ABSTRACT

Alexithymia is a disorder, which has a significant impact on one’s ability to have an insight into their own emotional states, making it impossible to identify and understand the information coming from experienced emotions. Alexithymia consists of the following symptoms: difficulty identifying and verbalizing emotions, difficulty in distinguishing between emotions and the bodily sensations, external, operational way of thinking, as well as impaired creativity. This way of functioning can have a significant impact on experiencing stress – existing research suggest that people with alexithymia experience prolonged negative affect in face of stress, probably because of the inability to regulate their own emotions, as well as dysfunctional stress regulatory mechanisms. Because of the mentioned symptoms of alexithymia, it is interesting to explore the way of experiencing dreams in alexithymia, such as: dream recall frequency, experiencing nightmares, sleep paralysis and lucid dreams. The existing literature, focused on exploring this relation, is minimal, yet has shown that alexithymia has a significant impact on dream recall frequency, as well as experiencing nightmares. Research also suggests that there are significant relations between high levels of perceived stress and nightmare experiences, as well as sleep paralysis.

Keywords: alexithymia; dream experiences; stress

INTRODUCTION

Alexithymia is a peculiar deficit in the process of recognizing and describing feelings and emotions. It has been described as a construct encompassing the following aspects: difficulty identifying and verbalizing emotions, difficulty
distinguishing between emotions and their accompanying physiological arousal, constricted imaginal processes, and operational thinking marked with focusing on external matters rather than personal experiences (Taylor, 1994). Alexithymia as a trait neither relates only to individuals with somatic diseases nor belongs to mental disorders, but is a phenomenon present in the general population and has a normal distribution. Just as people are different in terms of their ability to understand and describe feelings and emotions, each person is characterized by a certain intensity of alexithymia and its components and among the majority of people it has average values. An extremely high level of alexithymia concerns only 13% of the population. It occurs more frequently in individuals of a lower socioeconomic status and a lower level of education. It is more common among men – 17%, than women – 10% (Płońska, Czernikiewicz, 2006).

Although people with alexithymia may appear to be composed and rational, they incur high costs of energy. Their psychological stress, instead of being relieved, persists for a long time and causes discomfort. Therefore, people with alexithymia show signs of numerous medically confirmed physical and psychological conditions. For example, they are marked with susceptibility to infections, the risk of arterial hypertension, eating disorders, addiction vulnerability and a propensity for mental disorders (Zdankiewicz-Ścigała, 2017). Researchers observed also sleep disorders in people with alexithymia, which will be analysed in detail in this article.

ALEXITHYMIA

Alexithymia is a disorder that has caused an enormous interest amongst scientists for the past fifty years – since the early seventies of the past century. Peter Sifneos, an American psychiatrist who is thought to be the author of the mentioned construct, created the name out of combining the following three Greek words: a, lexis and thymos (Maruszewski, Ścigała, 1998). The first one – a – means “lack”, the second one – lexis – means “word” and the last one – thymos – means “emotion”, together creating the word “alexithymia”, which could in fact be shortly described as a lack of words for emotions. Sifneos has mainly worked with patients who suffered from psychosomatic disorders, and throughout years of practice, he noticed that many of his patients had a difficulty with finding the right words to describe their own emotional state. It almost seemed as if the patients did not understand what it was like to experience emotions. Trying to explore this phenomenon further, Sifneos worked with patients who suffered from different disorders, such as eating disorders and substance abuse addictions – the difficulty with describing one’s emotional state was present in these patients as well, making alexithymia a construct that reaches beyond symptoms of psychosomatic patients (Luminet, Bagby, Taylor, 2018). This led Sifneos, with the help
of his co-worker John Nemiah, to distinguishing the following general symptoms that would characterize people who could be described as alexithymic: difficulty in identifying and verbalizing emotions, difficulty in distinguishing between emotions, the bodily sensations and external, operational way of thinking and limited imaginal processes (Brzeziński, 1995).

Due to the inability to grasp emotions and name them, people with alexithymia experience emotional arousal, but are unable to express it; they lack words which would specify the experienced state. Such a situation also leads to the inability to use adequate techniques of emotional control which could reflect the current experience. This is related to using inflexible forms of coping with emotions by people with alexithymia. Defence mechanisms present in such individuals mostly include: repression, isolation and perceptual defence (Maruszewski, Ścigała, 1998). It is worth noting that the above-mentioned “lack of words” to describe experienced states is not connected with the actual lack of knowledge of dictionary terms that name particular emotions. The experiment conducted by Harvey Irwin and Elizabeth Melbin-Helberg (1997) consisting in saying words of certain categories during one minute, proved no correlation between alexithymia and the achieved score. The test categories included: positive emotions, negative emotions, wild animals and furniture – all categories were defined; the test also introduced a division of emotions into mental and physical states.

People with alexithymia also have difficulty recognizing their own emotional states at the moment of experiencing them. It is probable that an alexithymic individual after some time will be able to understand that the experienced arousal is associated with a strong negative or positive emotion, but they will not be able to recognize the cause of this reaction or specify a given emotion. The identified arousal is related to such physiological reactions as: rapid heartbeat, sweating of the hands, or flushing. It is more likely that an alexithymic person will interpret such arousal as symptoms of a disease or changes connected with such external conditions as increased temperature, rather than relate it to emotions. Due to the lack of distinction between the bodily reaction and emotional arousal, people with alexithymia are unable to adequately identify emotions as signals informing about their current state. Also, they are not able to make use of the information coming from emotions to influence their own development and make significant changes (Thompson, 2009).

Cognitive functions in people with alexithymia to a large extent are related to concentration on external, superficial aspects of certain situations, the lack of motivation for delving into the essence of things and reluctance to make changes in the current situation (Maruszewski, Ścigała, 1998). People with alexithymia are individuals who tend to have restricted interests, their thinking is orientated towards facts; they prefer being in situations which are predictable and familiar. In the case of people with alexithymia, negatively charged emotions by far outnumber positively charged ones (Taylor, 1994).
People with alexithymia are in a way the opposite of creative people; they have difficulty producing ideas, especially those which are not based on familiar material. They primarily use external facts and information, their imagination functions well intellectually, but it is not spontaneous and creative for lack of the access to emotions; they are not able to rely on internal experiences (Krystal, Krystal, 1988). The study carried out by Karolina Czernacka and Błażej Szymura (2008) shows that people with a high intensity of alexithymia are significantly less creative than people with a low intensity of that trait. However, functioning of their imagination is not significantly different in terms of effectiveness during task performance.

It is not fully clear what is the cause of alexithymia. However, in the literature the most common explanations point to: genetic factors that have a bearing on the possible inheritance of alexithymia, the effect of environmental factors, and psychological origin. The inheritance of alexithymia, treated as a personality trait, seems to be associated with a general thesis stating that human personality is largely affected by genetic factors, passed down from parents to children. The meta-analysis of the studies on inheriting personality traits conducted by Tinca Polderman, Beben Benyamin, Christiaan de Leeuw, Patrick Sullivan, Arjen van Bochoven, Peter Visscher and Danielle Posthuma (2015) proved that heritability is approximately 49%. A Danish research study conducted on more than eight thousand twin couples showed that genetic factors have a noticeably significant effect on the risk of alexithymia. It ranges from 30 to 33% (Jørgensen, Zachariae, Skytthe, Kyvik, 2007).

The influence of environmental factors on the formation of alexithymia seems to be fairly likely, taking into account a bigger number of men in relation to the number of women with alexithymia. According to Ronald Levant’s theory of Normative Male Alexithymia (1992), it may stem from different requirements for men during the process of socialization, influenced by the ideology of traditional masculinity according to which a man should be strong and should not show emotions to such a degree as women. Levant, working with male patients, observed that only in the case of a considerable intellectual effort and practical exercises, they are able to find suitable words to describe the emotions that they experience (Levant, Hall, Williams, Hasan, 2009). Levant’s observations led him to a conclusion that probably the described difficulties of male patients originate from discouraging boys from expressing their emotions by their parents, peers and teachers, frequently even in the form of ridiculing the experienced emotions as a sign of their weakness and lack of masculinity. Due to such a process of socialization men may not have a chance to learn suitable vocabulary to name particular emotions or even may not become aware of them, and, therefore, are not able to notice and classify them correctly.

Many research studies also point to the role of stress and traumatic events in the genesis of alexithymia (Zdankiewicz-Ścigała, 2017). In a study conducted by
Mark Connelly and Douglas Denney (2007), 94 participants (47 with alexithymia and 47 without) were tested in order to verify whether there is any significant difference in the levels of perceived stress. The researchers relied on heart rate and skin conductance data in order to measure the physical response to stress, they also asked the participants to report on the negative affect they might have been experiencing. The results have shown that high alexithymia levels correlated positively with high levels of negative affect, meaning that people with alexithymia reported experiencing negative affect significantly more often than the control group, whereas no major differences were detected within the autonomic response to stress. People with alexithymia do not seem to be more prone to stronger physiological responses to stress than others, but it is important to note that they might suffer from prolonged negative affect which is most likely related to difficulties with emotional regulation.

Researchers also draw attention to the role of neurobiological factors, possibly contributing to alexithymia in some people. Such factors as: dominance of the right frontal lobe over the left one, dysfunctional interhemispheric communication, and anomalies in amygdala, insular cortex and cerebellum, seem to play a role in the probability of alexithymia (Meza-Concha, Arancibia, Salas, Behar, Salas, Silva, Escobar, 2017).

Division into primary, secondary and organic alexithymia seems to settle the dispute over its etiopathogenesis (Messina, Beadle, Paradiso, 2014). Most studies which contributed to the vast knowledge base on alexithymia examined individuals with primary alexithymia, which may be caused by a trauma or negative experiences during childhood. Therefore, this type is currently regarded as a more or less stable personality trait which is shaped in childhood and early adulthood. On the other hand, secondary alexithymia is not formed during the development stage but as a result of certain life events. These can be events which are psychologically significant and/or health-related (diseases or ailments) which directly or indirectly affect functions of the brain. Therefore, secondary alexithymia may be characterized both by psychological and somatic mechanisms. Apart from somatic symptoms, alexithymia may in some cases be related to mental illnesses. Primary alexithymia constitutes then a risk factor of developing a mental illness and secondary alexithymia is formed as a consequence of such an illness.

**DREAM EXPERIENCES**

Sleep makes up around one third of human life (Myers, 2003), which is a quite significant amount of time spent on seemingly very little activity, thought to be the time that is needed for people to rest. It is impossible to function without sleep, the consequences of its deprivation are significant to one’s physical and mental health – weakened immune system, higher irritability, poor concentration, hand
tremor or poor creativity and performance – these are only some of the symptoms of not getting enough sleep. Knowing how important the phenomenon of sleep is, it has been studied widely by many researchers for the past decades, especially in connection to the fact that issues with sleep are one of the main complaints from patients who decide to seek help (Cierpiałkowska, 2015).

One of the most common issues with sleep are nightmares – highly unpleasant, full of negative emotions type of dreams which tend to appear in the second phase of REM sleep. According to a study conducted on 8,558 participants by Shirley Li, Bin Zhang, Albert Li, and Yun Wing (2010), frequency of experiencing nightmares every week sums up to about 5%. The correlates of their occurrence are: gender (female), low income and symptoms of insomnia. People who are experiencing mental disorders are also six times more likely to experience nightmares. Around one third of patients diagnosed with PTSD, and around 50% of patients diagnosed with BPD report experiencing nightmares (Rek, 2017). The connection of nightmares to the suffered stress is indisputable, not only in relation to trauma, but also in relation to quite universal stressors such as taking exams or being a part of an accident (Loveland, Cook, Caplan, Wolowitz, 1990).

Another concept connected to experiencing dreams is dream recall frequency (DRF) – it is commonly understood that every person sleeps and dreams, but for some reason not everyone can recall their dreams and yet some can recall their dream almost every time they wake up (Schredl, 2018). Tore Nielsen (2000) states that the time of waking up plays an important role in being able to recall one’s dream – DRF values fluctuate around 80 to 90% when one is woken up during the REM phase, whereas during the NREM phase DRF values are around 50%. It is important to consider the role of emotional state while speaking of dream recall frequency, according to a study conducted by David Cohen (1974), people who feel emotionally unwell before falling asleep remember significantly more dreams, mainly because of the fact that the said emotional state seems to be transferred into the dreaming life as well. This plays well with David Cohen and Peter MacNeilage’s (1974) theory that points out emotionally vivid experiences as being easier to remember, which could also transfer to being able to recall dreams that seem to be quite expressive (Schredl, 2018).

The last two concepts that seem to be quite interesting and can be considered a part of dream experiences are sleep paralysis and lucid dreaming. The first phenomenon is a state that is related to a natural body reaction – bodily movements are prevented due to muscle paralysis during one’s sleep in order to prevent injuries that could possibly occur while dreaming during the REM phase. However, sleep paralysis occurs when an individual is still conscious and aware of losing the control over their muscle, not being able to move nor open their eyes (Carr, 2014). Sleep paralysis is often accompanied by hallucinations and high dosage of anxiety but its duration does not last longer than a few minutes (Olunu, Kimo,
The second concept – lucid dreaming – is simply a dream in which an individual is aware of the fact they are dreaming, sometimes being able to even take the control over their own dream – although this part is not necessary to classify a dream as a lucid dream (Brogaard, 2012).

All the above-mentioned phenomena of experiencing dreams occur in a non-clinical population. The quoted study conducted by Li and the team (2010) shows the frequency of experiencing weekly nightmares at a level of 5%. Also such phenomena as sleep paralysis and lucid dreaming occur in a healthy population. It results from the study on 1,798 students carried out by Nicholas Spanos, Stacey McNulty, Susan DuBreuil, Martha Pires, and Melissa Burgess (1995) that approx. 21% of them experienced sleep paralysis at least once. On the other hand, in Berit Brogaard’s study from 2012, 82% of the participants had an experience of at least one lucid dream during their lifetime. Not all people are able to recall the content of their dreams (Schredl, 2018). The described phenomena of experiencing dreams are regarded as a disorder when they assume a persistent and recurrent form, making everyday life difficult, and when they are a prodromal symptom of mental disorders (Skalski, 2017).

DREAM EXPERIENCES IN ALEXITHYMIA

As stated above, dream experiences are significantly connected to emotions, so it seems natural to wonder whether there is any significant connection between dreams and alexithymia due to its peculiar characteristics in the area of emotional functioning. It seems that dream analysis may be an important element of diagnosis as anomalies in this area correspond to main symptoms of alexithymia. Below, there are results of the most important studies in this field illustrating a diagnostic value of dream analysis for the description of alexithymia symptoms.

Inability to verbalize emotions in relation to nightmares and inability to recall dreams

The main difficulty in alexithymia is the inability to recognize and verbalize emotions. For this reason, people suffering from this disorder are not able to create mental representations of feelings and emotions, and consequently behave like “an emotionally illiterate individual”, not being able to read other people’s emotions and communicate information about their own state. Therefore, a person with alexithymia may have difficulty communicating with others and controlling their own emotions, or may try to separate from experienced sensations. Referring this indicator to dreams one could assume that individuals with alexithymia will remember fewer dreams, and the dreams which will be remembered will

be deprived of emotional undertones or will be negatively charged. Insufficient emotional processing may be proved by the presence of intrusive symptoms of emotional activity such as nightmares. The thesis was tested, for example, in the study by Mark Lumley and Robert Bazydlo (2000), who put forward the following hypotheses:
1. People who score high on TAS-20 (used for measuring alexithymia) will experience difficulties when asked to recall their dreams or the dreams they recall will be emotionally barren.
2. People who score high on TAS-20 will experience dreams characterized as nightmares which are not subjected to any regulations.

One hundred fifty-three participants were asked to use dream diaries, a method used for writing down remembered dreams in retrospective. The results were as following:
- people, who scored high in the Externally-Oriented Thinking subscale were more likely to experience difficulties while trying to recall their dreams and even if they did recall them, they were described as dull,
- people with high scores in the Difficulty Describing Feelings subscale, as well as Difficulty Identifying Feelings subscale, described their dreams as aggressive and odd, classifying them as nightmares.

A similar study has been conducted by Tore Nielsen, Katia Levrier, and Jacques Montplaisir (2011), but with a significantly higher number of participants ($N = 720$). People who scored high in TAS-20 questionnaire were more likely to experience nightmares and less likely to be able to recall their dreams in general. The results were as follows: 1. High scores within the Externally-Oriented Thinking subscale were connected to unclear and dull dreams; 2. People scoring high in the Difficulty Describing Feelings subscale could recall less dreams; 3. High scores within the Difficulty Identifying Feelings subscale were connected to higher quantity of nightmares. Furthermore, in a study conducted by Luigi De Gennaro, Michele Ferrara, Riccardo Cristiani, Giuseppe Curcio, Valentina Martiradonna, and Mario Bertini (2003), the researchers reached a similar conclusion: people with high scores in alexithymia remember less dreams and the dreams they remember seem to be shorter than the ones remembered by people without alexithymia.

Of course, not all research proves the same significance of dream experiences in alexithymia, a polysomnography study (a type of sleep study) conducted by James Parker, Tonya Bauermann, and Carlyle Smith (2000) has shown that there is no significant difference in the quantity of dreams and the ability to recall them between people with and without alexithymia. Although it is worth mentioning that the study has shown a significant difference between non-alexithymic and alexithymic participants in the characteristics of described dreams. Participants with alexithymia described their dreams as less fantasy-like and less vivid than
the control group. This information can be crucial, especially considering the fact that high alexithymia may be connected to impaired imagination (Sifneos, 1973). The results of this study may differ from the previous conclusions, mainly because of the fact that merely 16 participants (control group $N = 8$ and alexithymic group $N = 8$) took part in it.

**Inability to distinguish between the bodily arousal and emotions in relation to atypical somatic reactions during sleep**

Another aspect of alexithymia is the inability to distinguish the bodily symptoms from arousal resulting from important experiences. It causes that a person with alexithymia perceives their state as produced only by external stimuli rather than processes occurring in their mind. Such an individual may misinterpret their own emotion as physiological arousal (or *vice versa*), which may lead to hypochondria and somatization. In dreams it may be manifested through atypical somatic reactions.

Bauermann, Parker, and Taylor (2008) conducted an interesting study which focused on sleep difficulties and their connection to alexithymia. Participants with high scores in TAS-20 questionnaire reported experiencing the following issues with their sleep: insomnia, hypersomnia, nightmares and sleep walking. Listed issues had no connections to poor sleep hygiene nor bad frame of mind which may suggest that alexithymia can have a significant impact not only on one’s dream experiences but also sleep experiences, which could possibly mean that the mentioned issues may be symptomatic for alexithymia.

A frequent symptom accompanying alexithymia is sleep bruxism which is characterized by regular teeth grinding during sleep and visible worn-down and damaged teeth and/or post-sleep headaches, sore lower jaw muscles or lockjaw. People suffering from bruxism have a fixed mechanism activating the limbic system in response to strong emotions or stress, which results in neuromuscular tension of the masticatory apparatus and unconscious grinding movements of teeth (Przystańska, Jasielska, Ziarko, Pobudek-Radzikowska, Maciejewska-Szaniec, Prylińska-Czyżewska, Wierzbik-Strońska, Gorajska, Czajka-Jakubowska, 2019).

**Operational style of thinking and limited imaginal processes in relation to lucid dreams and sleep paralysis**

Operational thinking is characteristic of individuals with alexithymia. It consists in excessive concentration on concrete things and details, which is accompanied by difficulties with abstract thinking and restricted imagination. Other characteristic features of alexithymia include the lack of fantasies which is reflected in poor creativity and difficulty with inventing one’s own problem-
solving strategies.

The mentioned lack of creativity in alexithymia, could be considered a significant factor of certain dream experiences in alexithymia. Lucid dreaming has been researched by Michael Schredl and Daniel Erlacher (2004) in a study \( (N = 439) \) that aimed to check whether lucid dreaming is a rare experience amongst people, as well as its links to personality traits. The results were as follows: 1. 82% of the participants reported experiencing lucid dreaming at least once in their lifetime; 2. Lucid dreaming reported small correlations with one Big Five personality trait – openness to experience – which is also associated with imagination, ideas and fantasy, which may prove to be a significant factor for lucid dream experiences in alexithymia. Another dream experience, which may be connected to creativity and thus may have an impact on alexithymia, is sleep paralysis. According to a study \( (N = 1,798) \) conducted by Spanos et al. (1995), 21% of participants have experienced sleep paralysis at least once – there were no significant gender differences. The variable that proved to have an impact on experiencing sleep paralysis was imaginativeness – researches claim that it may be so because of the fact that people with high scores in this area are more likely to add a story to a sound they think they heard while falling asleep – they may try to move to see what it was and experience sleep paralysis. Again, if alexithymia can be connected with lack of creativeness, this dream experience may appear less often in people with high alexithymia scores.

Obviously, limited imaginal life is reflected in a low intensity and dullness of dreams, as well as the lack of emotional undertones, which was already mentioned while presenting the results of the previous research (Lumley, Bazydlo, 2000; Parker et al., 2000).

**CONCLUSIONS**

It is a fact that each human needs sleep. However, the way itself of experiencing dreams seems to be connected with many factors, and disruptions of the correct course of sleep may often be a symptom of disorders. The above-mentioned phenomena such as: nightmares, sleep paralysis, lucid dreams, sleep bruxism and dream recall frequency may have their specific reflection in the case of people with alexithymia and become an important element while diagnosing this disorder. Despite still a minimal number of examples of the literature on the relationship between alexithymia and experiencing dreams, the conducted research seems to bring promising results and be a stimulus for undertaking further research in this field.
REFERENCES


STRESZCZENIE

Aleksytymia jest zaburzeniem, które w sposób znaczny ogranicza możliwość wglądu we własne stany emocjonalne, tym samym powodując brak identyfikowania i zrozumienia informacji płynących z przeżywanych przez jednostkę emocji. Zaburzenie to obejmuje takie obszary deficytowe, jak: niezdolność do werbalizacji emocji, niezdolność do odróżnienia pobudzenia fizjologicznego od emocji, operacyjny styl myślenia oraz ubóstwo życia wyobrażeniowego. Taki sposób funkcjonowania aleksytymików może mieć istotny wpływ na doświadczanie stresu – badania sugerują, że osoby te przeżywają przedłużony negatywny afekt w obliczu stresu, który prawdopodobnie wynika z nieumiejętności regulacji własnych emocji oraz z dysfunkcjonalnych strategii radzenia sobie. Ze względu na obszary deficytowe występujące u aleksytymików ciekawy wydaje się sposób doświadczania marzeń sennych przez takie osoby, a dokładniej ilość pamiętanych snów, koszmarów sennych, przeżywanych paraliżów sennych oraz świadomych snów. Obecnie literatura dotycząca związków aleksytymii z doświadczeniami sennymi jest stosunkowo skromna; wskazuje się w niej na występowanie istotnych związków tego zaburzenia z ilością koszmarów sennych oraz pamiętanych snów. Badania wykazują również istotne związki pomiędzy podwyższonym poziomem stresu oraz występowaniem koszmarów sennych i paraliżu sennego.

Słowa kluczowe: aleksytymia; doświadczenia senne; stres