive impaired patients, how would you do that?
   - How do you think we can make the process of implementing PRPP in municipal services easier for OTs? *(Will be asked only if they believe that implementation of PRPP was challenging)*

7. Is there anything else you would like to tell related to your experience with using PRPP in your workplace?

Norsk versjon

1. Vil du presentere deg selv og fortelle litt om hvordan du jobber og hvilke klienter du jobber med?
   - Din bakgrunn og utdannelse
   - Hvor lenge har du jobbet som OT?
   - Din rolle i kommunetjenesten
   - Hvor lenge har du jobbet med kognitive funksjonshemmede pasienter?

2. Hvordan var din erfaring fra å delta på PRPP-kurset?
   - Har du vært kjent med PRPP før du gikk kurset?
   - Hva synes du om nødvendigheten av å ha forkunnskaper om kognitive funksjonsnedsettelser før du går på kurset?

3. Etter kurset gikk du tilbake til arbeidsplassen din og begynte å bruke PRPP. Kan du fortelle meg hvordan det var?
   - Hvordan opplevde du implementeringen av PRPP-intervensjonen innen kommunale tjenester?
   - Hva synes du om å bruke en standardisert yrkesbasert tilnærming mens du jobber tverrfaglig?
   - Hvordan påvirket denne tilnærmingen arbeidet med andre helsepersonell?
   - Følte du behovet for å bruke et standardisert verktøy?

4. Hva er dine meninger om fordeler/begrensninger ved bruk av PRPP?
   - Har du noen positiv eller negativ erfaring med bruk av PRPP, generelt eller spesielt for pasienter med kognitiv svikt?

- Har du opplevd noen spesifikke barrierer eller motivasjoner for å implementere PRPP-tilnærming i arbeidet ditt?
- Hvilke faktorer tror du kan påvirke (positivt eller negativt) på det praktiske ved PRPP i kommunale tjenester?
    - Pasientenes egenskaper
    - kommunens tilstand
    - OTs egenskaper

5. Du er en del av et forskningsprosjekt der du evaluerer effekten av PRPP-intervensjonen. Hva er din erfaring med det?
    - Basert på det du vet nå, er det noe som kan gjøres/organiseres annerledes?
    - Ville du gjort det igjen hvis du visste hva det innebar å være en del av det?
    - Kommer du til å fortsette å bruke PRPP etter at intervensjonsstudien er over? Hvorfor/hvorfor ikke?

6. Forslag til andre OT-er i samme kontekst:
    - Hvis du skulle oppmuntre andre OT-er til å bruke PRPP for pasienter med kognitiv svikt, hvordan ville du gjort det?
    - Hvordan tror du vi kan gjøre prosessen med å implementere PRPP i kommunale tjenester enklere for OT? (Blir bare spurt hvis de mener at implementering av PRPP var utfordrende)

7. Er det noe annet du ønsker å fortelle knyttet til din erfaring med bruk av PRPP på din arbeidsplass?

Appendix 2: Information letter

Are you interested in taking part in the research project

"*Exploring Experience of community-based occupational therapists from implementing PRPP intervention for people with cognitive impairments after ABI*"?

This is an inquiry about participation in a research project where the main purpose is to *investigate experience of community-based occupational therapists from implementing the PRPP intervention for people with cognitive impairment following ABI.* In this letter you will be given information about the purpose of the project and what your participation will involve.

Purpose of the project
This research is being done as a master's thesis with the aim of exploring experience of occupational therapists working in municipal services from implementing PRPP intervention for people with cognitive impairment. The PRPP approach is a standardized occupation-based assessment and intervention tool used for cognitive impaired patients. This study tries to discover the practicality of this intervention in municipal services in Norway.

Who is responsible for the research project?
- Linda Stigen at NTNU Gjøvik, E-mail: linda.stigen@ntnu.no, Phone: 93223019

Why are you being asked to participate?
You have been selected to participate in this study because your professional role and work area is relevant to the PRPP intervention.

What does participation involve for you?
If you chose to take part in the project, you will be asked to participate in a semi-structured interview, which lasts approximately 60 minutes. There will be several pre-defined questions for the interview, along with some possible follow-up questions for each theme. The interview will be recorded, and no data will be published until anonymized and given consent.

Participation is voluntary
Participation in the project is voluntary. If you chose to participate, you can withdraw your consent at any time without giving a reason. All information about you will then be made anonymous. There will be no negative consequences for you if you chose not to participate or later decide to withdraw.

Your personal privacy – how we will store and use your personal data
We will only use your personal data for the purpose(s) specified in this information letter. We will process your personal data confidentially and in accordance with data protection legislation (the General Data Protection Regulation and Personal Data Act).
- Only the student Maryam Haghshenas at NTNU Trondheim and project manager Linda Stigen at NTNU Gjøvik will have access to your information
- In connection with the institution responsible for the project, the persons responsible for the project will have access to data

- No personal data, only gender, age and country will be addressed in the material. The collected interview data will be locked away.
- Persons responsible for the project will have access to collected data that has been de-identified
- Your name and contact information will be replaced with fictitious names in the transcript and your personal information will be sorted in a list of that is separate from the other data. All material, except your name and personal information will be sorted on an external, password protected device
- The project has been approved by REK, with the project number 215391.

Participants will not be recognizable in publications.

What will happen to your personal data at the end of the research project?
The research project is scheduled to end 1th August 2022. The project data will be stored for the purpose of follow-up studies, archived for future research and publications. No personal data will be stored.

Your rights
So long as you can be identified in the collected data, you have the right to:
- access the personal data that is being processed about you
- request that your personal data is deleted
- request that incorrect personal data about you is corrected/rectified
- receive a copy of your personal data (data portability), and
- send a complaint to the Data Protection Officer or The Norwegian Data Protection Authority regarding the processing of your personal data

What gives us the right to process your personal data?
We will process your personal data based on your consent.

Based on an agreement with NTNU Gjøvik, REK – The Regional Ethics has assessed that the processing of personal data in this project is in accordance with data protection legislation.

Where can you find out more?
If you have questions about the project, or want to exercise your rights, please contact:
- Student: Maryam Haghshenas, Email: maryamh@stud.ntnu.no, Phone: 40584680
- Project manager: Linda Stigen at NTNU Gjøvik, E-mail: linda.stigen@ntnu.no, Phone: 93223019
- Data Protection Officer: Thomas Helgesen, E-mail: thomas.helgesen@ntnu.no, Phone: 93079038

Yours sincerely,

Linda Stigen	Maryam Haghshenas
Project manager/supervisor	Student

Appendix 3: Consent form

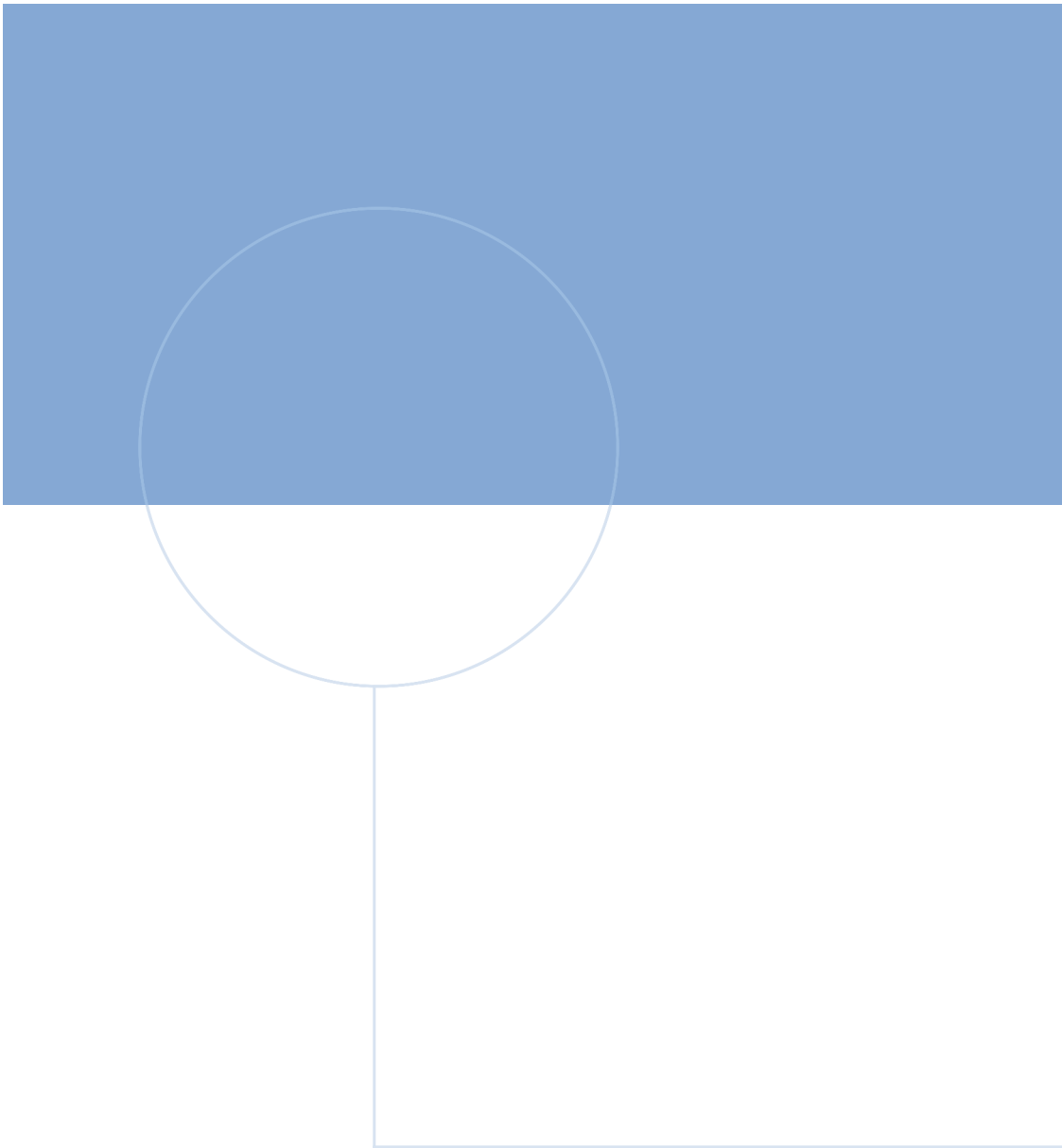
Consent form

I have received and understood information about the project *"Exploring Experience of community-based occupational therapists from implementing PRPP intervention for people with cognitive impairments after ABI"* and have been given the opportunity to ask questions. I give consent to:

☐ participate in an interview

I give consent for my personal data to be processed until the end date of the project.

(Signed by participant, date)



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