



Article Perceptions of patients with psychosis on living an active lifestyle

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Abstract: The aim of the study was to gain insights into how people living with psychosis at a psychiatric hospital describe what living an active lifestyle means for them. Interpretative phenomenological analysis was used to guide the methodology. The study involved three participants diagnosed with psychotic disorder living at an institution offering long-term in-patient treatment. Semistructured interviews were conducted, including inviting participants to 'walkingby-talking' and to bring photos representing their notions of an active lifestyle to enhance the richness of the data and increase participants' agency. All participants talked about a range of different activities they associated with an active lifestyle. One important dimension of these activities was the quality of relationships with others. However, as long-term inpatients, the participants experienced individual and structural barriers to living an active lifestyle. Individuals living with psychosis revealed a broader and deepened understanding of how an active lifestyle is and is profoundly bound to living a socially active life, beyond 'physical activity and exercise'. The participants described how long-term hospitalization made them feel that their real life was on hold. These seem to be important challenges to address, in order to offer meaningful activity integrated with treatment. The study highlights the importance of individual, relational and contextual meaning dimensions.

Keywords: severe mental illness; physical activity; positive mental health; health promotion; interpretative phenomenological

Introduction

The overall aims of current psychiatric treatment is to support patients to cope with their illness, empower them, build relationships, and participate in meaningful activities (Drake et al., 2003). Treatment of severe mental illness (SMI) has evolved from longer inpatient treatment towards more local out-patient treatment and shorter in-treatment stays (Kolstad & Pedersen, 2009). Despite this shift, some institutions still offer long-term intreatment psychiatric care for individuals in need. This is often the case for patients with psychosis, which is characterized as one of the most severe mental diagnoses, resulting in the largest reduction in function among the psychiatric illnesses (Tandon et al., 2008). The national guidelines for treatment of psychosis disorders in Norway state that patients with psychosis should be offered physical activity (PA) as part of their treatment (Helsedirektoratet 2013). The European Psychiatry Association has also recently advocated for the introduction of structured exercise as a core component of treatment for individuals with SMI (Stubbs et al, 2018).

Physical activity, living an active lifestyle and health promotion

There is a growing body of research showing that a physically active life is beneficial for individuals diagnosed with SMI, including increased psychological well-being and quality of life, reduced symptoms of psychiatric diseases and improved physical health parameters (e.g., Dauwan et al., 2016; Firth et al., 2015; Morres et al., 2019; Rosenbaum et al., 2014). Research findings have not shown that PA can reduce the risk of psychosis (Brokmeier et al., 2020). However, large and positive effects of PA have been found on reducing schizophrenia symptoms. Further, PA is found to contribute to reducing some of the symptoms of psychosis and improves management of others (Rosenbaum et al., 2014).

Despite the overall evidence of these beneficial health effects of PA, researchers have previously noted that people with SMI can be highly sedentary (Vancampfort et al., 2017), and patients living with mental illness (Fraser et al., 2015), with psychosis specifically (Newberry et al., 2018), and from staff working with these populations (Glowacki et al., 2019) have reported barriers to being physically active. Specifically, several challenges related to supporting patients living with psychosis disorder to be physically active and make lifestyle changes include lack of motivation, psychotic symptoms, lack of physical healthrelated knowledge and side effects of medication (Abed, 2010; Newberry et al., 2018). The challenges of supporting patients could partly be explained by what is described as the "translational gap" (Rebar & Taylor, 2017). The translational gap refers to the difficulties of applying and adapting research findings about the positive effects of PA, to the implementation of PA in a constructive or meaningful way to people and patients in real life (Rebar & Taylor, 2017). To narrow the gap and to increase the likelihood of staff success in supporting lifestyle changes, such as increased PA, it has been argued that there is a need to better understand the patient's perspective (Mjøsund et al., 2015). But the vast majority of research about patients with psychotic disorders, PA and health has been situated within a bio-medical perspective (Boydell et al., 2010), focusing on quantitative research exploring standardized measures of symptoms, social function, quality of life and effects of interventions (e.g., Bueno-Antequera et al., 2018; Erdner & Magnusson, 2012; Tandon et al., 2008). However, research aiming for a deeper understanding of patients' own perceptions of their physical activity behaviour (Rebar & Taylor, 2017) and their health (La et al., 2014; Mjøsund et al., 2015) seems to be lacking.

Including the lived experiences of people with SMI can be a rich source of important knowledge regarding health promotion work (Mjøsund et al., 2017). The researchers who have conducted qualitative work in the field so far (e.g., Abed, 2010; Aschbrenner et al., 2013; Erdner & Magnusson, 2012; Glover et al., 2013; Hargreaves et al., 2017; Newberry et al., 2018) have shown that helping people with SMI improve their health through lifestyle changes can be complicated (Abed, 2010). This is due to barriers related to psychiatric symptoms and anti-psychotic medicine (Glover et al., 2013) and lack of motivation (Abed, 2010; Newberry et al., 2018). Reduced self-concept and isolation have also been identified as barriers to being physically active (Abed, 2010; Erdner & Magnusson, 2012). Social support from the family has been found to facilitate lifestyle change, and equally an unsupportive social environment can serve as a barrier (Aschbrenner et al., 2013). The study of Hargreaves and colleagues (2017) focused on how to facilitate the process from inactive to physically active among patients with SMI in their recovery phase. Of the core findings, was the importance to support these individuals in relation to what they perceived as meaningful physical activities for them. Despite researchers offering insights into patients own perceptions of the barriers and facilitative factors to being physically active as described, it can be argued that it has focused mostly on physical activity understood as exercise. As such, broadening the perspective on what an active lifestyle could mean for eujapa.upol.cz

patients themselves might develop the knowledge base on how to facilitate initiatives and support individuals with psychosis to live a more active life.

Perspective on mental health promotion

Mental health promotion has been described as work that strives to enable people to cope with both predictable and unpredictable life events through increased self-esteem and perceived well-being (McCulloch & Boxer, 1997). Health promotion is an understanding of health that is different from the more traditional medical perspective, that is a focus on illness reduction (Kobau et al., 2011). Health promotion is thus related to the concept of positive mental health, which offers a more nuanced understanding of mental health inspired by positive psychology (Keyes & Lopez, 2002). "The dual continual model of mental health" describes how mental health consists of both mental illness and positive mental health (Keyes, 2002). In this model, mental illness and positive mental health reflects two distinct continua, rather than the extreme ends on a single spectrum (Keves & Lopez, 2002). The extreme ends in the continua of mental illness are "mental illness" and "no mental illness", whereas the continua of positive mental health has the two extreme ends of "high positive mental health" and "low positive mental health" (Keyes & Lopez, 2002; Keyes, 2005). As such, mental health promotion can include both decreasing symptoms of mental illness, yet also encompass increasing positive mental health (Keyes & Lopez, 2002). Positive mental health can be understood as a continuum from minimal to optimal mental health, associated with subjective states in the range from unhappiness and minimal well-being to happiness and high levels of well-being. According to Keyes (2007), positive mental health consists of the three components of emotional, psychological and social well-being. Emotional well-being can be defined by the feeling of being rather cheerful, interested in life, in a good mood, glad, calm and peaceful, and feeling alive (Keyes 2007). Psychological wellbeing is often portrayed as positive individual functioning, self-acceptance, positive relationships with others, personal growth, experiencing meaningfulness about life, feeling autonomous and having a sense of control over one's own life. Finally, social well-being is described as a feeling of being socially accepted and integrated, being socially valued, and a perception of growing and developing socially (Westerhof & Keyes, 2009).

Researchers who have used the dual model of mental health have shown that it is valid and trustworthy when exploring mental health among psychiatric patients (Franken et al., 2018). Patients living with SMI can, at the same time, experience higher levels of positive mental health, which in turn can moderate the impact of the clinical symptoms of mental illness on their general ability to function in their daily life (Seow et al, 2016). Further, Franken and colleagues (2018) emphasized the importance of exploring well-being, in addition to psychiatric illness, within mental health care settings. However, the dual model of mental health has not directly been used to explore how an active lifestyle could be more fully integrated as part of health promotion in support of positive mental health. Thus, the aim of the current study was to gain insight into how people living with psychosis at a psychiatric hospital describe what living an active lifestyle means for them. Further we explored whether and how they experienced support from staff to live an active lifestyle based on their own terms, during their stay at the mental institution.

Materials and Methods

Study design

Interpretative Phenomenological Analysis (IPA) was chosen to guide the design and methodology for this study (Smith et al., 2009). An IPA study involves detailed investigation of participants' lifeworld, explores personal experience and is concerned with individual perceptions of an object, situation or event. How the world appears to the individual is central, which makes it well suited to support researchers' focus on understanding, representing, and making sense of peoples' ways of understanding and talking about their experiences (Smith et al., 2009). The methodology is based on three theoretical cornerstones: phenomenology, double hermeneutics and ideography. It represents an interpretive rather than a descriptive approach to analysis and typically involves a detailed analysis of the verbatim accounts produced through semi-structured interviews, with a relatively small group of research participants (Smith et al., 2009).

Participants and recruitment

The participants were recruited from a psychiatric hospital that has a 24-hour unit with 12 long-term beds, as well as two user-controlled units, in South-eastern Norway. It offers treatment for patients in the age range of 18-65 years. That said, most patients are usually in the younger age group, from 18-35 years old. Employees at the institution include psychologists, psychiatrists, a sports pedagogue, a music therapist, psychiatric nurses and environmental workers with special training in psychiatry, thus ensuring a variety in treatment and activity offered.

In line with the purpose of the study, we wanted to recruit individuals diagnosed with a psychotic disorder (F20-F29: Schizophrenia, schizotypal and delusional disorders; ICD-10; World Health Organization, 1992). Following ethical guidelines on research with particularly vulnerable groups, we established a close collaboration with the clinical management of the institution prior to recruitment. The institution received written information regarding the purpose and design of the project and information on what participation might entail for both the institution and the individual participants. Based on this, a collaboration agreement was signed between researchers and institution, where roles and responsibilities within the project were discussed and agreed upon. Of importance, employees at the mental health institution with professional insight and knowledge of the patient's health and functioning were involved in the recruitment process. These three main inclusion criteria were established for participation: 1) be an in-patient at the institution during data collection, 2) be able to give informed consent, and 3) have an authorized healthcare personnel or a sports pedagogue who knows the potential participant well, to provide a second opinion about whether the patient's participation will be burdensome or perceived as negative. After receiving formal ethical research approval, six patients were deemed eligible to participate in the study. They were informed orally about the project and asked if they agreed to be contacted by the second author (I. J.) to obtain further information. Of the six respondents, four agreed to participate. However, the health status of one participant changed, with increasingly severe symptoms, which made it difficult for him to participate. Thus, three participants signed the written informed consent and took part in the study. The participants were all in the age range of 28-31 years, and two were men and one was a woman. They all were diagnosed with a psychotic disorder (F20-F29, ICD-10), and this was not their first long stay at a psychiatric hospital.

Data collection

The study is based on data collected using individual semi-structured interviews. Each interview was carried out by the second author (I.J.), lasted for close to an hour, and were audio taped. The interview guide was constructed with relatively few open questions, as recommended by IPA. During each interview, the participants were asked about their routines and daily life, what they preferred to do both indoor and outdoor, who they preferred and enjoyed to spend time with, how they envisioned their future life outside the

institution and if possible, how they would plan and spend a day on their own. They were also asked about their perception of and opinions about the general conversation in society and media about physical activity.

Additionally, two other strategies were used during interviews to increase the likelihood of richer data and give the participants autonomy within the interview situation. These were through doing the interview by "walking by talking" (Anderson, 2004) and asking participants to bring photos representing their active life (Harper, 2019). Thus, we chose to set-up this study using an outdoor "walking by talking" interview format (Anderson, 2004). It is argued that walking interviews generate richer data, because interviewees are prompted to make meanings and connections to the surrounding environment and are less likely to try and give the "right" answer (Evans & Jones, 2011). The institution is located within a secluded area on top of a hill. It overlooks forests and farms and is surrounded by a beautiful garden, well suited for short walks in the fresh air. By inviting participants to walk outside in this environment with the second author (I.J.) while talking, the aim was to create a context in which their former experiences of being free to move around and be physically active could be more easily recalled. Walking outdoors could also provide inspiration for topics or questions that may not have arisen during an indoor interview. A walking interview can empower participants by giving them the choice of where to go. It might also relax the interview context, being surrounded by outdoor smells and sounds and allowing the participants to look elsewhere than straight into the eyes of the researcher. It should be noted that the "walking by talking" interview was an option suggested by the researchers, however, the participants could also choose to sit inside for the interview if they preferred.

Based on the method of "photovoice" (Harper, 2019), the participants were asked to bring with them a couple of photos on their smart phones illustrating what an active lifestyle could be for them. In qualitative health research, visual narrative research methods have increasingly been used (Sibeoni et al., 2017). Photovoice is a method based on the assumption that photographing one's own world and what is considered important in it, is empowering (Harper, 2019). Photos are presented as a positive element within the research interview context, as something that can contribute to the participant's experiences and that strengthens the participant's position in the interview situation. Further, images can contribute both more information about the participant, and different types of information than what might be gathered without them (Harper, 2019). Photos can be supportive in breaking down barriers between the researcher and participants. It can be a useful tool to understand more about how people make sense of experiences of being unwell and getting treatment (Sibeoni et al., 2017), and facilitate the understanding across the divide between health and illness and experiences of living in a healthy way or not (Harper, 2019).

After being presented with the methodological opportunities for interviews, only one of the participants brought actual pictures, and two of the participants chose to walk whilst talking. Yet, all three participants expressed their thoughts about what the pictures could be of, and one of them explained why they chose not to walk whilst talking. Thus, the option of using pictures and walk and talk as part of the interview process still contributed richness to the data in all interviews. These methods have thus given value to the data collection by getting the participants to talk about meaningful topics related to the interview guide.

Data analysis

The data analysis was guided by the theoretical perspectives of IPA namely phenomenology, hermeneutics and ideography (Pietkiewicz & Smith, 2014). The central aspect of phenomenology is to examine how a phenomenon is experienced and talked about by the individual (Smith et al., 2009). In IPA studies, the researcher participates in double hermeneutics by trying to interpret the participants' interpretations of a phenomenon (Smith et al., 2009). Ideography focuses on examining the individual in-depth perspective of the participants, analyzing it in light of their unique context (Pietkiewicz & Smith, 2014). The goal of IPA is not to develop a generalizable theory, but rather to produce an in-depth investigation of a certain phenomenon (Pietkiewicz & Smith, 2014). Based on this, using IPA as a methodological framework was considered relevant for this study, to investigate in what ways a phenomenon like living an active lifestyle is experienced by individuals who have been diagnosed with psychosis and admitted to a mental health institution.

After transcribing the interviews, the process of analysis followed the four steps described by Smith and colleagues (2009). To become fully familiar with the data, the transcripts were read and re-read several times by the second (I.J.) and third author (R.G.). During this first stage, notes were taken of anything that appeared relevant and interesting considering the research question. During the second stage, the emerging categories from step one was closely examined, looking for patterns and conceptual similarities which captured essential qualities of the data material related to the experiences of each of the participants. Each of the three transcripts were subjected to the same analytic procedure. In the third stage, cross-case patterns were established. The aim was to group themes based on similarities and common threads, and then gather them under an overarching category with a descriptive name. In this way, the final categories are primarily based on common features and key topics considered to have the most coverage in the data material (Pietkiewicz & Smith, 2014; Smith et al., 2009).

Ethical considerations

The study was approved both by the Norwegian Social Data Services (project number 887797), and The Norwegian School of Sport Sciences Ethical committee. It was conducted in accordance with the Declaration of Helsinki (World Medical Association, 2013). This project included humans who, according to the National Research Ethics Committees, could be categorized as being part of an especially vulnerable group. Patients in mental health care represent a group with potentially reduced consent competence (National Committee for Research Ethics in the Social Sciences and Humanities, 2010), which means that there may be factors that can affect their ability to understand or make rational assessments. As mentioned, one of the inclusion criteria for participation in this project was consent competence. To be consent competent, participants must be able to understand the purpose of the project and any advantages and disadvantages associated with participation (National Research Ethics Committees, 2005). When selecting participants, consent competence was assessed in close dialogue with professionals at the institution who interacted with the patients daily. All participants signed an informed consent for participation prior to engaging with the study. The fact that the participants were considered especially vulnerable also had consequences for communication with them, both before, during and after the interview. In order to act ethically in the interview situation, it was necessary to pay extra attention to signs that may indicate that they were uncomfortable or did not want to talk about certain topics and to avoid a negative experience in the interview situation (Pietkiewicz & Smith, 2014). At the beginning of each interview, it was emphasized that there was a low threshold for pausing or stopping the interview or changing the topic for the participants at any time if they wanted. The interviewer also ensured that health personnel were available if the participant needed someone to talk to afterwards (Pietkiewicz & Smith, 2014). Participants were encouraged to contact the second author (I.J.) afterwards with questions or comments regarding the project if they felt like it. To preserve confidentiality,

the participants and the institution are referred to by fictitious names; Chris, Jenny and Eric, and the institution Flowergarden.

Results

Three overarching themes, were identified in the data analysis of both data related to interpretation of pictures and walk and talk. Through the four analytical steps of IPA, the material has gradually and thoughtfully been transformed. To visualize and keep in touch with both the empirical and the analytic level, each theme will in the following be presented as both a direct quotation and an abstracted analytic phrase: "I envision that..." – life in general vs. life right now; "I appreciate them a lot" – relationships; and "It is only on Wednesdays" – lack of autonomy support from the institution.

"I envision that..." - Life in general vs. life right now

The theme "I envision that" – life in general vs. life right now captures findings related to what the participants shared when they talked about an active lifestyle, and how the dimensions of time and place appeared interesting in light of their current situation in the institution. When the participants talked about an active lifestyle, they exemplified this by talking about the kind of hobbies and activities they preferred in their general life. Chris said that he loved horses and riding and enjoyed watching TV-series and movies every night. He also talked enthusiastically about traveling. Jenny presented a variety of activities, interests and hobbies, such as singing, running, playing football, watching Netflix and spending time with family and friends. Eric too had several hobbies and activities he used to participate in, including soccer, and guitar, both alone and in a band. He liked to read, acquire new knowledge and new languages. He favoured sports and news on television and enjoyed visiting cafes or the cinema and to watch his favourite football team play home games at the stadium. Also, he liked to cycle, run and swim in a lake during summertime.

Even though all three participants had lots of interests and hobbies, living an active life in the way they described, was not relevant for them while staying at the institution. Most of the activities they talked about were not part of their life at the time of the interview. Even though the participants did not address this directly, it became evident as the conversations developed and they continuously described how an active life used to be for them or could be for them in the future. Chris' experiences represented an example of how distance in time was expressed when he talked about a potentially active lifestyle in the future, in contrast to his in-patient life here and now. In some of the quotes, [pause] is inserted to illustrated how the participants sometimes had difficult to express their thoughts with flow.

Hm... for me it would be to... Ehm... for example have many horses to ride [pause]. Like where I ride in my hometown. There... There I have several horses I must ride every day. Mm... Wake up early in the morning, at six-seven to ride... many horses through the day. Spend the day in the stable with the horses. I envision that... working hard and exercise hard. That is what I envision as my kind of an active lifestyle.

When Jenny talked about an active lifestyle, she used her life before as an example of what it could be for her.

Yes... When I was younger, I used to be active. Exercising, in fact a little bit too much, I guess. Eh... I was really... I ra... ran. I loved running. Long distances. Running ehm. I rode a lot. Played soccer. Eh... and that... is something I would like to take up. Eh... The running, maybe? Or, to take fast walks and... [pause] ...losing weight and stuff is also a part of my plan [pause].

Jenny had memories about being active earlier in her life. She addressed a potential problem with exercising too much, but also that running long distances was something she used to love. She also talked about her weight gain after starting to use antipsychotic medicine and that she looked forward to stopping her medication. Then it would finally be easier to start losing weight again, by getting back to the active lifestyle she used to have. Jenny was very explicit about the difference between earlier experiences of living an active lifestyle and how she experienced it now. She simply asked whether she should answer the questions in relation to her "normal life" or in relation to the current situation at the institution. Also, Eric said that what he talked about was dependent on him being home, and that this was different in comparison to living at the institution. Accordingly, time was an interesting aspect in dialogue with the participants – it was either "in the past" or "in the future", instead of "life here and now". Likewise, place became as another interesting aspect. Thus, the participants talked about living an active lifestyle not only in a different time, but also somewhere else. For example, Chris said that he wanted to move far away to the north of Norway, to have some physical distance from where he grew up, as a solution to becoming more independent. Also, Eric talked on several occasions about a specific place, a lake in the woods. If he could, he would go there on a summer day to live an active life as he envisioned it could be, "... I could possibly swim as well, in Summerlake [pause] ...and I could also run around Summerlake [pause]. Swimming, sunbathing, running, and you got to relax in the grass." (Eric). In summary, the participants had clear thoughts about what an active life could be for them. However, their descriptions of this, were, to a large extent, something that took place in an everyday life outside the psychiatric hospital they currently lived at.

"I appreciate them a lot" - relations

The theme "I appreciate them a lot" – relations", reflects how the participants expressed the ambiguous meaning of relations in connection with living an active lifestyle. Jenny stressed the importance of spending time with family and friends as part of an active lifestyle. Eric talked about being together with others, as an important dimension of sport and physical activity. For Jenny, not being able to spend time with friends made it more difficult to engage in various activities and put life on hold for her. Eric, on the other hand, was not that dependent on friends and could envision himself alone in the outdoors, sunbathing, bicycling, running and swimming. The topic "family relations" also appeared in the conversation with Chris, in conjunction with him talking about his wish to move away from family and friends. He wanted to move away because to keep a distance to the place where he grew up. He envisioned a new place to live up north of Norway, providing him a fresh start, and to be able to explore nature there.

Eric expressed the idea that relationships with other people could also contain broken expectations about how life had turned out to be for them. When talking about his relation to his mother he said:

Maybe she grew up under more tough circumstances than I did... in a way... some areas. Maybe you had to be fit and stuff, be talented and stuff... [pause] I am just thinking about... [pause] when I was younger [pause] me and my mother talked a bit about that. Like... not about that, but about... [pause] maybe she had... [pause] imagined how things should be for me, and stuff. But then... [pause] I got ill

Although Eric had difficulty expressing himself verbally, he was able to express a vague feeling of being a disappointment to his own mother. To become ill was not part of her plan for him, which he imagined had been more about him being fit and talented in some kind of activity. While talking about this topic he referred to a song which described his experience

regarding the perception of his mother's expectations of him. The song was "Thursday" with Jess Glynne. The song is about a person taking ownership of oneself and believing that one is good enough. It is about not being insecure and not letting others' expectations interfere with the person one truly wants to be. As such, Eric alluded to a possible conflict in his relationship with his mother, when it came to choosing activities considered representative of an active lifestyle.

The findings regarding relationships were further expanded to capture variations in how the participants experienced the opportunity and their desire to maintain their relationships with friends and family outside the institution. Jenny expressed how she felt there was limited opportunity to hang out and do activities with her friends while she was hospitalized. This was both because they lived far away, and because she wanted the treatment to be a priority. Further, Eric said that he appreciated activities that required collaboration and team play, and that he saw relationships as an important aspect of the activities he chose in his active life. As such, Eric wanted to stay connected to his band members at home while living at the institution, although he needed a leave of absence from the institution to play guitar with them. In essence, it seemed from the participants' perspective that social life was not a priority and that it was put on hold during their stay.

"It is only on Wednesdays" - lack of autonomy support from the hospital

The theme "It is only on Wednesdays" – lack of autonomy support from the institution deals with how the participants experienced support from the institution to live an active lifestyle according to their own preferences. Core sub-themes addressed were lack of autonomy support and legal capacity.

The participants' perceptions of how they experienced support from the institution varied. Jenny talked about the activities offered each week at the institution from the sports pedagogue, the music therapist and the art therapist. Jenny said that she was very satisfied with the opportunities, but at the same time, she did not make use of them. This revealed an unexplained discrepancy between satisfaction with the offer of activities and her use of them.

Yes, indeed... Eh... now there is only that my foot hurts a bit, so I have stayed home... but it has been very sad that it happened, though [pause] but it is very typical, and... because before I got here I was too inactive, and going from that, to getting active again ... suddenly, then something happens... but anyhow, I think that Flowergarden has a great offer. (Jenny)

Also, Eric said that to a certain extent he experienced his current situation as active and felt supported by the institution. However, the institution was in control to permit him to live an active lifestyle outside the institution.

Maybe they don't even know that I usually do that [pause] at Flowergarden. [pause] ... So, no, I do not do it now... eh... Or. I play guitar and stuff... here at... here at Flowergarden. But it is not like that. It is only on Wednesdays [pause] and then, then it is... it is just my own project really, like [pause] Beside [pause] Self practice.

In other words, Eric wanted to maintain his hobby in the way he used to, with his guitar teacher and the band at home, and not just by playing alone or together with the music therapist. Further, Chris was very explicit about not being satisfied with his stay at Flowergarden, and he did not feel supported by the institution to do the activities he liked. He had on several occasions expressed his wish to ride horses without staff support. Overall, the results indicate that the participants in several ways experienced lack of autonomy and limited legal capacity. Chris talked about how he would like to change his situation, to become more independent and able to handle his life without help from others. "For me to

show... that I can be sane again. To show that I am sane again [pause] That is what I want. To be discharged. That is my goal for this year. I am hospitalized forcibly... [pause]" (Chris). Before Chris could be understood as "sane", it seemed like it was hard for him to imagine how he would be able to live his life, what to do and where he would like to go with whom. All of this was governed by the rules and regulations of the institution, until Chris himself could be independently responsible for his own situation. At the time, it was like Chris did not have any say in managing his own situation, and it seemed like he had given up having power or control over his own interests.

Discussion

Overall, from the findings, we showed that the participants described a range of activities that, for them, constitutes an active lifestyle. These activities included both activities conducted on their own, however, most of them were strongly influenced by a social context. In addition, the activities were not only those typically included within a medical perspective on "physical activities and exercise". They also included other activities such as music, going to cafes and watching TV series. Further, the participants reflected on how they were able to live an active lifestyle in their current situation as in-patients, how activity affected their mental health, and how they perceived support from the institution to live such an active lifestyle. These core findings will be discussed in the following sections.

Active lifestyle as contributor to positive mental health

Overall, the participants related their previous experiences of being physically active with several of the core dimensions of positive mental health (Gomes et al., 2014; Keyes & Lopez, 2002; Mjøsund et al., 2015; Seow et al, 2016), such as mastery, the feeling of positive emotions exemplified by calmness, predictability, and enjoyment. Thus, these findings support previous research related to the importance of accommodating an active lifestyle for persons with SMI, because of the potential for positive experiences which are valuable in themselves, and which can also contribute to moderating the impact of the patient's clinical symptoms of illness and their general functioning (e.g., Franken et al., 2018; Seow et al., 2016). However, it is important to also acknowledge that the participants did not currently live a physically active lifestyle to the extent they would have liked, but imagined and dreamed about how they wanted to do it. This supports previous research findings regarding barriers to being physical active while living in an institution or during periods in life where severe mental illness is more present (Fraser et al., 2015; Newberry et al., 2018). Moreover, this finding supports researchers who recently claimed that this patient group is motivated to be more physically active, but need adapted and structural support in how the activities are offered (Farholm et al., 2017; Sørensen et al., 2020). In addition, it seems of high importance to individualise the physical activity programs within psychiatric treatment (Sørensen et al., 2021).

Further, the findings clearly indicated that exploring what the participants perceived as an active lifestyle revealed a wider range of activities than those normally associated with being physically active. Activities that were described as valuable and meaningful for the participants included for instance, playing instruments, watching movies, being with friends, and being in contact with nature and animals. As such, the more medical approach towards a physically active lifestyle, understood as exercise, was for these patients not as relevant to their current situation. This is in line with previous findings showing that individuals with clinical higher risk of psychosis are less physically active which is related to themselves not having a self-perception of being physically active persons (Newberry et al., 2018). However, they all talked about having previous experience of being physically active in a more traditional way (e.g., exercise, jogging). Yet, this was something related to "their eujapa.upol.cz prior life" or something they might consider in "their future life". In the clinical practical recommendations from the European Psychiatric Association (Stubbs et al., 2018), it is suggested that all patients with SMI within primary and secondary care should be screened for their PA habits as a tool to support them to be more physically active if needed. In light of the current findings, we suggest broadening the scope of this screening for this population to focus on an active lifestyle. For those individuals with currently low physically active lifestyles this might be a more adaptive motivational avenue and more manageable.

Relational distance

Relational well-being is described as one of the core components of positive mental health (Keyes, 2002), and is also highlighted as a central element of perceived health and well-being among individuals living with mental illness (e.g., La et al., 2014). As such, it was interesting to see how all participants described personal and close relationships as important aspects of their perception of what constitutes an active lifestyle. The finding that Jenny experienced and emphasised the importance of the close relationship with her family was an example of this finding. She emphasized the significance of deeper relationships for her well-being when describing the experience of closeness to her family, both in terms of being together, but also sharing common interests. This is in line with previous research pointing to the importance of close and quality relationships when living with severe mental illness, being able to manage the illness through support from family and friends (Gumber & Stein, 2013), and that these relationships influence quality of life and reduce the experience of being lonely (Hawkley et al., 2010). However, as an in-patient for a longer period of time, Jenny found it challenging to be with friends and family, and thus found herself being isolated. Isolation has been found to be a commonly experienced symptom of SMI (Linz & Sturm, 2013), which can challenge the continuity of positive relationships, both during times of more severe symptoms and during hospitalization. The structures within an institution and the localization can jeopardize opportunities for maintaining quality and health promoting relationships. As Eric explained, he needed to apply for an "approved leave" from the institution to be allowed to continue his band rehearsals, and his perception was that he would not get it, so he never even asked.

From a professional point of view, it could be argued that some patients need a "break" from their ordinary life to have the ability to focus on their treatment goals. As well, sometimes the relationships in their ordinary lives have been complicated due to their symptoms of illness, and thus an increased feeling of isolation might have emerged (Koenders et al., 2017). As such, when hospitalized, new relationships are being created, although it has been discussed whether most of them are with professionals at the institution (Lauveng, 2005). However, good therapeutic relationships can result in positive psychological and behavioural outcomes, if they have been established in a supportive and optimistic relational environment (Berry & Greenwood, 2015). Further, it was only Eric who sporadically took part in the organized activities at the institution, such as for instance physical activity, music and cooking. Indirectly, he expressed a longing for a "community", as such the relational aspect seemed to be a motive for his participation. Increased social well-being for this population as one of the outcomes related to taking part in PA groups has also been identified in the literature (Richardson et al., 2005). Yet, though one of the participants partly experienced this positive outcome, this was not mentioned by the other two. Further, the findings from the current study indicated that when patients are living at the institution for a longer period, there is a risk they will perceive their outpatient life as disconnected from their institutional life. Lauveng (2005), wrote in her biographical book that the gap between the institutional world and the real world became so large that she felt she lost contact with life outside, and thus the feeling of being able to reconnect felt even harder to achieve. As such, striving to maintain or rebuild important relationships in the patients' home environments is important.

Life on hold

A clear overall finding from this study was the participants' experience of time and place in relation to living an active lifestyle. The way the participants talked about their preferences for an active lifestyle was not congruent with their life here and now. It seemed like they were currently living a life outside of themselves, as though their life was put on hold while they were in hospital. Even though they all talked about activities of personal value and meaningfulness, they spoke about them from a perceived distance, both in time and place. Having an experience that "life is on hold" while being under treatment, has been found to create boundaries and decrease perceived autonomy over a patient's life in the context of outpatient treatment (Stensrud et al., 2015). This undermines patients' wellbeing, as the sense of autonomy and control over one's own life are core dimensions of psychological well-being (Westerhof & Keyes, 2009).

At first glance, it could be perceived as paradoxical that the participants were offered a range of different activities aligned with what they themselves described as an active lifestyle, but only took part in these activities to a limited degree. Yet, the participants expressed having difficulty identifying themselves as leading an active lifestyle during this part of their life. This could be explained by the perception of their "real life" being put on hold, and that the time and power structures imposed by the institution put boundaries on their life, were demotivating and were perceived as barriers (Abed, 2010; Newberry et al., 2018). It seems of crucial importance when supporting psychiatric inpatients to live a more active lifestyle, to account for and minimize the impact of being hospitalized. As such, the transactional gap (Rebar & Taylor, 2017) seems to be evident when patients are hospitalized for a longer period of time. It is not just about making PA interventions available in short-term and outpatient treatment, but also to adapt these interventions in the context of long-term treatment, where the real world seems to be distant in time and place.

Strengths, limitations and future research

Through this study we illustrated the benefits of exploring the thoughts and reflections of patients with psychosis in long-term treatment. There were insights into a sample of psychiatric patient's reflections and thoughts about physical activity. The small sample prevents us from concluding on behalf of psychiatric patients in general, but it makes it possible to identify thoughts and reflections that can be shared by other patients. Thus, the results open up areas for further investigation. Patients with SMI can be a difficult population to include in research. Particularly regarding access to these types of institutions, and supporting participants through the research process, in keeping with ethical guidelines. However, future studies should strive either to include more participants or aim for a richer data collection by following the participants over time with several interviews (Smith & Sparkes, 2016). To incorporate different perspectives in such a study, including those of staff, family and friends could also be of interest (e.g., Sørensen et al., 2020).

As researchers engage in qualitative research, we understand the so-called "reality" as already interpreted. In other words, the participants' stories, as well as our own, about living physically active lives, are based on and formed by the social structures of our various life worlds. As a consequence, we have interpreted the data from the interviews with an active awareness of our prior understanding of PA within psychiatric care. Part of our prior understanding is based on two of the researchers' experiences of working as staff / sports

pedagogues within a similar context to the one the study is conducted in. But still, to narrow the evidence gap between the researcher and the researched, and to make sure relevant perspectives are fully represented, we suggest that future studies include co-production at all stages of the research process. To include individuals with personal experience from a psychiatric context, to inform the creation of the study and collaborate in all the research phases, will possibly make the findings even more valid (Mjøsund et al., 2017).

Conclusions

By asking people living with psychoses about their own perceptions and associations with the term "active lifestyle", there were individual, relational and contextual meaning dimensions of being active. All the participants associated an active lifestyle with family and friends, places, animals and nature. Thus, analysing the participants' associations to what it meant to be living an active lifestyle, broadened and deepened our understanding of the phrase to be more about a socially active life, in contact with others and with many kinds of activities. These are important dimensions that change for the participants, in radical ways, when they undertake psychiatric in-treatment. Further, the results of this study indicated that participants' perception of being hospitalized was seen as a state of emergency, like living somehow a surreal life outside of themselves.

Perspectives

The findings of the current study are of importance regarding what psychiatric hospitals need to consider when supporting their patients to maintain or increase their activity level. Consequently, by making the topics of how individual, relational and contextual meaning dimensions are changed when patients are hospitalized, they can set the stage for the adaption and promoting of activities offered. Where patients felt their life was set on hold while being at the psychiatric hospital, it illuminated a present challenge that should be addressed in order to reach the goal of integrating meaningful activity in treatment. Being active cannot be understood as a neutral initiative that is imposed on patients from the outside, but should be integrated as an offer to patients in line with their own perceptions of self and as part of their identity.

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References

Abed, H. (2010). What factors affect the lifestyle choices of people with schizophrenia? *The Mental Health Review*, *15*(2), 21-27. <u>https://doi.org/10.5042/mhrj.2010.0368</u>

Anderson, J. (2004). Talking whilst walking: a geographical archaeology of knowledge. *Area*, *36*(3), 254-261. <u>https://doi.org/10.1111/j.0004-0894.2004.00222.x</u>

Aschbrenner, K., Carpenter-Song, E., Mueser, K., Kinney, A., Pratt, S., & Bartels, S. (2013). A qualitative study of social facilitators and barriers to health behavior change among

persons with serious mental illness. *Community Mental Health Journal*, 49(2), 207-212. <u>https://doi.org/10.1007/s10597-012-9552-8</u>

- Berry, C., & Greenwood, K. (2015). Hope-inspiring therapeutic relationships, professional expectations and social inclusion for young people with psychosis. *Schizophrenia Research*, *168*(1-2), 153-160. https://doi.org/10.1016/j.schres.2015.07.032
- Boydell, K. M., Stasiulis, E., Volpe, T., & Gladstone, B. (2010). A descriptive review of qualitative studies in first episode psychosis. *Early Intervention in Psychiatry*, *4*(1), 7-24. <u>https://doi.org/10.1111/j.1751-7893.2009.00154.x</u>
- Brokmeier, L. L., Firth, J., Vancampfort, D., Smith, L., Deenik, J., Rosenbaum, S., Stubbs,
 B., & Schuch, F. B. (2020). Does physical activity reduce the risk of psychosis? A systematic review and meta-analysis of prospective studies. *Psychiatry Research*, 284, 112675. https://doi.org/10.1016/j.psychres.2019.112675
- Bueno-Antequera, J., Oviedo-Caro, M. Á., & Munguía-Izquierdo, D. (2018). Sedentary behaviour, physical activity, cardiorespiratory fitness and cardiometabolic risk in psychosis: the PsychiActive project. *Schizophrenia Research*, *195*, 142-148. https://doi.org/10.1016/j.schres.2017.10.012
- Dauwan, M., Begemann, M. J., Heringa, S. M., & Sommer, I. E. (2016). Exercise improves clinical symptoms, quality of life, global functioning, and depression in schizophrenia: a systematic review and meta-analysis. *Schizophrenia Bulletin*, *42*(3), 588-599. https://doi.org/10.1093/schbul/sbv164
- Drake, R., Green, A., Mueser, K., & Goldman, H. (2003). The history of community mental health treatment and rehabilitation for persons with severe mental illness. *Community Mental Health Journal*, *39*(5), 427-440. <u>https://doi.org/10.1023/A:1025860919277</u>
- Erdner, A. & Magnusson, A. (2012). Physical activities and their importance to the health of people with severe mental illness in Sweden. *Issues in Mental Health Nursing*, 33(10), 676-679. <u>https://doi.org/10.3109/01612840.2012.697253</u>
- Evans, J., & Jones, P. (2011). The walking interview: Methodology, mobility and place. *Applied Geography* 31(2), 849-858. <u>https://doi.org/10.1016/j.apgeog.2010.09.005</u>
- 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*(4), 914-921. https://doi.org/10.1111/scs.12413
- Firth, J., Cotter, J., Elliott, R., French, P., & Yung, A. R. (2015). A systematic review and meta-analysis of exercise interventions in schizophrenia patients. *Psychological Medicine*, *45*(7), 1343-1361. <u>https://doi.org/10.1017/S0033291714003110</u>
- Fraser, S. J., Chapman, J. J., Brown, W. J., Whiteford, H. A., & Burton, N. W. (2015). Physical activity attitudes and preferences among inpatient adults with mental illness. *International Journal of Mental Health Nursing*, *24*(5), 413-420. https://doi.org/10.1111/inm.12158
- Franken, K., Lamers, S. M. A., Ten Klooster, P. M., Bohlmeijer, E. T., & Westerhof, G. J. (2018). Validation of the mental health continuum-short form and the dual continua model of well-being and psychopathology in an adult mental health setting. *Journal of Clinical Psychology*, 74(12), 2187-2202. https://doi.org/10.1002/jclp.22659
- Glover, C. M., Ferron, J. C., Whitley, R., Cook, J. A., & Mueser, K. T. (2013). Barriers to exercise among people with severe mental illnesses. *Psychiatric Rehabilitation Journal*, *36*(1), 45-47. <u>https://doi.org/10.1037/h0094747</u>
- Glowacki, K., Weatherson, K., & Faulkner, G. (2019). Barriers and facilitators to health care providers' promotion of physical activity for individuals with mental illness: A scoping review. *Mental Health and Physical Activity*, *16*, 152-168. https://doi.org/10.1016/j.mhpa.2018.10.006
- Gomes, E., Bastos, T., Probst, M., Ribeiro, J. C., Silva, G., & Corredeira, R. (2014). A contribution to designing effective and enjoyable physical activity programs for individuals with schizophrenia. *European Journal of Adapted Physical Activity*, *7*(2). https://doi.org/10.5507/euj.2014.008
- Gumber, S., & Stein, C. H. (2013). Consumer perspectives and mental health reform movements in the United States: 30 years of first-person accounts. *Psychiatric Rehabilitation Journal*, *36*(3), 187. <u>https://doi.org/10.1037/prj0000003</u>

- Hargreaves, J., Lucock, M., & Rodriguez, A. (2017). From inactivity to becoming physically active: The experiences of behaviour change in people with serious mental illness. *Mental Health and Physical Activity*, *13*, 83-93. https://doi.org/10.1016/j.mhpa.2017.09.006
- Harper, K. (2019). Essentials of Photovoice in participatory visual research. Qualitative essentials. Taylor & Francis Group.
- Hawkley, L. C., Cacioppo, J. T. & Hawkley, L. C. (2010). Loneliness matters: a theoretical and empirical review of consequences and mechanisms. *Annals of Behavioral Medicine: a publication of the Society of Behavioral Medicine, 40*(2), 218-227. https://doi.org/10.1007/s12160-010-9210-8
- Helsedirektoratet. (2013). *Nasjonal faglig retningslinje for utredning, behandling og oppfølging av personer med psykoselidelser*. [National professional guideline for the investigation, treatment and follow-up of people with psychotic disorders]. The Norwegian Directorate of Health.
- Keyes, C. L. M. (2002). The mental health continuum: From languishing to flourishing in life. *Journal of Health and Social Research*, 43, 207-222. https://doi.org/10.2307/3090197
- Keyes, C. L. (2005). Mental illness and/or mental health? Investigating axioms of the complete state model of health. *Journal of Consulting and Clinical Psychology*, *73*(3), 539. <u>https://doi.org/10.1037/0022-006X.73.3.539</u>
- Keyes, C. L. M. (2007). Promoting and protecting mental health as flourishing. *American Psychologist*, *62*(2), 95-108. <u>https://doi.org/10.1037/0003-066X.62.2.95</u>
- Keyes, C. L. & Lopez, S. J. (2002). Toward a science of mental health. In Snyder, R. & Lopez, S. (Eds), *Handbook of Positive Psychology* (pp. 45–59. Oxford University Press.
- Koenders, J. F., de Mooij, L. D., Dekker, J. M., & Kikkert, M. (2017). Social inclusion and relationship satisfaction of patients with a severe mental illness. *International Journal of Social Psychiatry*, *63*(8), 773-781. <u>https://doi.org/10.1177/0020764017737572</u>
- Kobau, R., Seligman, M. E., Peterson, C., Diener, E., Zack, M. M., Chapman, D., & Thompson, W. (2011). Mental health promotion in public health: Perspectives and strategies from positive psychology. *American Journal of Public Health*, *101*(8), e1-e9. <u>https://doi.org/10.2105/AJPH.2010.300083</u>
- La, S., Ungar, M., Malla, A., Frankish, J., & Suto, M. (2014). Meanings of well-being from the perspectives of youth recently diagnosed with psychosis. *Journal of Mental Health*, 23(1), 25-30. <u>https://doi.org/10.3109/09638237.2013.841866</u>
- Lauveng, A. (2005). Tomorrow I was Always a lion. Cappelen Damm.
- McCulloch, G. F., & Boxer, J. (1997). Mental health promotion: policy, practice and partnerships. Baillière Tindall.
- Linz, S. J., & Sturm, B. A. (2013). The phenomenon of social isolation in the severely mentally ill. *Perspectives in Psychiatric Care, 49*(4), 243-254. <u>https://doi.org/10.1111/ppc.12010</u>
- Morres, I. D., Hatzigeorgiadis, A., Stathi, A., Comoutos, N., Arpin-Cribbie, C., Krommidas, C., & Theodorakis, Y. (2019). Aerobic exercise for adult patients with major depressive disorder in mental health services: A systematic review and meta-analysis. *Depression and Anxiety*, *36*(1), 39-53. <u>https://doi.org/10.1002/da.22842</u>
- Mjøsund, N.H., Eriksson, M., Espnes, G.A., Haaland-Øverby, M., Jensen, S.L., Norheim, I., Kjus, S.H.H., Portaasen, I.-L., & Vinje, H.F. (2017). Service user involvement enhanced the research quality in a study using interpretative phenomenological analysis—the power of multiple perspectives. *Journal of Advanced Nursing*, *73*(1), 265-278. <u>https://doi.org/10.1111/jan.13093</u>
- Mjøsund, N. H., Eriksson, M., Norheim, I., Keyes, C. L., Espnes, G. A., & Vinje, H. F. (2015). Mental health as perceived by persons with mental disorders–an interpretative phenomenological analysis study. *International Journal of Mental Health Promotion*, *17*(4), 215-233. <u>https://doi.org/10.1080/14623730.2015.1039329</u>

- National Committee for Research Ethics in the Social Sciences and the Humanities. (2010). *Guidelines for research ethics in the social sciences, law and the humanities.* National Committees for Research Ethics in Norway.
- Newberry, R. E., Dean, D. J., Sayyah, M. D., & Mittal, V. A. (2018). What prevents youth at clinical high risk for psychosis from engaging in physical activity? An examination of the barriers to physical activity. *Schizophrenia Research, 201*, 400-405. https://doi.org/10.1016/j.schres.2018.06.011
- Pedersen, P. B., & Kolstad, A. (2009). De-institutionalisation and trans-institutionalisation – changing trends of inpatient care in Norwegian mental health institutions 1950-2007. *International Journal of Mental Health Systems*, *3*(1), 28. <u>https://doi.org/10.1186/1752-4458-3-28</u>
- Pietkiewicz, I., & Smith, J. A. (2014). A practical guide to using interpretative phenomenological analysis in qualitative research psychology. *Psychological Journal*, 20(1), 7-14. <u>https://doi.org/10.14691/CPPJ.20.1.7</u>
- Rebar, A. L., & Taylor, A. (2017). Physical activity and mental health; it is more than just a prescription. *Mental Health and Physical Activity*, *13*, 77-82. https://doi.org/10.1016/j.mhpa.2017.10.004
- Richardson, C. R., Faulkner, G., McDevitt, J., Skrinar, G. S., Hutchinson, D. S., & Piette, J. D. (2005). Integrating physical activity into mental health services for persons with serious mental illness. *Psychiatric Services*, *56*(3), 324-331. https://doi.org/10.1176/appi.ps.56.3.324
- Rosenbaum, S., Tiedemann, A., Sherrington, C., Curtis, J., & Ward, P. B. (2014). Physical activity interventions for people with mental illness: a systematic review and metaanalysis. *The Journal of Clinical Psychiatry*, *75*(9), 964-974. <u>https://doi.org/10.4088/JCP.13r08765</u>
- Seow, L. S. E., Vaingankar, J. A., Abdin, E., Sambasivam, R., Jeyagurunathan, A., Pang, S., Chong, S. A., & Subramaniam, M. (2016). Positive mental health in outpatients with affective disorders: Associations with life satisfaction and general functioning. *Journal of Affective Disorders*, *190*, 499-507. <u>https://doi.org/10.1016/j.jad.2015.10.021</u>
- Sibeoni, J., Costa-Drolon, E., Poulmarc'h, L., Colin, S., Valentin, M., Pradère, J., & Revah-Levy, A. (2017). Photo-elicitation with adolescents in qualitative research: an example of its use in exploring family interactions in adolescent psychiatry. *Child and Adolescent Psychiatry and Mental Health*, *11*, 49. <u>https://doi.org/10.1186/s13034-017-0186-z</u>
- Smith, J. A., Flowers, P., & Larkin, M. (2009). Interpretative phenomenological analysis: Theory, method and research. Sage.
- Smith, B., & Sparkes, A.C. (Eds.) (2016). Routledge Handbook of Qualitative Research in Sport and Exercise. Routledge.
- Stensrud, B., Høyer, G., Granerud, A., & Landheim, A. S. (2015). "Life on hold": a qualitative study of patient experiences with outpatient commitment in two Norwegian counties. *Issues in Mental Health Nursing*, *36*(3), 209-216. https://doi.org/10.3109/01612840.2014.955933
- Stubbs, B., Vancampfort, D., Hallgren, M., Firth, J., Veronese, N., Solmi, M., Brand, S., Cordes, J., Malchow, B., Gerber, M., Schmitt, A., Correll, C. U., De Hert, M., Gaughran, F., Schneider, F., Kinnafick, F., Falkai, P., Möller, H-J., & Schmitt, A. (2018). EPA guidance on physical activity as a treatment for severe mental illness: a meta-review of the evidence and position statement from the European Psychiatric Association (EPA), supported by the International Organization of Physical Therapists in Mental Health (IOPTMH). *European Psychiatry*, *54*, 124-144. https://doi.org/10.1016/j.eurpsy.2018.07.004
- Sørensen, M., Bentzen, M., & Farholm, A. (2020). Lessons learned from a physical activity intervention in psychiatric treatment: Patient, staff, and leader perspectives. *Frontiers in Psychiatry*, *11*, 87. <u>https://doi.org/10.3389/fpsyt.2020.00087</u>
- Sørensen, M., Bentzen, M., & Farholm, A. (2021). Motivational physical activity intervention for psychiatric inpatients: A two phased single-cases experimental study.

European Journal of Adapted Physical Activity, 14(2). https://doi.org/10.5507/euj.2021.008

- Tandon, R., Keshavan, M. S., & Nasrallah, H. A. (2008). Schizophrenia, "just the facts" what we know in 2008. 2. Epidemiology and etiology. *Schizophrenia Research*, *102*(1), 1-18. <u>https://doi.org/10.1016/j.schres.2008.04.011</u>
- Vancampfort, D., Rosenbaum, S., Schuch, F., Ward, P. B., Richards, J., Mugisha, J., Probst, M., & Stubbs, B. (2017). Cardiorespiratory fitness in severe mental illness: a systematic review and meta-analysis. *Sports Medicine*, 47(2), 343-352. https://doi.org/10.1007/s40279-016-0574-1
- Westerhof, G. J., & Keyes, C. L. M. (2009). Mental illness and mental health: The two continua model across the lifespan. *Journal of Adult Development*, *17*(2), 110-119. https://doi.org/10.1007/s10804-009-9082-y
- World Health Organization. (1992). The ICD-10 classification of mental and behavioural disorders: clinical descriptions and diagnostic guidelines (Vol. 1). World Health Organization.
- World Medical Association. (2013). World medical association declaration of Helsinki: Ethical principles for medical research involving human subjects. *Jama, 310*(20), 2191-2194. <u>https://doi.org/10.1001/jama.2013.281053</u>



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