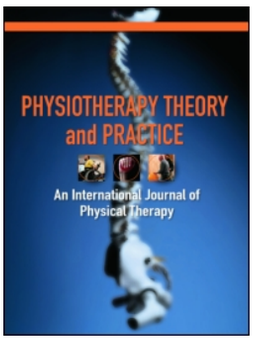

Taylor & Francis
Taylor & Francis Group

Physiotherapy Theory and Practice
An International Journal of Physical Therapy

ISSN: (Print) (Online) Journal homepage: https://www.tandfonline.com/loi/iptp20

Learning from a situation of discomfort – a qualitative study of physiotherapy student practice in mental health

Siri Tessem , Elisabeth Møyner & Marte Feiring

To cite this article: Siri Tessem , Elisabeth Møyner & Marte Feiring (2021): Learning from a situation of discomfort – a qualitative study of physiotherapy student practice in mental health, Physiotherapy Theory and Practice, DOI: 10.1080/09593985.2021.1878566

To link to this article: https://doi.org/10.1080/09593985.2021.1878566

Published online: 24 Jan 2021.

PHYSIOTHERAPY THEORY AND PRACTICE
https://doi.org/10.1080/09593985.2021.1878566

Taylor & Francis
Taylor & Francis Group

Learning from a situation of discomfort – a qualitative study of physiotherapy student practice in mental health

Siri Tessem*, Elisabeth Møyner*, and Marte Feiring#

Department of Physiotherapy, Faculty of Health Sciences, Oslo Metropolitan University, Oslo, Norway

ABSTRACT

Purpose: This qualitative study aimed to explore how physiotherapy students learn during practice as physical activity mentors for mentally ill individuals. The practice took place in an everyday environment without the presence of a supervisor.

Methods: Information was collected through three focus group interviews with 16 students in their second year of study. The data were analyzed using thematic analysis, based on a sociocultural learning perspective.

Results: Three main categories summarize the students' experiences. 1) Experimenting and adapting the activities. The students were challenged through communication and relationship-building, and they had to adapt the activities to the clients' state of mind; 2) Experiencing clients breaking social and cultural codes. The students felt responsible for ensuring the clients did not draw unwanted attention to themselves, which forced them to explore creative solutions; and 3) Learning from situations of discomfort. The students learned from having to cope with unpredictable and embarrassing situations without a supervisor present.

Conclusions: Practice as physical activity mentors for mentally ill individuals can stimulate students' learning through reflection in and on action. To avoid stigmatizing behaviors, process experiences and enhance learning, we suggest a frequent and standardized access to supervision.

ARTICLE HISTORY
Received 19 November 2019
Revised 1 October 2020
Accepted 20 December 2020

KEYWORDS
Student practice; mental illness; physical activity mentor; learning in practice

Introduction

Learning in practice is a central part of the professional qualification in physiotherapy education. Physiotherapists work with patients at various levels in the community, making practice learning crucial to developing clinical competence. Several factors might contribute to the development of learning processes for healthcare students, including learning environments and the amount and quality of supervision (Pitkänen et al., 2018; Salminen, Öhman, and Stenfors-Hayes, 2016). However, learning in practice might also introduce elements of instability to the learning process, as patients and clinical placements vary in complexity (Milanese, Gordon, and Pellatt, 2013). The students sometimes enter work cultures that are totally different from any educational context, making the transition between different learning cultures challenging for many students. However, learning opportunities that combine patient interactions and educator feedback have been demonstrated to be highly valued by students (Milanese, Gordon, and Pellatt, 2013). In addition, learning in practice seems to lead to the acquisition of more lasting skills and competencies compared to participating in theoretical courses at the university (Vågstøl and Skøien, 2011).

At Oslo Metropolitan University, supervised practice is organized periodically through the bachelor's degree Program in Physiotherapy, with emphasis on the final year of study. Practice takes place in hospital wards, rehabilitation institutions and municipal health services, and a supervisor is always available and in close proximity to the students. However, there is a constant need to explore new ways of organizing student practice. One way to do this is to focus on client groups that have a special need for follow-up through adapted physical activities.

One such group is individuals experiencing mental illness. The lifetime prevalence of severe mental illness is estimated at 29% on a global basis (Steel et al., 2014). People with mental illness are generally more physically inactive compared to a healthy population, and they have an increased risk of developing obesity and metabolic syndrome (Gardner-Sood et al., 2015; Vancampfort et al., 2012). Consequently, physical activity is of great importance in preventing somatic

CONTACT Siri Tessem sirit@oslomet.no Department of Physiotherapy, Faculty of Health Sciences, Oslo Metropolitan University, Oslo, Norway.
*Associate Professor, Department of Physiotherapy, Faculty of Health Sciences, Oslo Metropolitan University, Oslo, Norway
#PhD in Sociology, Professor, Department of Physiotherapy, Faculty of Health Sciences, Oslo Metropolitan University, Oslo, Norway
This article has been corrected with minor changes. These changes do not impact the academic content of the article.

disorders and avoiding enhancement of mental symptoms (Harvey, Hotopf, Øverland, and Mykletun, 2010; Pedersen and Saltin, 2015). A robust relationship between physical activity and depression has been identified, regardless of exercise intensity (Harvey, Hotopf, Øverland, and Mykletun, 2010; Pedersen and Saltin, 2015). Regular physical activity reduces depressive symptoms and improves quality of life among people with mental illness (Rosenbaum et al., 2014).

Mental illness is associated with a high degree of unstable behavior and even learned helplessness (Hamovitch, Choy-Brown, and Stanhope, 2018). Individuals experiencing mental illness are also more socially isolated compared to a healthy population, and they often lack the initiative and motivation necessary to maintain regular physical activity (Harvey, Hotopf, Øverland, and Mykletun, 2010; Pedersen and Saltin, 2015). Consequently, individualization of activities might be more challenging compared to other client groups (Hamovitch, Choy-Brown, and Stanhope, 2018).

Over some years, several Norwegian municipalities have introduced physical activity mentors to encourage mentally ill people to establish and experience a healthier lifestyle (Skrede, Munkvold, Ø, and Martinsen, 2006). Physiotherapists working at a hospital ward for mentally ill clients in Oslo experienced that although physical activity was part of the treatment offered to clients when hospitalized, most clients failed to maintain regular physical activity after discharge. The question arose if the physical activity mentoring could be an appropriate practice for physiotherapy students, and a request to the bachelor's degree Program in Physiotherapy at Oslo Metropolitan University was made. Many physiotherapy students have an interest in and experience with various physical activities. They have attended courses in exercise physiology, psychiatry, communication and ethical issues during their second year, providing them with the knowledge and skills needed to act as physical activity mentors.

Consequently, in addition to practice in the traditional clinical institutions, physical activity mentoring practice for mentally ill clients discharged from hospital has been implemented regularly in the bachelor's program since 2014. The students conduct one training session with the clients once a week over 12 weeks, based on the clients' activity preferences. Being physical activity mentors differs from ordinary practice since practice takes place in the clients' own home environment as a part of their everyday life. In addition, the students conduct the activity mentoring practice alone, and they meet a client group they otherwise seldom meet as bachelor's students. The students can contact a supervisor when needed, although there are no specific guidelines for the amount or quality of supervision.

Physiotherapy student learning in practice has been highlighted in several articles. Thomson et al. (2014) studied the perceptions of 2nd year physiotherapy students preparing for their first clinical placements. They found that students were unprepared regarding clinical reasoning and communication skills. Some articles focus on: different elements of collaborative and relational learning (Clouder and Adefila, 2017; Patton, Higgs, and Smith, 2018; Skøien, Vågstøl, and Raaheim, 2009; Vågstøl and Skøien, 2011); practical learning in students' professional development (Korpi, Piirainen, and Peltokallio, 2017); and the impact of learning through supervision (Milanese, Gordon, and Pellatt, 2013; Vågstøl and Skøien, 2011).

Student practice in mental health services has been studied previously in relation to stigma (Dandridge, Stubbs, Roskell, and Soundy, 2014; Maranzan, 2016) and therapeutic relationships (Ketola and Stein, 2013). Previous research on students as physical activity mentors has focused on the physical activity mentors' experiences of developing the therapeutic role (Møyner, 2016). Apart from that, we do not know of any other health education program carrying out similar practices, and no other studies to our knowledge have documented the experiences of students who have been physical activity mentors for mentally ill individuals.

Given the fact that this practice is so different from ordinary student practice, it was interesting to know more about the students' experiences as physical activity mentors and how they learn from this specific student practice. The assumption was that student practice alone with clients who experience mental illness might lead to different types of challenges and learning opportunities than supervised practice with clients who are mentally healthy.

Theoretical approach

Several assumptions underlie the theoretical approach of this study, leaning on a sociocultural learning perspective (Lave and Wenger, 1991). The situated perspective points out that learning fundamentally is a social process and highlights the interplay between social competence and personal experience (Engeström, 2001; Wenger, 2000). Physiotherapy students construct their learning in the interaction between school, clinical practice and everyday life, in this case through participating in educational courses and as physical activity mentors for mentally ill clients in municipal and home environments.

Interest and motivation drive learning processes in students, with teachers and supervisors acting as facil-

itators. Vygotsky and Cole (1978) introduced the concept of the "zone of proximal development," which indicates a difference between the level of learning that occurs by practicing alone and the level of learning achieved under supervision. According to Vygotsky as interpreted by Glassman (2001), the role of a supervisor is to guide students to enable them to exploit their own potential.

Students interact with their environment in order to adapt and learn, making "learning by doing" an important analytical concept. The learner is an explorer and needs to learn from life itself (Dewey, 1933). Lave and Wenger (1991) transferred the notion of "learning by doing" into a general theoretical concept called "legitimate peripheral participation." This concept identifies learning as a contextual social phenomenon and is particularly relevant for student learning in clinical placements. This indicates the movement of a novice from the periphery of a sociocultural community of practice to its center, becoming progressively more engaged within the clinical workplace (Lave and Wenger, 1991).

"Learning by doing" is in fact one of the training methods most relevant to healthcare workers and might be useful in empowering professional performance (Gil-Lacruz, Gracia-Pèrez, and Gil-Lacruz, 2019). Dewey (1933) introduced a link between what practitioners experience and how the experiences are processed to produce learning. He argued that reflective thinking moves people away from routine thinking, and his ideas provided a basis for the concept of reflective practice. These ideas were further developed by Schön (1987, 1991)), aiming to uncover the tacit dimensions of practice.

Traditional school learning has great emphasis on assimilative learning, meaning that learning is acquired mainly through reproduction of knowledge (Illeris, 2009). However, practitioners often find it impossible to deal with unique situations by applying standard theories or techniques (Dewey, 1933; Schön, 1987; Teekman, 2000), and busy professionals short of time sometimes tend to apply reflective practice in mechanical ways (Donaghy and Morss, 2000; Finlay, 2008). To build professional competence, health workers also need to activate accommodative learning, indicating the ability to be flexible and creative to meet the ever-changing requirements of a specific situation (Illeris, 2009; Tanggaard, 2014). Schön (1991) aimed to establish an epistemology of practice, accounting for practical competence in unpredictable and divergent situations. He identified two types of reflection: reflection in action (thinking while doing) and reflection on action (after-the-event thinking). According to Schön (1991) reflection in action is the core of professional artistry, indicating the need for both intuitiveness and creativity. Transformative learning is the highest level of learning, characterized by the ability to reconstruct learning by challenging existing constraints in order to handle difficult and crisis-like situations (Illeris, 2009). Due to the stressful nature of practice, the concept of critical incidents has emerged, representing strong emotional events that change perception and awareness. Such experiences stimulate action and have the potential to accelerate learning processes (Cope and Watts, 2000; Kleiman, 2011).

Students are novices and sometimes experience a steep learning curve as they enter practice. Through conscious reflection in and on action, they have the possibility to extend their learning. However, reflection is time consuming and requires attention and taking a step back, which makes it even more important to facilitate and stimulate reflective learning in student practice (Molander, 1996). Based on these theoretical assumptions, our research question is: How do physiotherapy students learn during practice as physical activity mentors for mentally ill clients?

Methods

This study has an explorative and interpretive design and applies a qualitative approach. Focus groups are chosen as a method to collect data because we were interested in how the students reflect together on how they learn from practical client situations. In this section we describe how we designed and collected the data, and how we interpreted the students' group reflections in order to gain in-depth insight into the phenomena of learning by doing.

Recruitment and participants

The study was approved by the NSD (Norwegian Center for Research Data), and research ethics guidelines were followed. Client confidentiality was secured, and no identifiable personal data was exchanged during the interviews. The students gave informed consent for their participation in the study, and they were informed that they could withdraw from the study at any time. All participants are anonymous, and they are given fictitious names in the results section. The total number of students who had been physical activity mentors was 23, and the recruitment of students was done by the first and second author. They posted an e-mail to all the students who had just finished their activity mentoring practice. The aim of the research project was explained, and the students were asked to participate in a focus group interview by proposing three different time schedules. Seven students did not participate in the study;

three students were physical activity mentors for patients with physical disabilities, and they were therefore excluded. Four students were unable to participate due to private appointments. A total of 16 physiotherapy students, 6 males and 10 females, participated in the focus group interviews. All students were between 23 and 31 years of age, and 7 students had previous work experience from psychiatric wards or facilities for disabled.

Data collection

Three focus group interviews were conducted in the spring of 2017, two months after the students had finished their physical activity mentoring practice. Each of the interviews was led by the second author, and she was assisted by the third author. The interviews lasted for about one and a half hours, and they were conducted over three days. The students were evenly distributed between the focus groups. All interviews were audio recorded. We made use of a semi-structured interview guide to introduce some themes to the students. This was developed based on evaluations from students who had been physical activity mentors earlier, and a previous study (Møyner, 2016). The themes from the interview guide were "expectations before meeting the client," "implementing and adjusting the activities," "learning process" and "supervision."

The students were invited to reflect upon their experiences, and the focus was on sharing and comparing, based on the belief that the participants find the meaning of their own action in the reaction of others (Morgan, 2012). The moderators encouraged the students to tell, compare and comment on each other's stories. The main moderator supported the group interaction, while the co-moderator assisted with follow-up questions. The first author, who was the course coordinator, knew the students and had a secretarial function during the interviews. She was sitting outside the group, had no eye contact with the students, and remained silent during the interviews.

Analyzing the interviews

The data were analyzed using thematic analysis, partly theoretical and partly data-driven (Braun and Clarke, 2006). We have included the following audit trail: What struck us the most the first time we listened to all the interviews was the students' expressions of not feeling quite prepared. They did not know what to expect when meeting the clients and described difficulties in building relations and communicating. They therefore felt they had learned more about communication skills and less about pathology and exercise physiology. Many students were surprised and sometimes overwhelmed when deviant behavior was exposed. We made the following preliminary codes: 1) "student expectations and preconditions,"; 2) "challenges in meeting mentally ill individuals"; and 3) "learning dimensions."

In our next step we read through the transcripts separately again to get deeper into the interviews. We applied different analytical concepts presented in the theory section in order to interpret the material and discover new insights. As we listened to the students' statements, we realized how they gradually managed to spot mental illness symptoms. Being alone with the clients was challenging, and many students stated that they missed a supervisor. The coding undertaken by all the authors was discussed in two separate meetings, resulting in additional codes. These were: 1) "recognizing deviant behavior,"; 2) "learning through dealing with challenging situations alone"; and 3) "supervision." During the first two steps of analyzing the interviews, we realized that the students had learned a lot from being physical activity mentors. In our last step we became increasingly focused on how the students had learned. These reflections prompted us to re-read the interviews, and eventually three main themes appeared across the three focus group interviews as presented in the Results section.

The three authors critically reflected upon their own roles. The first and second authors are both involved as teachers in the bachelor's program in which the physical activity mentoring practice took place. They both had an insider role as they knew a lot about the practice, and they had arranged and taken part in student evaluations in previous years. Therefore, it was important to be conscious of their understanding (Braun and Clarke, 2006), and not let the students' statements interfere with student experiences from earlier years. The interviews were conducted three weeks before the end of the term, and the students were informed that they did not risk getting the first or second authors as evaluators at their upcoming exam, nor as teachers in their final year of the bachelor's program. The students were asked to comment freely on any negative experiences concerning the activity mentoring practice. The third author played the role of an outsider in relation to the students. Together all the authors provided important contributions to elicit the diversity in the data material.

The mentally ill individuals assigned to physical activity mentors were still in contact with their health institutions. They were supposed to participate in

everyday activities in line with other people but needed help to initiate the activities and become more physically active. As this might be regarded as a medical measure, the individuals are referred to as clients.

Results

The themes from the final analysis were: 1) Experimenting and adapting the activities; 2) Experiencing clients breaking social and cultural codes; and 3) Learning from situations of discomfort. The results are presented with these themes as sub-headings.

Experimenting and adapting the activities

The students had attended several courses before they started their practice. Some of them stated that knowledge of pathology and exercise physiology provided a feeling of security before meeting the clients. Other students said that being a physical activity mentor did not require any specific professional knowledge. Simon said this:

> "*Anyone could have done the same job. You didn't need to be a physio.*"

Initially, the students reflected on their own expectations prior to meeting a person with a psychiatric diagnosis. However, many of them acknowledged that being prepared for everything that unfolded in the first meeting with the clients would be impossible. Julia put it this way:

> "*I made use of what I had learned from pathology sessions about schizophrenia. But then I tried to rethink, because the person you meet tends to have a lot of issues, and everything does not necessarily fit into a diagnosis.*"

The relationship with the clients developed through regular interactions. Many students stated that exploring communication skills and ethical considerations were more challenging than making use of theoretical knowledge related to pathology and exercising. Some clients did not respond adequately or failed to make use of the information provided. Therefore, the students had to pay extra attention to the clients' body language, which would sometimes be introverted and apathetic, and sometimes stressed and anxious. Tom said that eventually, after the third meeting, he was able to communicate with his client. Annie highlighted communication issues with her client in the following:

> "*My client had no thoughts about having a bad day. Asking her was not an option, because she had no reflections on the many voices she heard, which made it exhausting.*"

The severity and extent of psychiatric symptoms varied widely between clients. Obviously, this challenged the students a lot in finding and adapting relevant physical activities and made it hard to ask for clients' opinions. Some clients could suddenly dissociate or hallucinate; some were unpredictable or had no personal motivation or exercise aims. The students presented many examples from situations where they demonstrated the ability to improvise and adapt the activities to the client's current state of mind. Julia compared it to planning an activity with a child who is constantly changing his mind. Molly supervised a client who was afraid to fall when she was climbing stairs. She described how she had to troubleshoot to prevent the client's anxiety from blocking the exercise yield, which eventually made her "play the physiotherapy card":

> *"As a physiotherapist, I can see that you climb the stairs very convincingly. You lean forward, so there is no danger of you falling backwards."*

Eventually, Molly noted that the client relaxed and felt safe. Other students described their clients as being perfectionists, and some of them immediately emerged as eager and highly motivated. The psychiatric symptoms were not always visible, or in some cases they were more difficult to detect. Both John and Susanne described clients with obsessive behavior, making it necessary to calm them down rather than motivate them to make a greater effort. Susanne reflected on her own learning in meeting a client with manic symptoms:

> "*I learned a lot from having to restrict the activities for my client. She was extremely conscientious and did not tell me when she was in pain. When you have a client unable to know when to stop, you must be extremely careful to pick up on what's going on and recognize when something is enough.*"

These examples show how the students, depending on the degree of their clients'psychiatric symptoms, had to experiment and improvise more than what would have been the case with a non-psychiatric client population.

Experiencing clients breaking social and cultural codes

Several activities were performed in outdoor environments or fitness centers where people were constantly coming and going. Despite that, many clients showed little or no awareness of their own bodily expressions. They were not always able to comprehend and respond to cultural codes for acceptable behavior. Many clients looked different, and some even had a strong odor. Tom described this situation:

"We were out walking and he became tired. He shuffled, snorted, and his jaw hung. He didn't do anything about it."

The students felt responsible for their clients, and some tried to prevent clients from receiving unwanted attention when many people were gathered. Other clients had no idea about what was appropriate clothing during physical activity. Helena, who was performing some physical tests with her client, explained:

"She arrived in rubber boots without socks, and she would not take them off when she was to be tested. So I had to pull her boots off."

Both Karen and Frank described how their clients, even though exercising made them sweat, saw no point in taking a shower. Frank had to confront his client:

"*I told him to go change and have a shower even before we went training. His body odor was so strong that I felt uncomfortable, and I didn't want to expose him to other people at the fitness center."*

The most challenging situations arose when the students were unable to protect their clients and had to deal with a situation where deviant behavior generated unwanted attention. Annie experienced an unpleasant situation at the subway station when her client suddenly became very intimate in the presence of many other people. The client spoke loudly and revealed a lot of sensitive information, which Annie found very embarrassing to listen to. Not knowing how to respond to the situation made Annie feel helpless and unprofessional. However, she felt more at ease after a quick debrief with her supervisor who helped her understand that the client probably just needed someone to talk to and that Annie could join in as a listener.

Learning from situations of discomfort

Although the students stated that they were motivated to work with mentally ill persons, the learning potential seemed unclear to most of them. Some students stated that they initially expected to learn more about mental illness and applied exercises. However, they gradually realized that their learning was largely related to how they handled being alone with clients in emotionally challenging situations. Tom felt uncomfortable and embarrassed in the meeting with a quiet client:

"*I was trying to find something to talk about when the traffic went by. There was a nice car, a red roof . . . Just to say something. I wasn't prepared for him just to walk along, completely silent."*

The students realized that being alone in challenging and embarrassing situations forced them to rely on their own judgment. Some of the clients dissociated without warning, and the students said that this was very difficult and sometimes frightening. Annie described it like this:

"*She was running on a treadmill, and suddenly she just [mentally] disappeared completely. She was running slower and slower, and I couldn't get in touch with her. It was scary, but I learned a lot from it."*

Despite the discomfort triggered in some situations, the students agreed that these situations, more than anything, highlighted their learning. When you are alone in a difficult situation with responsibility for a client, you must look for flexible solutions. However, some students found it difficult to be without a supervisor when challenging situations arose. Despite this, many students failed to ask for supervision after experiencing situations of discomfort. Annie described how supervision enhanced her learning:

"If I had not experienced my supervisor pushing me to step outside of my comfort zone, I would have missed a lot of learning, I think. I learned a lot from asking difficult questions. It is unpleasant to talk about the issues that are a bit taboo, in a way. But you learn a lot about yourself too; how to react when being challenged."

This example shows that although the students learned by taking control in challenging situations, they sometimes missed the opportunity to extend their learning and process their experiences by not asking for supervision.

Discussion

The subject of this study is student learning in practice, and we have posed the question of how physiotherapy students learn when serving as physical activity mentors for mentally ill clients. The results indicate that the students learned from having to deal with unpredictable situations without a supervisor present. In a further analysis of the material, students' learning is discussed in light of learning by doing and reflection in and reflection on action.

Learning by doing

Some students described a feeling of not being properly prepared when they entered practice as physical activity mentors and being responsible for mentally ill clients made the first meetings challenging. Ketola and Stein (2013) described similar distressing experiences in nursing students when meeting worried and seriously ill psychiatric patients. Although the students' theoretical knowledge represented a safe base before starting their

practice, many students stated that their knowledge was not enough to organize and adapt activities for the clients. Many students said that they were most challenged in terms of communication skills.

This mismatch between theory and practice may be related to the fact that higher education is still characterized by a strong pull toward security and consensus, and therefore is out of line with life outside the educational institutions (Kleiman, 2011). Practice is characterized by complexity, and pure knowledge acquisition in line with assimilative learning may have a limited value when the students' knowledge is to be challenged in practical situations (Finlay, 2008; Illeris, 2009; Schön, 1991; Teekman, 2000; Thomson et al., 2014). However, the therapist and client alliance will always contain elements of uncertainty. Even experienced clinicians find that working with clients is inherently unpredictable, and there will be a constant need for adjusting a treatment plan from one treatment to another (Teekman, 2000).

Learning takes place when knowledge is applied through active participation in daily practice (Lave and Wenger, 1991). Practice as physical activity mentors stimulated the students' learning, primarily by allowing the students to work independently in adapting activities for a client group characterized by a high degree of variation and unpredictability. Novice practitioners, lacking knowing-in-action, sometimes cling to rules and procedures in a mechanical way (Finlay, 2008). This did not seem to be the case for the students participating in the current study, possibly because there were very few rules and procedures to follow. The students learned by doing, making them gradually more responsible in situations where there is no blueprint for what is "right and wrong". The statements show how they gained more confidence as they learned to know the clients, and through experimenting and adapting the activities. This is comparable to Korpi, Piirainen, and Peltokallio (2017) and Patton, Higgs, and Smith (2018), who also found that physiotherapy students felt more confident when they participated successfully in clinical workplaces. Giving students trust and responsibility seems to be empowering and will optimize learning outcome (Clouder and Adefila, 2017).

Undergraduate physiotherapy students are taught evidence-based treatment approaches and interventions. However, evidence-based approaches focused on controlled research methodologies only are not always applicable to clients with comorbidity and complex life challenges (Anjum, Copeland, Kerry, and Rocca, 2018). Considering the unpredictable nature of practice, person-centered care can therefore constitute an appropriate approach for mentally ill clients. This approach aims to support and empower people with severe mental illness so they can attain personal goals while living with chronic disability (Hamovitch, Choy-Brown, and Stanhope, 2018; Ketola and Stein, 2013). This enables a more comprehensive understanding of the client's different perspectives related to health and life challenges (Adams and Grieder, 2014). Such an understanding will require an open and exploratory approach and can be developed through good patient-therapist interactions (Hamovitch, Choy-Brown, and Stanhope, 2018). The students' practice experiences reveal that they were highly person-centered. They experimented through learning by doing, and they gradually developed relational skills, enabling them to be more sensitive to the clients' specific life situations.

Individuals with severe mental illness can be regularly physically active when provided with a supportive environment and suitable opportunities (Farholm, Sørensen, and Halvari, 2017). Consequently, being able to interact and communicate appropriately with the individual client will constitute a more important skill than mere dissemination of health-related theoretical knowledge (Wijma et al., 2017). The students worked hard through trial and error to adapt the activities to the clients' state of mind. Although they did not all succeed in detecting the clients' specific needs and personal goals, they all gained valuable experience, primarily by trusting themselves in being able to cope with unpredictable situations alone.

Learning through reflection in action

According to Schön (1991), reflection in action is the "core of professional artistry" (Finlay, 2008). However, this is not a property of experts and demonstration of expertise only (Yanow and Tsoukas, 2009), and does not mean that students are unable of exerting reflection in action. Different levels of reflective thinking can be described through health workers' self-questioning (Teekman, 2000), which also includes students.

Schön (1987) described reflection in action as *"a capacity to respond to surprise through improvisation on the spot"*. He emphasized an experimental character, consisting of four components: routinized action, encounter of surprise, reflection, and new action. The students' actions were not routinized, but they experienced moments of surprise, forcing them to reflect in order to handle the situation. The choices of action were not always "best practice", but they were at least partially initiated through reflective activity.

Working life arenas lean on a different kind of logic compared to educational institutions, as "real life" often demands quick decisions (Tanggaard, 2014). Tackling

challenging tasks requires on-the-job learning and might lead to increased motivation and confidence, especially when the task has been solved successfully (Eraut, 2008). Having trust and being able to handle challenging situations is self-empowering (Clouder and Adefila, 2017; Teekman, 2000), and overcoming resistance and ambivalence can serve as central drivers of learning (Heggen and Smeby, 2012; Patton, Higgs, and Smith, 2018; Rees, 2013; Tanggaard, 2014). In fact, ongoing "monitoring" from a supervisor might in some cases demotivate the learning processes (Clouder and Adefila, 2017; Patton, Higgs, and Smith, 2018). On the other hand, the speed of decision-making might impede reflection in action (Donaghy and Morss, 2000; Finlay, 2008), making practice without a supervisor even more challenging for students with no earlier clinical experience. Several students described stressful and even frightening situations. These experiences could potentially have paralyzed the students, but although they were largely unprepared, they all managed to cope with the situations in some way.

Tanggaard (2014) stated that creativity is a necessary ingredient in learning processes. When you exceed the limits of your knowledge, you need to experiment (Illeris, 2009; Molander, 1996; Tanggaard, 2014). Creativity is often triggered by situations evoking strong emotions such as anger, anxiety and sadness, and these can further act as triggers for reflexive activity (Cope and Watts, 2000; Kleiman, 2011; Rees, 2013). The students sometimes had to cope with critical incidents when deviant behavior was exposed (Cope and Watts, 2000; Tanggaard, 2014). To uncover this lack of situational understanding, the students did not primarily make use of professional knowledge. They developed creative ways to cope with challenging situations, and to do so they applied some sort of everyday knowledge.

An important question, however, is whether the students' actions were solely based on reflective thinking, or sometimes on prejudices or unprocessed emotions? The students stated that although they were able to take care of their clients in safe ways, they felt inadequate or embarrassed in some situations. Attending courses in psychiatry and mental health before entering practice, is not necessarily enough to prepare students for their own emotional reactions in meetings with mentally ill clients (Thomson et al., 2014). People who look different or exhibit deviant behavior might trigger stereotypical negative reactions (Goffman, 1963; Thornicroft, Rose, and Mehta, 2010), and students sometimes try to limit the impact of the clients' strange behaviors by introducing standards of normality (Dandridge, Stubbs, Roskell, and Soundy, 2014; Ketola and Stein, 2013). Would it not be possible for the client to do the exercises without the student having to pull her boots off? By trying to prevent the clients from receiving unwanted attention, the students probably protected themselves as much as the clients.

Learning through reflection on action

The focus group interviews were conducted one month after the students had finished their activity mentoring practice. The students' statements therefore obviously appear as reflections on action. Although they managed to overcome challenges, practicing alone with clients sometimes made learning processes demanding, and they had little time to process the impressions from the day. This is reasonable since undergraduate students with no clinical experience still lack the ability to catch the complexity, extract the essence of and respond adequately in every situation (Patton, Higgs, and Smith, 2018). Students' experiences can thus be understood as "gap-producing" situations, which according to Teekman (2000) typically occur when faced with an unusual situation characterized by either: 1) A lack of situational information, which occurs when the health worker has too little information about the situation and fails to see "the whole picture."; 2) Overload of situational information, when the health worker is unfamiliar with the setting and has a lot of conflicting information; and 3) A lack of appropriate propositional knowledge, meaning that the health worker lacks knowledge of specific medical conditions and care requirements.

Extended learning based on situations that trigger discomfort and creative solutions obviously require more than everyday knowledge. Insight into the clients' deficiencies is usually necessary to deal with mentally ill clients in a professional manner (Wijma et al., 2017). Schön's (1991) concept "reflection on action" introduces a higher level of reflection, as the health worker needs to step back and take time to think through the situation.

Workplace learning is often incidental, asking for a retrospective contemplation of practice in order to uncover mistakes and knowledge hidden in a situation (Korpi, Piirainen, and Peltokallio, 2017; Schön, 1991). Students with no earlier clinical experience will need to be mirrored on how their actions and behavior affect other people. A high occurrence of mental illness stigma is documented, even among healthcare students and professionals (Maranzan, 2016; Thornicroft, Rose, and Mehta, 2010), and this can be related to both limited knowledge of mental illness and safety concerns (Dandridge, Stubbs, Roskell, and Soundy, 2014). Reflection on action might help students develop empathy and ethical reflection by confronting their own conscious or unconscious prejudices toward mentally ill

clients. However, by practicing alone the students did not have full access to a collective learning dimension that comes from being part of a community of practice (Engeström, 2001; Wenger, 2000). To exert reflection on action, the students had to process their experiences alone or with a supervisor, although many students did not take the opportunity to ask for supervision. One possible reason may be that undergraduate students do not always know that some situations allow for more than one interpretation. Some studies suggest that successful reflection is profoundly difficult without guidance and support (Donaghy and Morss, 2000; Routledge et al., 1997), and we therefore question if students are sometimes given too much responsibility for their own learning when supervision is offered only on a "get in touch when needed" basis. Several students stated that they had learned a lot from the conversations they had had with the supervisor after challenging experiences. This underlines the importance of students having easy and frequent access to graduated supervision to guide them through the zone of proximal development (Engeström, 2001; Vygotsky and Cole, 1978) and to help them process their own emotional reactions (Clouder and Adefila, 2017; Ketola and Stein, 2013; Korpi, Piirainen, and Peltokallio, 2017; Teekman, 2000; Vågstøl and Skøien, 2011).

Methodological reflections

The students' experiences in our research correspond with earlier and later student evaluations, and this strengthens our results. It also increases the trustworthiness of this study that the researchers represented different professional backgrounds, seeing physiotherapy from both insider and outsider perspectives. We believe that this has provided a more credible and nuanced analysis.

However, one limitation of this study is related to student representation. Our findings were based on one student cohort from one university in Norway. Thus, our findings may not be representative for cohorts from earlier or later years and from other higher education institutions. Further, the students were preparing for an exam, and this might have affected their opportunity to participate. Two of the authors are teachers in the bachelor's program, which might represent potential conflicts of interest. However, this challenge was met by including the third author who did not have any affiliation with the student group. The main purpose of this study has been explorative rather than comparative; thus further studies of this student practice are recommended to compare across student groups.

Implications for student education

Given the fact that most practical work with clients contains elements of unpredictability, a relevant question might be how we can educate health workers to act appropriately in situations unknown at the time of education (Illeris, 2009). Bergland and Øien (1997) argued that we need to acknowledge the experience of uncertainty in professional practice as an expression of being uncertain in a competent way. However, the term "uncertainty" as used in this context must not be misunderstood. Being "competently uncertain" is about being able to reflect on alternative interpretations and choices of action and showing professional judgment based on ethically acceptable justifications. This kind of competence can only be acquired over time and through reflection and clinical decision-making. For health educational institutions, it is crucial to facilitate enough supervised practice, giving the students opportunities to engage in critical reflection. Larsen, Juritzen, Knutsen, and Feiring (2017), put it this way: *"Perhaps we should, to a greater extent, educate the future health workers, not to seek absolute security, conveyed through models, standards or evidence, but rather to tolerate and cultivate the doubts that result from critical reflection and the danger of not getting clear answers"*.

Conclusion

The results show that student practice as physical activity mentors for individuals with mental illness can contribute to learning. The students learned by doing, especially by communicating and being sensitive to people with differing preconditions and needs, and by exerting flexibility to adapt the activities to the client's state of mind. Being faced with unpredictable and challenging situations, the students found creative solutions in situations where there is no right and wrong. They exerted reflection in action to some degree, but their choices of action depended on the severity of mental illness symptoms exposed when challenging situations unfolded. The students experienced emotional reactions to difficult and embarrassing situations, which sometimes triggered reflection on action, especially for those students who received supervision afterward.

Practice as physical activity mentors for clients with mental illness can make a small but important contribution toward becoming a reflective practitioner. However, there are limits to how far students can exploit their learning potential while practicing alone. Undergraduate students with little clinical experience are not always able to catch the complexity in challenging situations. We therefore recommend a close follow-up by supervisors to enhance learning

and reflection in this specific student practice, with special attention toward stigmatizing attitudes and behaviors.

Disclosure statement

The authors report no conflict of interest.

References

Adams N, Grieder D 2014 Treatment planning for person-centered care: Shared decision. Waltham, MA: Elsevier, Inc.

Anjum RL, Copeland S, Kerry R, Rocca E 2018 The guidelines challenge - Philosophy, practice, policy Journal of Evaluation in Clinical Practice. 24: 1120–1126.

Bergland A, Øien I 1997 Praksishandlinger og forståelse [Practices and understanding]. In: Bergland (Ed) Praksis: Velferdsyrkenes Kunnskapsgrunnlag [Practice: The Welfare Professions' Knowledge Base], p.108. Otta: Tano Aschehoug.

Braun V, Clarke V 2006 Using thematic analysis in psychology Qualitative Research in Psychology. 3: 77–101.

Clouder L, Adefila A 2017 Empowerment of physiotherapy students on placement: The interplay between autonomy, risk, and responsibility Physiotherapy Theory and Practice. 33: 859–868.

Cope J, Watts G 2000 Learning by doing. An exploration of experience, critical incidents and reflection in entrepreneurial learning International Journal of Entrepreneurial Behaviour and Research. 6: 104–124.

Dandridge T, Stubbs B, Roskell C, Soundy A 2014 A survey of physiotherapy students' experiences and attitudes towards treating individuals with mental illness International Journal of Therapy and Rehabilitation. 21: 324–330.

Dewey J 1933 How we think: A restatement of the relation of reflective thinking to the educative process. Boston: DC Heath.

Donaghy ME, Morss K 2000 Guided reflection: A framework to facilitate and assess reflective practice within the discipline of physiotherapy Physiotherapy Theory and Practice. 16: 3–14.

Engeström Y 2001 Expansive learning at work: Toward an activity theoretical reconceptualization Journal of Education and Work. 14: 133–156.

Eraut M 2008 Using research into how professionals learn at working for enhancing placement learning. The WACE Asia Pacific Conference, Sydney, Australia.

Farholm A, Sørensen M, Halvari H 2017 Motivational factors associated with physical activity and quality of life in people with severe mental illness Scandinavian Journal of Caring Sciences. 31: 914–921.

Finlay L 2008 Reflecting on 'Reflective practice'. Practice-Based Professional Learning Paper 52, The Open University. https://oro.open.ac.uk/68945/1/Finlay-%282008%29-Reflecting-on-reflective-practice-PBPL-paper-52.pdf.

Gardner-Sood P, Lally J, Smith S, Atakan Z, Ismail K, Greenwood KE, Keen A, O'Brian C, Onagbesan O, Fung C, et al. 2015 Cardiovascular risk factors and metabolic syndrome in people with established psychotic illnesses: Baseline data from the IMPaCT randomized controlled trial Psychological Medicine. 45: 2619–2629.

Gil-Lacruz M, Gracia-Pèrez ML, Gil-Lacruz AI 2019 Learning by doing and training satisfaction: An evaluation by health care professionals International Journal of Environmental Research and Public Health. 16: 1397.

Glassman M 2001 Dewey and Vygotsky: Society, experience, and inquiry in educational practice Educational Researcher. 30: 3–14.

Goffman E 1963 Stigma. In: Notes on the management of spoiled identity, New York:Simon & Schuster.

Hamovitch EK, Choy-Brown M, Stanhope V 2018 Person-centered care and the therapeutic alliance Community Mental Health Journal. 54: 951–958.

Harvey SB, Hotopf M, Øverland S, Mykletun A 2010 Physical activity and common mental disorders British Journal of Psychiatry. 197: 357–364.

Heggen K, Smeby JK 2012 Gir mest mulig samanheng også den beste profesjonsutdanninga? [Does the greatest possible coherance also provide the best professional education?] Norsk Pedagogisk Tidsskrift. 96: 4–14.

Illeris K 2009 Kompetence, læring og uddannelse [Comptence, learning and education] Nordisk Pedagogik. 29: 194–209.

Ketola J, Stein JV 2013 Psychiatric clinical course strengthens the student-patient relationships of baccalaureate nursing students Journal of Psychiatric and Mental Health Nursing. 20: 23–34.

Kleiman P 2011 Learning at the edge of chaos All Ireland Journal of Teaching and Learning in Higher Education. 3:62.7.

Korpi H, Piirainen A, Peltokallio L 2017 Practical work in physiotherapy students' professional development Reflective Practice. 18: 821–836.

Larsen K, Juritzen TI, Knutsen IR, Feiring M 2017 Hva er kritikk i helsefagene og hva skal vi med kritiske perspektiver? [What is critique in the health sciences, and why do we need critical perspectives?]. In: Feiring M, TI J, Knutsen I, Juritzen I Larsen K (Eds) Kritiske Perspektiver i Helsefagene [Critical Perspectives in the Health Sciences], p. 324. Oslo: Cappelen Damm Akademisk/NOASP

Lave J, Wenger E 1991 Situated learning: Legitimate peripheral participation. Cambridge: Cambridge University Press.

Maranzan KA 2016 Interprofessional education in mental health: An opportunity to reduce mental illness stigma Journal of Interprofessional Care. 30: 370–377.

Milanese S, Gordon S, Pellatt A 2013 Undergraduate physiotherapy student perceptions of teaching and learning activities associated with clinical education Physical Therapy Reviews. 18: 439–444.

Molander B 1996 Kunskap i Handling [Knowledge in Action]. Göteborg: Daidalos.

Morgan DL 2012 Focus groups and social interaction. In: Gubrium JF, Holstein JA, Marvasti AB, McKinney KD (Eds) Handbook of interview research: The complexity of craft, p. 161–176. Thousand Oaks, CA: SAGE.

Møyner E 2016 Terapeutrollen belyst ved studenterfaringer [The therapists role is elucidated by student experiences] Fysioterapeuten. 4: 53–57.

Patton N, Higgs J, Smith M 2018 Clinical learning spaces: Crucibles for practice development in physiotherapy

clinical education Physiotherapy Theory and Practice. 34: 589–599.
Pedersen BK, Saltin B 2015 Exercise as medicine - Evidence for prescribing exercise as therapy in 26 different chronic diseases Scandinavian Journal of Medicine and Science in Sport. 25: 1–72.
Pitkänen S, Kääriäinen M, Oikarainen A, Tuomikoski AM, Elo S, Ruotsalainen H, Saarikoski M, Kärsämänoja T, Mikkonen K 2018 Healthcare students' evaluation of the clinical learning environment and supervision - A cross-sectional study Nurse Education Today. 62: 143–149.
Rees KL 2013 The role of reflective practice in enabling final year nursing students to respond to the distressing emotional challenges of nursing work Nurse Education in Practice. 13: 48–52.
Rosenbaum S, Tiedemann A, Sherrington C, Curtis J, Ward PB 2014 Physical activity intervention for people with mental illness: A systematic review and meta-analysis Journal of Clinical Psychiatry. 75: 964–974.
Routledge J, Wilson M, McArthur M, Richardson B, Stephenson R 1997 Reflection on the development of a reflective assessment Medical Teacher. 19: 122–128.
Salminen H, Öhman E, Stenfors-Hayes T 2016 Medical students' feedback regarding their clinical learning environment in primary healthcare: A qualitative study BMC Medical Education. 16: 313.
Schön DA 1987 Educating the reflective practitioner: Toward a new design for teaching and learning in the professions, p. 5. Jossey-Bass: San Francisco, CA.
Schön DA 1991 The reflective practitioner: How professionals think in action. Avebury: Aldershot.
Skøien AK, Vågstøl U, Raaheim A 2009 Learning physiotherapy in clinical practice: Student interaction in a professional context Physiotherapy Theory and Practice. 25: 268–278.
Skrede A, Munkvold H, Ø W, Martinsen EW 2006 Treningskontakter ved rusproblem og psykiske lidingar [Training contacts for substance abuse problems and mental illness] Tidsskrift for Den Norske Lægeforening. 126: 1925–1927.
Steel Z, Marnane C, Iranpour C, Chey T, Jackson JW, Patel V, Silove D 2014 The global prevalence of common mental disorders: A systematic review and meta-analysis 1980-2013 International Journal of Epidemiology. 43: 476–493.
Tanggaard L 2014 A situated model of creative learning European Educational Research Journal. 13: 107–116.
Teekman B 2000 Exploring reflective thinking in nursing Journal of Advanced Nursing. 31: 1125–1135.
Thomson D, Boyle D, Legg C, Owen M, Newman M, Cole MJ 2014 Clinical placements: The perspectives of UK physiotherapy students on how prepared they were by their university for their first clinical placements: An example of one HEI International Journal of Practice-based Learning in Health and Social Care. 2: 69–79.
Thornicroft G, Rose D, Mehta N 2010 Discrimination against people with mental illness: What can psychiatrists do? Advances in Psychiatric Treatment. 16: 53–59.
Vågstøl U, Skøien AK 2011 "A learning climate for discovery and awareness": Physiotherapy students' perspective on learning and supervision in practice Advances in Physiotherapy. 13: 71–78.
Vancampfort D, Knapen J, Probst M, Scheewe T, Remans S, De Hart M 2012 A systematic review of correlates of physical activity in patients with schizophrenia Acta Psychiatrica Scandinavia. 125: 352–362.
Vygotsky LS, Cole M 1978 Mind in society: The development of higher psychological process. Cambridge, MA: Harvard University Press.
Wenger E 2000 Communities of practice and social learning systems SAGE Journals. 7: 225–246.
Wijma AJ, Bletterman AN, Clark JR, Vervoort S, Beetsma A, Keizer D, Nijs J, van Wilgen P 2017 Patient-centeredness in physiotherapy: What does it entail? A systematic review of qualitative studies Physiotherapy Theory and Practice. 33: 825–840.
Yanow D, Tsoukas H 2009 What is reflection-in-action? A phenomenological account Journal of Management Studies. 46: 1339–1364.