



A STUDY ON SLEEP PATTERN IN BORDERLINE PERSONALITY DISORDER –A CROSS SECTIONAL STUDY

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ABSTRACT

Background: sleep disorders and BPD are prevalent in the population and one is often a comorbidity of the other. **Aims and Objective:** To assess the current state of knowledge about sleep disorders in patients with borderline personality disorder (BPD). **Methods And Materials:** A cross-sectional study with a sample of from psychiatry out-patients of both men and women aged 18 years or older but not more than 60 years, who were seeking non-emergent medical care during the period from January 2021 to August 2022. Sleep quality was assessed with the Pittsburgh Sleep Quality Index (PSQI) and borderline personality was assessed with 2 measures: the borderline personality scale of the Personality Diagnostic Questionnaire-4 (PDQ-4) and the Self-Harm Inventory (SHI). During the study period 129 patients were approached; 96 agreed to participate, for a response rate of 74.41%. After obtaining the ethical clearance, following an explanation of the study protocol, including potential risks and benefits, participants were asked to complete a 6-page Performa with the cover page contained the elements of informed consent. We initially inquired about demographic information, and then explored subjective sleep quality using the PSQI. The PSQI is a 19-item, self-report questionnaire that explores subjective sleep quality over the past month. **Results:** The responses of participants to the queries regarding sleep quality are shown in the table 1. Of the 96 respondents, 12 (12.5%) scored in the top quartile of the global PSQI score, indicating severe sleep difficulties. For the entire sample, of the 7 different sleep quality components, habitual sleep efficiency was the most commonly self-rated component score of extreme difficulty, whereas only 9 (9.37%) respondents indicated extreme difficulty with regard to daytime dysfunction. **Conclusion:** Recognizing and managing sleep disorders in patients with BPD may help alleviate the disorder's symptoms. Treatment of people with BPD may be more effective if the treatment plan explicitly addresses sleep problems.

KEYWORDS : Borderline personality disorder; cognitive behavioral therapy and insomnia.

INTRODUCTION:

Borderline personality disorder has many clinical features, including relatively unrecognized sleep disturbances. Generally, sleep problems are not considered a primary characteristic of this condition, but research is beginning to identify specific patterns of sleep disruptions that are associated with the disorder. Borderline personality disorder is characterized by substantial emotional instability, relationship strains, behavioral problems, and difficulties with self-image. It is disruptive for the person who has the disorder, as well as for other individuals in their lives. Individuals with borderline personality disorder (BPD) are having features marked by mood and affect instability, impulsivity, instability of self-concept, and impaired, unstable interpersonal relationships [1,2]. While the criteria for diagnosis of borderline personality disorder differ from the criteria for diagnosis of bipolar disorder, there are some similarities, and it can be difficult at times to differentiate the two conditions [3]. The lifetime prevalence in the population of BPD is around 2.8% [4-7].

Prevalence is significantly higher among individuals seeking help in healthcare; patients with BPD make up to 15–28% of patients in psychiatric outpatient clinics or hospitals, 6% of primary care visits, and 10–15% emergency room visits [8-10]. Due to high levels of substance abuse [11,12], self-harm behavior [13], lifestyle and nutrition irregularities [14, 15], people with borderline personality disorder are at risk of many negative consequences for physical health [16] and severe chronic diseases such as heart disease, diabetes, arthritis, and chronic sleep problems [17– 19]. BPD is associated with obesity which has been related to many other somatic health problems [18-20].

MATERIAL AND METHODS:

A cross-sectional study with a sample of from psychiatry out-patients of both men and women aged 18 years or older but not more than 60 years, who were seeking non-emergent medical care during the period from January 2021 to August 2022. Sleep quality was assessed with the Pittsburgh Sleep Quality Index (PSQI) and borderline personality was

assessed with 2 measures: the borderline personality scale of the Personality Diagnostic Questionnaire-4 (PDQ-4) and the Self-Harm Inventory (SHI). During the study period 129 patients were approached; 96 agreed to participate, for a response rate of 73.31 %.

Participants

Participants were both men and women, aged 18 years or older but not more than 60 years, who were being seen in an outpatient psychiatry department.

Exclusion criteria

1. Medical (ie, severe pain), cognitive (eg, dementia), or psychiatric (eg, psychotic) illness that would preclude the successful completion of study.

Inclusion Criteria

1. Age ranging from 18 to 60 years.
2. Both sexes were included.

During the study period January 2021–August 2022, 129 patients were approached; 96 agreed to participate, for a response rate of 73.31 %. Of the 96 respondents included in our analyses (ie, those who completed all study materials), 72.91% were female and 27.08% male, ranging in age from 18 to 60 years (mean = 39.6, SD = 11.6). Most participants were white (94%); however, 6 participants were black. With regard to educational attainment, 5.4% had at least graduated high school, whereas 20.6% had earned a college degree. One participant did not complete any demographic information but completed all other measures.

Procedure

After obtaining the ethical clearance, following an explanation of the study protocol, including potential risks and benefits, participants was asked to complete a 6-page Performa. The cover page contained the elements of informed consent. We initially inquired about demographic information and then explored subjective sleep quality using the PSQI. The PSQI is a 19-item, self-report questionnaire that

explores subjective sleep quality over the past month. The last item relates to impressions on partner and was deleted for this study, leaving a total of 18 items. The PSQI contains 7 component scores (ie, subjective sleep quality, sleep latency, sleep duration, habitual sleep efficiency, sleep disturbances, use of sleeping medications, daytime dysfunction), and these may be coalesced into 1 global score, with higher scores indicating poorer sleep quality. A global PSQI score > 5 is considered to be a sensitive and specific measure of poor sleep quality. We used 2 measures for the assessment of BPD—the borderline personality scale of the PDQ-419 and the SHI.²⁰ The borderline personality disorder scale of the PDQ-419 is a 9-item, true/false, self-report measure that consists of the diagnostic criteria for borderline personality that are listed in the DSM-IV. A score ≥ 5 is highly suggestive of BPD. Earlier versions of the PDQ have been confirmed as useful screening tools for borderline personality.

The SHI²⁰ is a 22-item, yes/no, self-report measure that explores participants' lifetime histories of self-harm behavior. Each item in the inventory is preceded by the statement, "Have you ever intentionally, or on purpose," and items include, "overdosed," "cut yourself on purpose," "burned yourself on purpose," and "hit yourself." Each endorsement is in the pathological direction, and the SHI total score is the summation of "yes" responses. SHI total scores ≥ 5 are highly suggestive of the diagnosis of BPD. Indeed, in comparison with the Diagnostic Interview for Borderlines, the gold standard for the diagnosis of borderline personality disorder in research settings, the SHI demonstrates accuracy in diagnosis of 84%.

Statistical Analysis:

The global PSQI score was statistically significantly associated with scores on the PDQ-4 ($P < .01$), the SHI ($P < .01$), and the combination PDQ-4 and SHI ($P < .01$). With regard to the components of the PSQI, subjective sleep quality ($P < .05$), sleep duration ($P < .05$), and daytime dysfunction ($P < .01$) were all statistically significantly associated with scores on the PDQ-4, and sleep latency was statistically significantly associated with the combined PDQ-4 and SHI ($P < .05$).

RESULTS:

The responses of participants to the queries regarding sleep quality are shown in Table 1. Of the 96 respondents, 12 (12.5%) scored in the top quartile of the global PSQI score, indicating severe sleep difficulties. For the entire sample, of the 7 different sleep quality components, habitual sleep efficiency was the most commonly self-rated component score of extreme difficulty (36.8%), whereas only 9 (9.37%) respondents indicated extreme difficulty with regard to daytime dysfunction.

Table 1 Reporting Severe Sleep Difficulties. According To PSQI Scales, And Spearman's Correlations Of Ordinal PSQI Scales with PDQ-4, SHI, and PDQ-4 + SHI Scores

PSQI	Endorsed Severe Sleep Difficulty, n (%)	Spearman's Correlations		
		PDQ-4	SHI	PDQ-4 + SHI
Subjective sleep quality	20 (20.83)	0.41*	0.27	0.31
Sleep latency	24 (25)	0.36	0.37	0.39*
Sleep duration	25 (26.04)	0.40*	0.32	0.34
Habitual sleep efficiency	28 (29.16)	0.31	0.26	0.32
Sleep disturbances	12 (12.5)	0.26	0.32	0.33
Use of sleep medications	12 (12.5)	0.21	0.12	0.14
Daytime dysfunction	9 (9.37)	0.43**	0.34	0.36
Global score	12 (12.5)	0.50**	0.42**	0.46**

Abbreviations: PDQ-4 = Personality Diagnostic Questionnaire-4, PSQI = Pittsburgh Sleep Quality Index, SHI = Self-Harm Inventory.

Next, we examined correlations between the PSQI and borderline personality symptomatology according to PDQ-4 and SHI scores. We further included a composite measure of individuals who scored positively for BPD on both measures. As our sleep quality components and global PSQI scores are ordinal variables, we tested our correlations corrections for multiple comparisons. In these analyses, subjective sleep quality, sleep duration, and daytime dysfunction were all statistically significantly associated with scores on the PDQ-4. Sleep latency was statistically significantly associated with the

combined PDQ-4 + SHI measure. Finally, the global PSQI score was statistically significantly associated with all 3 assessment approaches to BPD.

DISCUSSION:

To summarize the present findings, global PSQI scores demonstrated statistically significant correlations with all assessment approaches to BPD, indicating that increasing borderline personality symptomatology is associated with an increased likelihood of sleep disturbances. This finding echoes those of Semiz and colleagues. As for the specific types of sleep disturbances encountered in BPD, our individual measures demonstrated associations with different components. Increasing scores on the PDQ-4 were associated with increasingly poor subjective sleep quality, shortened sleep duration, and greater daytime dysfunction, whereas increasing scores on the combination PDQ-4/SHI were only associated with greater sleep latency. Scores on the SHI were not associated with any PSQI components. So, the pattern of sleep disturbances appears variable depending on the measure used for assessment. However, regardless of BPD measure, the global sleep scores were all correlated with BPD. From these data, we believe that we can conservatively conclude that individuals with BPD experience disturbances in overall sleep quality. A number of factors may account for this finding in patients with BPD including their inherent self-regulatory deficits manifesting as sleep regulation difficulties; comorbid psychiatric disorders such as depression, substance abuse, and posttraumatic stress disorder; prescribed psychotropic medications; and psychosocial stressors. These data have a number of potential limitations. These include the self-report nature of the data and the inherent limitations of this form of data collection, the tendency for the PDQ-4 to be over inclusive i.e., generate false positives, use of a sample of convenience i.e., risk of sampling bias, and the small sample size. In addition, the assessment of sleep quality was undertaken with a standardized measure, and the study utilized 2 measures of BPD. Overall, findings indicate that individuals with borderline personality symptomatology experience poorer sleep quality regardless of assessment measure, although the explicit problematic components of sleep warrant further investigation.

CONCLUSION:

Recognizing and managing sleep disorders in patients with BPD may help alleviate the disorder's symptoms. Treatment of people with BPD may be more effective if the treatment plan explicitly addresses sleep problems. The proper diagnosis and treatment of sleep disorders in patients with BPD could lead to better therapy results. Individuals with borderline personality symptomatology demonstrate a poorer overall quality of sleep than those without these symptoms.

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