PERCEPTIONS ON HEALTH AND LIFESTYLE BEHAVIOR OF OBESE PATIENTS WITH SEVERE MENTAL ILLNESS IN FORENSIC PSYCHIATRIC CARE: THE INFLUENCE ON MOTIVATION TO IMPROVE HEALTH BEHAVIORS AND LOSE WEIGHT

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Introduction

For a long period of time mental health services were separated from medical health services, neglecting the physical well-being of patients with a severe mental illness (SMI)[1,2]. A SMI is a chronic psychiatric disorder that requires professional care and goes hand in hand with severe limitations in the patients' daily and/or social life[3,4]. Patients with a SMI are more likely to have physical health problems[1,2]. It is estimated that sixty percent of this excess mortality rate is due to physical illnesses[1,5]. They face the probability of a thirteen to thirty year shorter life expectancy than the general population[6]. Many factors contribute to these high rates, such as poor lifestyle behaviors (diet, exercise, substance abuse, sedentary lifestyle), use of antipsychotic or antidepressant medication and poor access to medical services[2,7]. The untreated physical problems and physical co-morbidities are associated with a worse mental health status and quality of life[8].

Patients with a SMI represent a considerable part of patients treated in forensic psychiatric care[9]. Forensic psychiatric hospitals offer involuntary clinical treatment, imposed by the criminal or civil law, to patients who are considered to have commit a crime in conjunction with severe psychopathology[10]. Generally, there is little attention for somatic wellbeing and healthy weight within forensic health care as their mental disorder and related risks are thought to be the most important focus of treatment[11,12].

Within a broad range of health-related risks and physical illnesses, obesity is one of the greatest challenges in patients with a SMI. When the Body Mass Index (BMI) is higher than or equal to 30 the term 'obese' is used[13,14]. One is considered to be morbidly obese with a BMI higher or equal to 35[13,14]. A meta-analysis showed that one in three patients with schizophrenia is at risk of being obese[15]. Patients with schizophrenia have a 2.8 -3.5 greater likelihood of being obese compared to the general population. For patients with severe depression or bipolar disorder this increased risk for obesity is estimated at 1.2- 1.5[6]. Obesity causes higher rates of cardiovascular diseases, diabetes and other chronic diseases, eventually leading to an elevated mortality rate[16].

Previous studies investigated the effects of several well-being- and educational programs, lifestyle coaching and nutritional counseling aiming to support weight loss in patients with SMI[17–24]. Few of these interventions report long-term weight loss[17,19,22]. Fear of failure, lack of support in their efforts to change their lifestyle, and illness symptoms are barriers for patients

with a SMI in making healthier lifestyle choices[25]. A review on weight management interventions in patients with a SMI concluded that interventions are often too complex and elaborate[26]. Patients with a SMI often have little energy and limited cognitive and motivational resources to stick to these interventions[26]. Furthermore, patients in forensic psychiatric care are restricted in their choices and options to engage in health promoting behavior due to the secluded nature of forensic care and interventions are poorly applicable in this specific setting[12]. It is unclear what the perceptions and needs of patients with a SMI in forensic care are concerning weight loss and what motivates them to make healthier lifestyle choices. To help these patients managing their weight it is necessary to have a better understanding about the perceptions of SMI patients in forensic psychiatric care on physical health, weight and lifestyle behavior. Subsequently, it is important to know to what extent patients with a SMI are motivated to lose weight and what factors are related to this motivation, specifically in relation to the treatment setting where they reside.

Aim

The aim of this research is to investigate the perceptions of patients with a severe mental illness in forensic psychiatric care on physical health, weight and lifestyle behavior, and to explain how these perceptions influence the motivation for changing lifestyle behavior regarding obesity.

Method

Design

This study has a generic qualitative design, following the principles of the Grounded Theory (GT). The GT is the most appropriate study design, as this study seeks to build theory explaining how perceptions of patients with a SMI in forensic care influence the motivation for changing lifestyle behavior regarding obesity, rather than solely describe the subject of this research[27,28]. The results of this study are reported following the guidelines of the Consolidated Criteria for Reporting Qualitative research (COREQ)[29].

Setting

This study was undertaken within two forensic psychiatric hospitals in The Netherlands.

Participants

Purposive sampling was used to select cases on predetermined criteria of importance to the subject of this research. Participants who are experienced with obesity and lifestyle changing and were able to communicate these experiences were identified by the first researcher and their professional caregivers. Sampling was also guided by interim findings. Participants who could enrich the data on specific topics were sampled when themes were unsaturated.

Eligible subjects had to meet the following criteria: diagnosed with a SMI, a BMI ≥ 30, ≥ 18 years old and able to express themselves in the Dutch language. Patients whose severe symptomatology impedes them from participating in an interview or when participating was believed - according to professional caregivers or the primary researcher - to harm them were excluded.

Data collection

Data is collected through face-to-face semi-structured interviews following a topic-list (Appendix A). The interviews are audio-recorded with a digital audio recorder. The recordings are transcribed verbatim by the first researcher (EM). Data is collected from February 2019 to May 2019.

Prior to the interview patients filled in the International Health and Behaviour Survey (IHBS) with the purpose of concretizing the participants' perceptions on their own health, the importance of a healthy lifestyle and factual lifestyle behavior. The IHBS is a validated instrument to describe the beliefs and attitudes related to physical health and lifestyle behavior with specific sections on eating, physical activity and weight[30,31]. The interviewer

used the obtained data from the IHBS to help participants reflect on their desired lifestyle behavior in relation to their current one.

Data analysis

Following the principles of the GT, data analysis was divided in two stages of iterative coding and open coding[27,28]. During the process of data analysis EM received strict supervision from BvM. In the first stage of coding 'line-by-line analysis' was applied by EM and a preliminary code tree was constructed. Codes with similar traits were then formed into categories. In the second stage of axial coding, relationships between categories were identified. After the fifth, eighth and twelfth interview the process of coding, and the coding itself, was evaluated in meeting between EM and BvM. Data analysis is supported by data management software program NVivo 12.

Procedures

In February 2019 the staff members of the two participating hospitals were informed about the research during the daily multidisciplinary consultation. After staff members were informed the medical service of both hospitals selected patients who met the inclusion criteria. From there on the first researcher and professional caregivers identified patients who were willing, capable and had the ability to express their perceptions on health, lifestyle and weight. The first researcher approached the identified patients. Patient received oral and written information about the research project. Participants could choose a location of their choice to carry out the interview, as long as the room was quiet. One pilot interview was held to evaluate to test the topic list and planned interview procedures, as well as to receive feedback on the interview skills of the primary researcher.

Trustworthiness

To enhance the trustworthiness of this study, quality measure shave been taken. To establish credibility in this study there was iterative data analysis, in which it is examined several times and data was obtained from a wide variety of participants. The preliminary code tree and the final themes were formed trough debate between BvM and EM to enhance dependability. To ensuring transferability and authenticity rich and realistic descriptions are given on the context in which this study was conducted.

Ethical issues

This research is conducted in accordance with the Declaration of Helsinki (October, 2008). The study is approved by an ethical committee of the participating forensic psychiatric hospitals and national organization for forensic psychiatric care in the Netherlands. Participants gave a written informed consent.

Results

The results of this study are divided in several themes. First, the perceptions of the participants on health in general are described, followed by the perceptions on a desired and actual lifestyle behavior. Next, the influences of these perceptions on their motivation to change lifestyle behavior are described. Ending with an theory on how these perceptions and motivation relate to behavior change.

Characteristics participants

In total twelve participants participated. Their age ranged from 26 to 59 years old, with an average of 42 years. Their BMI's differed between 30 and 49. The majority of the participants were male (81,8%). A full overview of the participants characteristics is shown in table 1. The interviews lasted on average 19 minutes (range of 12 – 33 minutes).

Insert table 1

Health in general

Participants described neglecting your health as 'dumb'. It was believed it is important to stay or become healthy. They defined 'health' as the absence of physical illnesses and not needing any more medical help.

"You can't buy health. It's hard to get healthy. Health is of so much more worth then having a lot of money." - (man, 34)

Desired lifestyle behavior

Participants had adequate knowledge of what a healthy lifestyle looked like. They named eating balanced meals, regular physical activity, refrain of smoking, having an effective coping, social contacts and hobbies as key factors of a healthy lifestyle. Furthermore, participants felt that taking care of your personal hygiene and appearance was also part of a healthy lifestyle. This includes taking daily baths, wearing clean clothes and cleaning your personal living space. Having daily routine was named as another characteristic of a healthy lifestyle. Participants valued that a day is well balanced in rest and activity. To maintain a well-structured day it should be divided in three meals of breakfast, lunch and dinner. They believed this stopped them from over-eating.

The majority of the participants labelled themselves as ´fat´ and thought that their obesity was unhealthy. They feared becoming sick or dying when the obesity worsened.

"*It scared me when they told me I could get diabetes. That was an eye-opener. So now, when I gain weight, this thought helps me to start dieting" - (women, 59)*

Losing weight would make them more attractive and would help to find an intimate partner, for which most participants longed. Overall, they believed that losing weight would make them happier, healthier and made them the person they were before being institutionalized.

"I'm not under the illusion that I'll ever get a stick-figure body, that's not necessary. I would love to lose weight, it´s definitely better for my knees. I really hope that I'll meet a man I like when I've lost some weight."- (man, 48)

Actual lifestyle behavior

Notwithstanding participants' knowledge about healthy lifestyle, the description was poorly applicable on their own behavior. Little effort was made to actually make healthier choices like exercising more and eating healthier. During the day they had the intention to make healthier choices but soon lapse into unhealthy snacking 'just because the food is there'. Especially when their rooms were locked-down for the night they eat unhealthy snacks, though not in all cases this was perceived as problematic.

"*I don't snack a lot. I just eat what I should eat, twice a day. I go off to bed and eat a couple of chocolates, then the day is done. But I had breakfast this morning, so it's okay!" – (man, 38)*

Although the majority of the participants undertook some form of physical activity, the length and frequency were limited. They played soccer two times a week, swam once a week or used the gym once in two weeks. When asked if they wanted to exercise more most participants thought their current training schedule was enough as their current condition would not allow them to do any more.

"To lose more weight I should be working out a lot more, I won't be able to do that. I just don't feel like it because I'm in here [forensic psychiatric hospital]. Which is strange because I do have the opportunity to work out here." - (man, 40)

Motivation to change lifestyle behavior

There are multiple factors found for not making healthier life style choices. Firstly, there are personal factors. Participants 'did not feel like' changing as they were satisfied with their current lifestyle. They named 'missing the drive', 'not feeling it' and 'not being the time yet' as reasons for not changing. When asked what could help them to help them to achieve a change of lifestyle behavior, as they also mentioned wanted to live healthier and lose weight, they were unable to define solutions. Participants showed some self-reflection on not changing their lifestyle to the desired one. A large share of the participants named that they lacked perseverance to hold on to healthier behavior. It took too long for them to see the results of their behavior change. Therefore, they accepted their current lifestyle.

“When you’re losing weight, then it’s quite okay, but the first step to actually lose weight, that’s hard. That can make a huge difference, I get frustrated when it doesn’t go fast enough.” – (man, 48)

Secondly, there were interpersonal factors. There was an ambivalence concerning their professional caregivers. On the one hand, participants were grateful for the help they receive from professional caregivers to lose weight. They expressed they need this help to actually make healthier choices as they were unable to change themselves.

“*Nurses made a diet schedule for me. I had to write down everything I ate and they cut out the things I didn’t need, so almost everything. I stuck to this schedule and it helped me. I still do it nowadays, a little less serious..” – (man, 40)*

On the other hand, the interference of professional caregivers felt belittling and annoying and therefore the offered help was declined most of the time. Participants who declined this help expressed that the interference was ‘unfair’. They felt that their caregivers were not fully able to understand - or give enough attention - to the consequences of their involuntary admission in a forensic psychiatric hospital and therefore were not allowed to correct them on unhealthy choices. Interference on lifestyle behaviour from professional caregivers made some participants angry as they could not differentiate this care from the involuntary treatment.

“When she told me to go exercising, I told her to not to mind my business. I screamed at her, she cried. I told her it wasn’t my fault I was in this hospital, she was the one who had put me in here!”- (man, 44)

Thirdly, participants believed that their obesity was largely caused by the (anti-psychotic) medication they were obliged to take. The side-effects of the medication were associated with a strong desire to eat, which they could not resist. Some participants even compared it with cravings from a substance addiction. They thought that dieting was of no use as long as they received medication.

“*I eat less than before did I was admitted in this hospital. The medication, solely the medication makes me gain a huge amount of weight!”*

Lastly, their involuntary admission was believed to be a major contribution in an unhealthy lifestyle. Participants expressed that they would maintain a healthier lifestyle when the involuntary admission would be adjourned. Their mandatory living situation in a forensic psychiatric hospital with several security efforts made it impossible to change their life style behavior. Participants mentioned that they are obligated to eat what the hospital offer or what other patients prepared. The food the hospitals offered was described as unhealthy, nasty, blend and fat. They firmly believed that their weight gain was connected with their admission in a forensic psychiatric hospital.

"*Everybody who comes here gets an enormous belly and they get really fat! I think that's the outrageous thing in forensic psychiatry, that this is allowed. When you are admitted you're skinny, when you're going out you're fat." - (man, 39)*

According to participants this setting leads to boredom what creates 'non-hungry' eating and wanting to sleep during the day. Participants named they waited to make changes until they had the option to go on leave[1]. Then they would be able to do their own groceries and engage in more physical activity. However, most participants who had the opportunity to go on leave did neither of both. The time on leave was largely spend on unhealthy grocery shopping.

Discrepancy in 'wanting' and 'doing'

There is a discrepancy in the actual and desired lifestyle behaviour, which influences the motivation to change lifestyle behaviour. Participants had positive expectations about a healthier lifestyle and weight loss. It was important to them and they believed it would make them happier as in most cases their obesity was a burden to them. Although they had positive expectations about a healthier lifestyle, it took too long to see result of this behaviour change. Therefore, patients settled for their current lifestyle as they felt they their involuntary admission and related restrictions made changing impossible. Change would happen when their involuntary admission ended or they could go on leave. The negative aspects of their current living situation overshadowed the positive intentions, which leads to the discrepancy in 'wanting' and 'doing'.

[1] Patients in forensic psychiatric care whose treatment seems to have effect get to go on leave to prepare them for a safe return in society. They have a restricted period of time to undertake activities outside the hospital supervised by a professional caregiver.

Discussion

This study shows that on the one hand patients were aware of their obesity express the desire to lose weight. They have adequate knowledge concerning a healthy lifestyle. On the other hand, they have great difficulties applying this knowledge on their own behavior. This is the result of a lack of motivation caused by personal, interpersonal and contextual factors, some related to the forensic setting. These factors make it impossible for patients to change their behavior and lose weight, which causes to not actively make healthier lifestyle choices.

In comparison with a previous study, on facilitators in health improving behaviour in patients with a SMI, our study showed similar results. In this study of Graham, Rollings, de Leeuw, and Anderson, Griffiths & Long participants named self-value and being empowered in their own behavior as positive facilitators in lifestyle changing[32]. Vice versa, patients in our study named the absence of self-confidence and perseverance as a reason for not changing their lifestyle. Participants in our study mainly blamed the mandatory admission as barrier for making healthier lifestyle choices. However, when patients received extra liberties, like the possibility to go on leave, their motivation to change their lifestyle did not increase. Although this study focused on patients with a SMI who received treatment in a forensic health care setting, it is important to pay attention to the 'normal' human aspect of having difficulties with losing weight. Qualitative studies on barriers and facilitator concerning weight loss programs with mentally healthy obese participants also mentioned problems with making lifestyle changes as a result of lacking motivation due to low self-efficacy concerning weight loss[33,34].

A mixed method study of Every-Palmer, Huthwaite, Elmslie, Grant & Romans on the perspectives on weight gain, body satisfaction, diet and physical activity of long-term psychiatric inpatients showed similarities with the results of this research[35]. The sample of their study contained both forensic and non-forensic patients. Comparable themes were found in our study, which only consist of forensic patients. Medication and environmental factors such as being restricted in your personal choices were believed to be barriers for changing lifestyle behavior[35]. The forensic patients in the study of Every-Palmer, Huthwaite, Elmslie, Grant & Romans mentioned that the transfer from prison to a psychiatric hospital was the start of their weight gain[35]. Forensic patients named 'looking fit and strong' is important in prison as it earns respect from other inmates and leads to safety during incarceration[35]. This phenomenon does not occur much in forensic psychiatric hospitals[35]. None of the patients in our study mentioned that the transfer from prison to a forensic hospital caused them to gain weight. This may be caused by a different care system in The

Netherlands for forensic patients with a SMI. The majority of Dutch forensic patients with a SMI do not receive a prison sentence or are not housed within mentally sane prison population.

A few limitations have been detected during this study. Firstly, participants showed pleasing behavior during interviewing. This could have created bias as patient seemed to sometimes adapt their answers to get approval from the first researcher or to be socially desirable. A possible explanation for this behavior is that patients tend to think that socially desirable behaviour helps with the termination of their involuntary admission. Another limitation of this study is composition of this study sample: it consists of participants who were willing to talk about their weight and lifestyle. Many eligible participants who were approached to participate in this study declined. This may result in an overrepresentation of patients who were self-conscious about their weight, lifestyle and motivation to change and had more affinity with healthier lifestyle in general.

The results from this study show implications for clinical practice and future research. In clinical practice healthier lifestyle behaviour could be promoted through creating a healthy eating environment[36]. Participants in this study were dissatisfied with the quality of food the hospital offered and therefore chose to eat unhealthy snacks instead. Patients should be included in the choice of hospital offers as this therapeutic attention to food is known to prevent patients from overeating[35]. Secondly, most of the participants in this study believed that the antipsychotic medication itself caused their obesity. Psychoeducation on the side-effects of antipsychotic medication may help patients understand that the medication on its own causes increased appetite, but does not causes weight gain. Patients could be more motivated to change their lifestyle behavior when they have learned that medication is not the sole cause of the obesity. Further research should focus on the specific needs for patients with a SMI in forensic care concerning lifestyle interventions as this remains unknown.

In conclusion, little is known about the physical health of patients with a SMI in forensic psychiatric care. Now we know that patients with a SMI in forensic psychiatric seem to have adequate knowledge about a healthy lifestyle and have the desire to lose weight However, they don’t apply this knowledge on their own lifestyle behavior as there are personal, interpersonal and contextual factors, some related to the forensic setting, which makes patients feel like changing is impossible. This phenomenon is a common behaviour for mentally healthy as well but attention should be given to the specific setting these patients reside in.

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Tables

Table 1: participants characteristics

(n=12)	
Gender, % Male	81.8
Age, *mean* (range)	*41.7* (26 – 59)
BMI, *mean* (range)	*32,4* (30 – 49)
Years of contact with mental health care *mean*(range)	*17.5* (8 – 50)
Years of current treatment, *mean* (range)	4.9 (0.3 – 11)

BMI (Body Mass Index)

Appendix A: topic List

1. Perceptions on own health
    - General description health
    - Description own health
    - Satisfaction with life
    - Satisfaction with health
    - Relation happiness/satisfaction life - health
    - Role of weight/obesity
    - Relation weight - health
2. Perceptions on own health behaviour
    - Description of own health behavior
    - Eating Habits- importance
    - Physical Activity – importance
    - Importance of improving health (reducing weight)
3. Perceptions on the willingness for changing lifestyle behavior
    - Description of a healthy lifestyle
    - Willingness to improve health/reduce weight
    - Perceived barriers in improving health/reducing weight
    - Perceived facilitators in improving health/reducing weight