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PERSONALITY DISORDERS (C SCHMAHL, SECTION EDITOR)

Dreams and Nightmares in Personality Disorders

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Abstract Although the relationship between dreaming and psychopathology has been studied quite extensively, research on dreaming in patients with personality disorders has been very scarce. In patients with borderline personality disorder, negatively toned dreams and heightened nightmare frequency have been found—characteristics not determined by co-morbid depression or posttraumatic stress disorder. The review includes suggestions for future studies as the existing results clearly indicate that this line of research is most interesting. Lastly, clinical recommendations especially regarding the treatment of the often found co-morbid nightmare disorder will be given.

Keywords Personality disorder · Nightmares · Dreaming

Introduction

A dream is defined as a recollection of subjective experiences that occurred while sleeping after waking up [1]. Empirical findings indicate that dream content reflects waking-life—the so-called continuity hypothesis of dreaming [2]. For example, sport students dream more often about sports compared to psychology students [3]. Since the publication of Sigmund Freud's book "Die Traumdeutung (The Interpretation of Dreams)" in 1899 (dated 1900, though) including the often cited statement "the interpretation of dreams is the royal road to a knowledge of the unconscious activities of the mind, p. 769 [4]," clinicians and researchers have been interested in the relationship between mental disorders and dreaming [5]. Starting with the discovery of REM sleep [6] and the application of systematic content analysis of dreams [7], a large number of empirical dream studies in patients with various mental disorders have been carried out [8–10, 11••].

For patients with depression, for example, it has been shown that their waking-life depressive mood correlated directly with the emotional quality of their dreams [12] and an improvement of depressive symptoms during pharmacological treatment was paralleled with a shift to more positive dream emotions [13]. In patients with eating disorder, food topics were prominent in patients with bulimia compared to controls and patients with anorexia nervosa dreamed about rejecting food, one of the key symptoms of this eating disorder [14]. Using graph analytic methods, Mota and Furtado [15] found marked differences between the dream reports of patients with schizophrenia compared to patients with bipolar disorder and healthy controls; the reduced connectivity within the dream report clearly reflects disorganized thinking—a key symptom of schizophrenia.

Given the research on dreams and psychopathology, it is astonishing that dreams of patients with personality disorders have not been studied more extensively. On a personal note, I was very much impressed by a very intense and bizarre dream reported by a female patient with borderline personality disorder. In her dream, she was walking along railroad tracks with her little sister on her side, holding her hand. Out of nowhere, a train came and rushed right through her. She felt this bizarre experience very intensely. For me, this was a poignant metaphor for the emotional dysregulation found in this personality disorder and stimulated me to carry out a dream study in this patient group.

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The present review focuses on dreaming in patients with borderline personality disorder and ends with suggestions for future research in this field and clinical implications of the research findings published thus far.

Nightmares and Nightmare Disorder

Nightmares are defined as disturbing mental experiences that generally occur in rapid eye movement (REM) sleep and that often result in awakening [16]. In contrast to the NREM parasomnia called night terrors, the content of nightmares can be recalled in detail [16]. Typical nightmare contents are being chased, falling, death of close person, being paralyzed, and arriving too late [17]. For diagnosing nightmare disorder, nightmares should be frequent (rule of thumb: once a week or more often) and cause clinically significant distress or impairment in social, occupational, or other important areas of functioning [18]. The diagnostic criteria of the nightmare disorder (code: F51.5) given in the DSM-5, the ICD-10, and the ICSD-3 are comparable [16, 18, 19]. The only other mental disorder including the occurrence of nightmares as a diagnostic criterion is the posttraumatic stress disorder (PTSD). In addition to the exposure, avoidance, negative alteration in mood and cognitions, and hyperarousal, one of the intrusion symptoms, can be "recurrent distressing dreams in which the content and/or affect of the dream are related to the traumatic event(s), p. 271 [18]." About 70 % of PTSD patients report recurrent nightmares [20••]. It should be noted, however, that PTSD patients also show a heightened frequency of non-trauma-related nightmares [21]. In clinical practice, the differentiation between idiopathic nightmares (occurring with the nightmare disorder) and posttraumatic nightmares (occurring within posttraumatic stress disorder) is often used [21].

The prevalence of the nightmare disorder in the general population is about 5 % [22]. In a sample of 498 psychiatric outpatients including depressive disorders, anxiety disorders, personality disorders, and other disorders, the prevalence of nightmare disorder was about 30 % [23]; within the subgroup of 161 patients with personality disorders, the prevalence rate was 31.1 %. The etiological model of nightmares is a disposition-stress model [24]. Genetic factors [25], personality dimensions like neuroticism [26••], and especially current stressors [27] play an important role explaining nightmare frequency. In groups of patients with mental disorders, it should be kept in mind that several psychotropic drugs can induce nightmares as possible side effect, for example, serotonin-reuptake inhibitors [28].

Typical pharmacotherapeutic strategies using benzodiazepines or antidepressants seemed to be not effective in treating nightmares [29•]; solely, prazosin [30•, 31] showed a moderate effect size in improvement of posttraumatic nightmares (five studies including 97 patients). Similar compounds like doxazosine [32] and terazosin [33] showed efficacy in several cases. Very effective psychological treatment strategies for idiopathic and posttraumatic nightmares alike are psychological desensitization, exposure therapy, imagery rehearsal therapy, and lucid dreaming therapy (see meta-analysis [31]), and the majority of studies with large patient groups have been carried out using imagery rehearsal therapy [30•]. As IRT is an easy-to-use method, it will be described briefly in the "Clinical Implications" section.

Dreaming and Borderline Personality Disorder

Borderline personality disorder (BPD) is characterized by core symptoms such as affective dysregulation and interpersonal problems [18]. Subjective sleep problems are very common in this patient group [34–37] even though recent polysomnographic studies [35, 36] did not find marked differences between BPD patients and healthy controls with regard to sleep physiology. On the other hand, Schredl and Paul [37] reported an increased arousal index during sleep in BPD patients, supporting the findings of reduced sleep quality.

Despite the relatively large number of sleep studies, dream studies in personality disorders and specifically borderline personality disorders are scarce [37]. Case reports [38–40] indicate that BPD patients report very negatively toned dreams during their psychodynamic treatment. Furthermore, BPD symptoms correlated with nightmare frequency in unselected student samples [41, 42] and patients with BPD have high co-morbidity with nightmare disorder (about 50 % [34, 43]).

In the following, two studies [37, 43] explicitly focusing on dreaming in borderline personality disorder patients will be described. Simor and Csóka [43] carried out a diary study with 23 BPD patients (co-morbid PTSD and substance abuse were excluded, but six patients received serotonin-reuptake inhibitors). Overall, 209 dream reports were collected showing clearly a preponderance of negatively toned dreams whereas other aspects like bizarreness or vividness of dreams did not differ from the control group [43]. Interestingly, the patient group also stated that the negative dreams strongly affect the mental state the next day. This fits in with the findings of Selby and Ribeiro [44] showing that trait rumination and negative waking emotions predict nightmares, supporting the emotional cascade model which states that self-amplifying feedback loops are activated during the day and persists during sleep producing nightmares. Interestingly, the negative dream emotions no longer differ significantly if the analysis was controlled for neuroticism, openness to experience, and assertiveness [43]. This supports the hypothesis that negative daytime emotions experienced by the patients are related to negatively toned dreams (e.g., [13]) and not the diagnostic category per se.

Schredl, Paul [37] carried out REM sleep awakenings during the third sleep laboratory night after two uninterrupted baseline nights in a sample of 27 BPD patients (nine patients with co-morbid PTSD). Home dream recall frequencies and recall rates after awakenings in the sleep lab did not differ between the patient and control groups, even though the BPD patients with PTSD showed higher but statistically non-significant recall in the sleep lab compared with the BDP patients without PTSD (96.4 vs. 82.6 %). Home nightmare frequency was elevated in both BPD patients groups, with and without co-morbid PTSD [37]. Similarly, negative emotions were more pronounced in the patient group compared to healthy controls, a finding not depending on the presence or absence of co-morbid PTSD. Disorder-specific dream content like self-inflicted injury or strong emotional shifts were not found to be more frequent in BPD dreams compared to control groups; in fact, these dream topics occurred very rarely. General aspects like dream length (word count), bizarreness, number of dream persons, and occurrence of verbal and physical interactions did not differ between the BPD group and the healthy controls.

To summarize, the few studies in dreams in borderline personality disorder showed that the emotional tones of dreams and nightmares are more frequent in these patients. The relatively small sample sizes, however, did not allow looking for diagnosis-specific dream content in detail. As research in the area of other personality disorders is almost completely lacking, the next paragraph will focus on suggestions for future research.

Suggestions for Future Research

In the following, the only study so far focusing on dreams in personality disorders in general [45] will be briefly described in order to serve as a starting point for future research. Guralnik and Levin [45] analyzed 203 dreams of 39 patients with different personality disorders (mean age about 40 years). Unfortunately, the distribution of the patients with various personality disorders included in the sample was not specified. Each participant contributed between one and 23 dreams. The factor analysis of the figures derived from the rating system of Hall and Van de Castle [7] and other rating scales yielded interesting results regarding the dream topics that are prominent in this patient group, e.g., the factor estrangement (ambiguous and unfamiliar dream setting). The figures, however, were compared to a college student sample, and thus, findings like reduced aggression or apprehension should be viewed with caution. In view of these shortcomings, the following topics should be considered in the future.

First, it seems pivotal to differentiate between the different personality disorders even though one might expect that—due the social impairment caused by the disorder—negatively toned dreams and nightmares might be more common in all types of personality disorders compared to controls (cf. the findings in borderline personality disorders cited above). On the other hand, it seems plausible that disorder-specific symptoms might show up. For example, schizotypal symptoms correlated with nightmare frequency in a student sample [46] and nightmare frequency was drastically increased in patients with at-risk mental state (ARMS) [47]. Furthermore, dream bizarreness was correlated in patients with schizophrenia and in patients with other mental disorders with daytime psychotic symptomatology [12]. I.e., it seems very likely that the dreams of patients with schizotypal personality disorder and/or paranoid personality disorder differ in several aspects not only from the dreams of healthy controls but also from the dreams of patients with other personality disorders. Dream content related to obsessive-compulsive behavior was found in patients with obsessive-compulsive disorder during exposition training, and thus, obsessive-compulsive dream topics should be also found in patients with obsessive-compulsive personality disorder. As waking-life aggression is related to the topic of killing someone within the dream [48], it also might be very promising to study dreams of persons with antisocial personality disorder.

In order to relate waking-life (stressors, distress due to the personality disorder, diagnosis-specific behaviors) to dreaming, it would be advisable to use the well-established measurement instruments like questionnaire, electronic, or paper diaries in order to characterize the sample in a very detailed way. Specifically, depressive symptoms should be measured reliably as the severity of depression is strongly related to dream emotions and dream content in patients with major depression and in patients with other mental disorders [12]. Furthermore, medication should be considered very carefully as serotonin-reuptake inhibitors, for example, can have a strong effect on dream content [28]. This is a problem many dream studies in patients with schizophrenia [49] or other severe mental illnesses (cf. [12]) have to deal with. There might be an advantage in studying patients with personality disorders as they might be treated with psychotropic drugs to a lesser extent.

Clinical Implications

Despite the small number of studies in the field, the findings so far seem to have important clinical implications. The heightened number of nightmares seems of peak interest as nightmares are an independent risk factor for suicide [50]. As patients rarely seek help for nightmares [51], nightmares are under-diagnosed [52] and thus should be explicitly asked for in the diagnostic procedures of patients with personality disorders. If a co-morbid nightmare disorder has been diagnosed, it is recommended to add a brief cognitive intervention called imagery rehearsal therapy [53] to the treatment plan of the

patient. The basic principle of this intervention is very simple: (1) the patient is asked to report a recent nightmare, (2) the patient is encouraged to imagine a new ending to the dream in any way s/he want, and (3) the new ending should be rehearsed once a day for 5 to 10 min over a 2-week period [22]. The treatment is effective for patients with idiopathic nightmares [54], for patients with posttraumatic nightmares [55], and for depressive patients with co-morbid nightmare disorder [56].

Conclusions

Although research regarding dreams in personality disorders is in its infancy, the previously published findings in this field seem promising. Future studies should focus on the direct relationship between daytime distress and diagnosis-specific symptoms and dream content in order to learn more about the inner world of the patients. The clinical implications are also of importance as dreams can be beneficial in the therapeutic process [57], and more specifically, efficient treatment of nightmares can be very helpful for patients with co-morbid nightmare disorder.

Compliance with Ethical Standards

Conflict of Interest The author declares that he has no competing interests.

Human and Animal Rights and Informed Consent This article does not contain any studies with human or animal subjects performed by the author.

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