

“Walk a mile in my shoes”. Mentalising ability in patients with eating disorders – literature review

„Przejdź milę w moich butach”. Umiejętność mentalizacji u pacjentów z anoreksją i bulimią – przegląd literatury

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Abstract

When it comes to eating disorders, more attention is being paid to social cognition deficits and their influence on the course of eating pathology. One of the forms of social cognition is mentalisation. It can be defined as the ability to interpret one's own behaviour as well as the behaviour of others in terms of underlying mental states. Even though mentalising ability in patients with eating disorders has been already addressed in the scientific literature, little is known about how mentalising ability differs across specific eating disorder diagnoses. Therefore, the aim of this paper is to conduct a literature review that will summarise, compare, and contrast mentalising ability in patients with anorexia nervosa (AN) and bulimia nervosa (BN). We predicted that patients with AN have poorer mentalising skills than those with BN. In the second part of this paper, we propose treatment options aimed at remediating mentalising abilities. The electronic database PsycInfo was used to identify relevant articles. Our findings were largely in line with our hypothesis. We found the evidence for impaired mentalising skills in patients with AN. When it comes to BN, it was found that despite relatively well-preserved mentalising skills, the patients tended to use maladaptive emotional regulation strategies. Mentalisation-based therapy (MBT) as well as social cognition training programs are discussed as promising therapies aimed at remediating mentalising abilities and addressing problems with emotional regulation in eating disorders.

Key words: eating disorders, social cognition, mentalisation.

Streszczenie

Coraz więcej uwagi poświęca się deficytom społecznego poznania oraz ich wpływowi na przebieg i kształt psychopatologii zaburzeń odżywiania. Jedną z form społecznego poznania jest mentalizacja. Można ją zdefiniować jako zdolność postrzegania, interpretacji i rozumienia zachowania poprzez odwołanie do stanów wewnętrznych – zarówno własnych, jak i innych osób. Mimo że tematyka mentalizacji u pacjentów z zaburzeniami odżywiania już kilkakrotnie została podjęta w literaturze, wciąż niewiele wiadomo na temat tego, jak procesy mentalizacji różnią się w zależności od konkretnej diagnozy z kręgu zaburzeń odżywiania. Dlatego celem niniejszej pracy było dokonanie przeglądu literatury empirycznej, który podsumuje, porówna i skonstruuje umiejętności mentalizacji u pacjentów z bulimią oraz anoreksją. Spodziewano się, że u pacjentów z jadłowstrętem psychicznym okaże się ona słabiej rozwinięta niż u pacjentów z bulimią. W drugiej części artykułu przybliżono również jedną z metod leczenia ukierunkowaną na poprawę umiejętności mentalizacji. Artykułów szukano w bazie PsycInfo. Rezultaty w dużej mierze potwierdziły hipotezy. Znalezione obszernie badania potwierdzające znaczące deficyty w mentalizacji u pacjentów z anoreksją. Pomimo braku znaczących deficytów w tym obszarze u pacjentów z bulimią badania sugerują występowanie u nich tendencji do używania dysfunkcyjnych strategii regulacji emocji. Terapia oparta na mentalizacji (MBT), podobnie jak programy usprawniania społecznego poznania, wydaje się obiecującą metodą terapeutyczną ukierunkowaną na rehabilitację deficytów umiejętności mentalizacji, a także na poprawę regulacji emocjonalnej u pacjentów z zaburzeniami odżywiania.

Słowa kluczowe: zaburzenia odżywiania, społeczne poznanie, mentalizacja.

Introduction

These days, researchers pay more and more attention to social-cognitive deficits in the aetiology and maintenance of eating disorders (Brockmeyer, 2016; Treasure *et al.* 2012). According to Smith and Semin (2007), social cognition refers to “mental representations and processes that underlie social judgment and behaviour”. Brockmeyer *et al.* (2016) proposed that some symptoms of eating disorders, such as purging or restraining from food, may serve as maladaptive strategies to compensate for impaired social cognition and aim at reducing social threat.

A specific form of social cognition is mentalisation (Górska and Marszał 2014). Mentalisation plays a crucial role in social cognition research and can be seen as a form of mental ability that allows the perception and interpretation of human behaviour in terms of intentional mental states (Fonagy *et al.* 2002). Previous research found that individuals with eating disorders exhibit lower emotional awareness compared to normal controls, and impaired processes of theory of mind, mentalisation, and empathy (Adenzato *et al.* 2012; Kessler *et al.* 2006; Medina-Pradas *et al.* 2012; Zonneville-Bender *et al.* 2004). Some researchers refer to mentalisation and theory of mind interchangeably, meaning: “the ability to interpret the behaviour of others in terms of mental states” (Górska and Marszał 2014). However, Górska and Marszał (2014) argue that the concepts, even though related, do not play the same role in explaining the psychopathology. According to the authors, theory of mind refers to the ability to detect, decode, and reason about mental states. Mentalisation, on the other hand, over and above theory of mind, incorporates reasoning about mental content in terms of needs, desires, goals and intentions. In this context, theory of mind can be thus better understood as “cold” (cognitive) knowledge, whereas mentalisation involves relational and emotional aspects of social cognition (Górska and Marszał 2014). Next to the interpersonal and relational aspect of mentalising ability, Skårderud (2007a) highlighted its self-reflective component. He argued that mentalisation plays a crucial role in the organisation of the self and underlies abilities such as: affect regulation, self-monitoring, and impulse control and allows for the experience of the self as an agent. The reflective aspect of social cognition (in reference to both the self and others, as well as in the relational context) is crucial in mentalising ability. In fact, mentalisation is often operationalised

in scientific studies as “reflective functioning” (the capacity to reflect and interpret one’s own and others’ behaviour in terms of intentional mental states such as thoughts, feelings, and beliefs; Fonagy and Target 1996; Rothschild-Yakar *et al.* 2010). Rothschild-Yakar *et al.* (2010) emphasised that mentalising ability requires the recognition of mental states as subjective. It further demands relating overt behaviour to the internal mental processes that underlie this observable behaviour. In other words, mentalisation requires integration of internal and external experiences.

Mentalising ability is not inborn (Fonagy *et al.* 2002). It has been proposed that it develops within the first four to five years of a child’s life (Innamorati *et al.* 2017) and takes place within the relationship between the child and a primary caregiver. Mentalising ability is thus formed in parallel with the attachment style. In fact, Bowlby (1969) proposed in his attachment theory that infants learn to form mental representations of themselves and other people in response to repeated experiences that they have with their primary caregivers (particularly experiences in which responsiveness and availability of the caregivers play a crucial role). Thus, both mentalisation and attachment represent important components of emotional and social development (Jewell *et al.* 2016).

Mentalisation is hypothesised to develop from three prementalising modes that form representations of the child’s inner-world (Fonagy *et al.* 2002; Rothschild-Yakar *et al.* 2010). These prementalising states are “psychic equivalence”, “pretend mode”, and “teleological stance”. In “psychic equivalence” mode, the child lacks the ability to distinguish between internal and external experiences (Fonagy *et al.* 2002). Negative cognitions and emotions that are related to the self are thus experienced with unbearable intensity because they are equated with the external reality. In the “pretend mode”, on the other hand, the child forms no bridges between the inner and outer world. The constitutional self is thus absent, and thoughts may be decoupled from feelings, creating the sense of emptiness. “Teleological stance” is another prementalising mode, in which internal states are perceived as real and legitimate only when they find direct reflection in the outer reality (e.g. feelings and thoughts are only perceived as real when they motivate observable change in the behaviour of the caregiver). Fonagy *et al.* (2002) suggested that to develop mentalising ability in the child, the caregiver needs to mirror the emotional

states of the child within the child-caregiver dyad. The child, while observing the caregiver during marked mirroring processes, learns to recognise emotional states and form mental representations of them. A lack of marked mirroring of the affective states in caregivers is thus hypothesised to underlie impaired mentalising ability in children and to be related to the use of primitive prementalising modes (Rothschild-Yakar *et al.* 2010). Bruch (1973), on the other hand, while reflecting on impaired mentalising ability in eating disorder patients, proposed that deficits in this aspect of social cognition may be related to the caregiver mirroring the child categorically incorrectly. She suggested that in the mother-child dyad, the mother is not sensitive to the cognitive and emotional needs of the child and interprets the child's behaviour in a purely physical/physiological manner (e.g. hunger or tiredness). In consequence, the child fails to learn to distinguish between physical needs and cognitive/emotional states.

An increasing body of evidence highlights the role of mentalising ability in understanding and treating eating disorders (e.g. Skårderud 2007a, 2007b). Pedersen *et al.* (2015) related eating disorders to deficits in the ability to identify, express, and regulate one's emotions, while Skårderud and Fonagy (2012) observed fragmentation of the self-concept as well as unstable self-esteem in eating disorder sufferers. Even though some literature reviews have already addressed the topic of impaired mentalising ability in patients with distorted eating, little has been done to review, compare, and summarise the role of mentalising ability in (between) concrete eating disorder diagnoses. We hypothesised that mentalising abilities may differ across various diagnoses of eating disorders. In particular, we predicted that patients with anorexia nervosa (AN) are characterised by poorer mentalising skills than those with bulimia nervosa (BN). While conducting a meta-analysis, Bora and Köse (2016) found more prominent deficits in theory of mind in anorectic in comparison to bulimic patients. Moreover, they found that one of the aspects of theory of mind, namely cognitive perspective taking (ToM-PT), was impaired in AN but not in BN patients. In addition, de Sampaio *et al.* (2013) showed in their study that the affective component of theory of mind was impaired in anorectic but not in bulimic patients. Overall, because theory of mind and mentalisation are related constructs, one could predict that more prominent impairment in theory of mind in patients with AN in comparison to

those with BN is accompanied by more severe impairment in mentalisation.

Material and methods

The electronic database PsycInfo was used to search for the articles. To ensure that the articles are relevant and embedded in actual theories, we searched for the articles from the year 2005 to the present. In our search we used keywords such as: "mentalisation", "anorexia nervosa", "bulimia nervosa", "eating disorders". We limited our search to the articles in English. Considering the limited number of articles concerning the topic, we took under investigation a wide range of data: qualitative and observational as well as quantitative and experimental.

Results

Anorexia nervosa

Skårderud (2007b) proposed impaired reflective functioning and compromised ability to use symbolism as the core symptoms of AN pathology. In order to support his view, he quoted a patient from a therapeutic session, who described how maintaining low weight and restricting food intake translates to the perception of control in different areas of the patient's life ("When, in my anorectic condition, I keep to a rigid food regime that maintains my weight at a very low level, it contributes to creating the security and stability, the sense of control, in my existence that I've never had."; Skårderud 2007b). To the healthy individual, such a translation may lack a rational basis. However, Skårderud (2007b) argued that these kinds of statements are not uncommon in patients with AN. The above-mentioned quote constitutes an example of what Enckell (2002) coined as a "concretised metaphor". In contrast to what is usually understood under the term "metaphor", being a demonstration of one phenomenon through the reference to another phenomenon, "concretised metaphor" is not indirect mental representation, but rather a concrete example of how a physical/bodily sensation (here: feeling "light" or having an empty stomach) directly relates to cognitive/emotional experience such as perception of security, stability, and control. In other words, Skårderud (2007b) and Enckell (2002) argued that, in some patients with AN, physical as well as physiological sensations are physical entities that represent mental states. Mental and emotional states are thus in these patients embodied, felt corporeally. It is hypothesised that the rea-

son for these phenomena is that these patients have a compromised ability to use symbolism. It means that the “as if” component of the metaphor is gone and instead it becomes a concretised bodily experience (Skårderud 2007b). The concretisation of emotional and mental representations was interpreted by Skårderud (2007b) as impaired mentalising ability that, according to the author, is a part of reflective functioning. It is important to mention, however, that the study by Skårderud (2007b) had some important limitations. First of all, it was a qualitative research, in which the patients were interviewed by the clinician who, at the same time, played the role of the researcher. Such a double role of the author may pose questions regarding the objectivity of the study (e.g. the author, having in mind his hypothesis, might have been suggestive while conducting his interviews or interpret patients’ statements solely within the framework of his theory, discarding alternative explanations). Second, the sample size under investigation was low ($n = 10$). Third, the observational nature of the study and lack of the use of validated instruments pose the question of validity and reliability.

Further evidence regarding the role of mentalising ability in patients with AN was provided by Brockmeyer *et al.* (2016). They examined a sample of $n = 25$ women with AN, who were matched with a comparison group with $n = 25$ non-clinical female participants. In order to measure mentalising ability and other aspects of social cognition, they used “The Movie for the Assessment of Social Cognition”. In this task, participants were shown a 15-minute video clip that presented a social situation (the interaction between two men and two women over dinner). The task of the participants was to answer 45 multiple choice questions at given breaks in the video. The hypothesised advantage of this task in comparison to other tasks measuring mentalising ability (e.g. “Reading the mind in the eyes”; Brockmeyer *et al.* 2016) is that it not only allows for inference of mental states in a situation that is proximal to a real-life-situation, thus being ecologically valid, but also allows for the scoring of cognitive and emotional mental states separately (Brockmeyer *et al.* 2016). The questions addressed topics such as: mental states of the characters involved in the interaction, the nature of the relationships between them, their mutual level of intimacy, and personality characteristics (e.g. outgoing, selfish, timid). Thus, in order to answer the questions, participants should take both verbal and nonverbal cues into

account. Results from the study showed that AN patients were less successful in inferring the emotional mental states of the characters than matched controls. However, they did not differ on the ability to infer cognitive mental states. These findings constitute preliminary evidence for the hypothesis that AN patients may display more impairment in emotional theory of mind than cognitive theory of mind (Brockmeyer *et al.* 2016). Similar findings were obtained earlier by Adenzato *et al.* (2012), who showed preserved theory of mind in anorectic patients, but impaired emotional functioning.

Another group of researchers investigated mentalising ability in $n = 34$ AN patients (binging-purging subtype) in comparison to a controlled sample of $n = 35$ students, who volunteered in the study for the exchange of study credits (Rothschild-Yakar *et al.* 2010). In this study, mentalising ability was captured by the Reflective Functioning (RF) scale (Fonagy *et al.* 1998). Scores on RF are coded based on the passages from the Adult Attachment Interview (AAI; George *et al.* 1996). In short, AAI is a semi-structured interview consisting of 20 questions that address the participant’s early childhood relations with his/her parents and aim at deducing how the nature of this early relationship might have affected the informant’s adult personality. In coding RF, relational aspects of the informant’s answers that require reflection are emphasised (exemplar questions: “Why do you think your parents behaved in that way?”, “Who did you feel closest to?”; Pedersen *et al.* 2015). The results showed that AN patients (binging-purging type) scored significantly lower on mentalising ability (as captured by RF) in comparison to the control group.

Also, in their systematic literature review, Jewell *et al.* (2016) found that AN patients tended to display difficulties in emotion recognition (a finding replicated across studies). The authors, however, highlighted the heterogeneity of study samples as a factor reducing the validity of the replications.

Bulimia nervosa

Some researchers investigated the mentalising ability in a sample of $n = 70$ BN patients in comparison to a control group ($n = 20$; Pedersen *et al.* 2012). The groups under investigation were interviewed with the AAI, and then their answers were scored on an RF scale that captured mentalisation. The results showed that BN did not differ significantly in mean mentalising ability in

comparison to the healthy individuals. However, what was observed was a significantly different distribution of the scores on the RF scale between the groups. While in the control group, close to normal distribution of the scores on RF scale was observed (with most individuals scoring in moderate range of RF ability), in BN patients, distribution of the RF scores was right-skewed. Scores of BN patients were also more polarised, with a greater number of individuals scoring in both low and high ranges of RF. The authors of the study proposed that, because a much greater proportion of bulimic patients experienced childhood abuse and adversity (39% in comparison to 10% in the control group), these experiences might have forced the patients to either reflect and try to understand the behaviour of their caregivers (contributing to high scores on RF later on) or defend against reflection (low RF). The advantage of this study was that it took under investigation a relatively large group of BN patients. The downside, however, was that the sample size of the control group was rather small, and the sizes of both samples were unequal, which could lead to some statistical difficulties in comparison making.

Moreover, Pedersen *et al.* (2015) ran qualitative case studies in which they investigated $n = 5$ BN individuals who scored “high” in mentalising ability (out of the total sample of $n = 36$ BN patients that were questioned). In these case studies, the authors aimed to explore the relationship between mentalisation and emotion regulation abilities. The patients were extensively interviewed, and the data about five different dimensions of the patient’s lives were collected. The categories were: “the parent’s affect and relationships”, “affects and affect regulation as a child”, “affects and affect regulation as an adult”, “body and eating disorder”, and “reflective functioning”. It was found that the patients under investigation had a relatively well-developed ability to reflect on their own and others’ mental and emotional states. Despite that, the patients displayed deficiencies in emotion regulation strategies and used compulsive eating as a means to regulate their mood. Thus, even though the patients performed well when it came to the ability to put their feelings into words, this ability did not help them in adaptive affect regulation. The authors suggested that mentalisation may not be as closely linked to affect regulation as previously hypothesised. Moreover, they suggested that the term mentalisation may be overinclusive and need further specification/narrowing down. The disadvantage

of the study was its small sample size as well as the lack of information about the mentalising ability scores of the other $n = 31$ individuals questioned.

Discussion and conclusions

This literature review aimed at comparing and summarising the body of evidence targeting mentalising ability in patients with AN and BN. We hypothesised that AN sufferers’ mentalising skills are more impaired in comparison to those with BN. We found the evidence to be largely in line with this hypothesis. Skårderud (2007b) found compromised ability to use symbolism and concretisation of mental life in AN. Brockmeyer *et al.* (2016) and Jewell *et al.* (2016) identified difficulties in emotional recognition in AN, while Rothschild-Yakar *et al.* (2010) observed the general tendency of AN to score lower on mentalisation in comparison to healthy controls. When it comes to BN, the evidence is harder to interpret. Even though Pedersen *et al.* (2012) found no difference in mean mentalising scores in BN in comparison to healthy controls, there was a significant difference in the distribution of the scores (greater polarisation). Moreover, despite relatively well developed mentalisation (Pedersen *et al.* 2015), BN patients were found to display difficulties in emotional regulation, so one could conclude that preserved mentalising skills did not protect BN sufferers from using maladaptive emotional regulation strategies.

At this state of knowledge, the evidence regarding mentalisation in AN and BN is still scarce, and there is a need for more research. So far, when it comes to experimental studies, we only identified those comparing either AN or BN to healthy controls regarding the measures of mentalisation. The studies directly comparing mentalising skills in AN and BN could help to arrive at a final conclusion regarding the difference in mentalising skills between these eating disorders. Moreover, there are some conceptual nuances that should be addressed, which make a comparison of mentalising abilities across studies difficult. First of all, no standardised definition of mentalisation exists. Some researchers equate mentalisation with the theory of mind, whereas others do not (e.g. Górska and Marszał 2014). What follows is that mentalisation is operationalised differently in different studies. To give an example, Brockmeyer *et al.* (2016) used in their study “The Movie for the Assessment of Social Cognition” to capture mentalisation, whereas Rothschild-Yakar *et al.* (2010) used

the “Reflective Functioning Scale”. In order to make the studies more comparable, it is necessary to develop a standardised definition of mentalisation and use it across studies, as well as to develop tools and measures that would allow mentalisation to be captured accordingly. Despite some ambiguities in terminology and operationalisation, this literature review shows that eating disorder sufferers indeed tend to have impaired mentalising skills or/and they use maladaptive emotional regulation strategies. What could particularly help to address these issues are mentalisation-based therapy and social cognition training programs.

Therapeutic implications for remediation of mentalisation

Mentalisation-based therapy (MBT) is becoming an increasingly popular treatment method targeting deficiencies in some aspects of social cognition such as mentalisation. MBT has its roots in psychodynamic approaches. It has its theoretical basis in attachment theory (Robinson *et al.* 2014). Even though it was first developed for individuals suffering from borderline personality disorder (BPD), a preliminary body of evidence shows its effectiveness in the treatment of eating disorders (Kroger *et al.* 2010; Chen *et al.* 2008). Additionally, current approaches towards psychopathology (e.g. transdiagnostic approach; Marchette and Weisz 2017) suggest that the treatment should address problematic symptomatology (which commonly overlaps between different diagnoses) rather than being based on the specificity of the diagnostic categories. From this perspective, BPD and eating disorders may be similar in a number of ways. BPD and BN tend to share impulsivity and dysfunctional affect regulation strategies, whereas BPD and AN are both characterised by the use of self-destructive behaviours (Kordyńska *et al.* 2018).

The main goal of MBT is to address the deficiencies in self-reflectiveness (mentalising; Robinson *et al.* 2014). The premise is that improving mentalising ability will alleviate the symptoms of the psychopathology as well as improve interpersonal functioning (Bo *et al.* 2017). This has already been found in a number of studies (Bateman and Fonagy 1999, 2001, 2008, 2009). Moreover, improving the capacity to mentalise was found to positively affect the ability to make use of social and cultural information received from close others as well as to enhance trust and the ability to form trust in interpersonal relationships (Bo *et al.* 2017).

Based on preliminary study results suggesting that MBT may be an effective method to address eating disorder symptomatology, some researchers have been working on the development of mentalisation-based therapy tailored specifically to patients with distorted eating (Robinson *et al.* 2014). Robinson *et al.* (2014), in their study protocol for a randomised control trial of mentalisation-based therapy for eating disorders (MBT-ED), proposed an intervention with the intensity of one individual and one group session per week for the period of one year. In this treatment protocol, the individual session lasts 50 min, whereas the group session lasts 90 min. In addition, in this intervention protocol, families and carers are offered attendance. The intervention is based on the Intensive Outpatient Therapy Model (Robinson *et al.* 2014) and is currently being tested.

Other forms of intervention that could improve the emotional thinking, emotional expression, and interpersonal relations are social cognition training programs. They commonly find their application in the treatment of patients with distorted eating (particularly AN), who tend to be characterised by impaired emotional and social functioning (Kulakowska *et al.* 2014). The social cognitive training program described by Kucharska *et al.* (2013) includes 10 sessions, the first five of which have been developed to improve emotional functioning and social perception. They include: 1) introduction to the training, becoming familiarised with the model of social cognition and the chart which presents connections between emotions, thoughts, and behaviour; 2) defining and recognising emotions based on non-verbal communication signs (e.g. facial expressions, gestures); and 3) learning about the role of emotions in different social situations and about empathy. Other sessions are focused mainly on improvement of functions of the theory of mind and the attribution style as follows: jumping to conclusions (including self-assessment and relations with others); recognising cognitive distortions including weight and appearance as well as their consequences; learning new strategies preventing individuals from jumping to conclusions (and other cognitive distortions); generating alternative speculations/the ability to look from different perspectives; separating facts from speculations; and gathering evidence and verifying suppositions. Social cognition training programs such as the one described above have been found effective in enhancing socio-emotional functioning in the treatment

of alexithymia (Amani *et al.* 2014; Nikoogoftar 2009; Tchanturia *et al.* 2014).

Strengths and weaknesses

To the authors' knowledge this is one among very few papers exploring mentalising processes in patients suffering from eating disorders. The paper, however, has a rather descriptive nature and is based on a limited number of studies because the evidence regarding mentalising abilities in eating disorders is still scarce.

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