

Online Sexual Activity among Iranian Clients with Borderline Personality Disorder and Its Correlation with Severity of Symptoms

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Abstract

Objective: Clients with borderline personality disorder (BPD) often engage in high-risk sexual behaviors. Online sexual platforms convey abusive and harmful themes, especially for this group of sexually impulsive patients. We hypothesized a correlation between their online sexual activities and the severity of BPD symptoms.

Method: Fifty clients with BPD who were referred to Iran psychiatric hospital and Tehran Psychiatric Institute in 2020 participated in this research. The Borderline Evaluation of Severity over Time (BEST) questionnaire was used to assess the severity of BPD symptoms, and the Internet Sex Screening Test (ISST) was used to evaluate online sexual behaviors. A psychiatric interview considered substance abuse and other confounding factors.

Results: The mean ISST and BEST scores were 7.82 ± 5.74 and 41.7 ± 12.5 , respectively. There was a positive and significant correlation between the severity of BPD symptoms and online sexual activities ($P < 0.001$, $r = 0.480$). There was also a significant relationship between online sexual activities and a history of substance abuse ($P = 0.003$, $F = 25.06$).

Conclusion: Online sexual activity can harm clients with BPD who are more vulnerable to high-risk sexual behaviors. More severe borderline personality traits were associated with more online sexual activity, which underlines the importance of providing education about and managing such activities in clients with BPD.

Key words: *Borderline Personality Disorder; Internet Addiction; Mental Health; Sexual Behavior*

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Article Information:

Received Date: 2022/01/16, Revised Date: 2022/05/07, Accepted Date: 2022/06/24



Personality disorders are among the most common psychiatric disorders, with a prevalence rate of about 40-60% in psychiatric outpatients (1). Borderline Personality Disorder (BPD) seems to be the most disabling personality disorder. Its main characteristics are emotional dysregulation, impulsivity, risky behaviors, repeated suicidal attempts, identity confusion, and cognitive distortions that lead to severe interpersonal conflicts (2, 3). The prevalence of BPD varies among societies. Previous research reported roughly one percent prevalence in the general population. However, about 10% of outpatients with psychiatric disorders and about 20% of inpatients with psychiatric disorders suffer from BPD (4).

Risky behaviors such as drug abuse, dangerous driving, and risky sexual activities are some of the harmful symptoms of clients with BPD. These high-risk behaviors often lead to severe difficulties in their individual and social life (5). They can bring about some irreparable consequences. In addition, former investigations showed that clients with BPD have various sexual issues, including sexual orientation problems, sexual identity issues, unprotected sexual activities, and multi-partner sexual relationships (3, 6-9).

BPD is associated with various forms of impulsive behaviors and identity problems, including sexual identity. Researchers have a consensus that clients with BPD exhibit more high-risk sexual behaviors, mainly around the theme of impulsivity and victimization, including sexual victimization (10).

In addition, some previous research showed that clients with BPD have a severe problem with intimacy in their interpersonal relationships as another core feature of their psychopathology. Abramov and his colleagues (11) showed in a trust game study that trust in clients with BPD declines when they play the trust game with a cooperative partner and increases after multiple trust violations.

Since the last decades of the 20th century, the internet and social media have provided a different atmosphere for relationships. Despite their many benefits for human societies, several concerns exist that lead to profound consequences. Nowadays, internet-based communications offer many sexual experiences, such as getting sexual information; having cybersex; finding offline sex partners; getting, or posting sexually stimulating material; participating in online communities for sexual minorities; buying sexual products; and sex work (12, 13). These activities attract various people, but clients with personality disorders might get more involved due to their vulnerability to more risky behaviors.

Online sex addiction is the most common internet-related mental disorder that has attracted clinical and research attention. In addition, it is known that sexual materials have the largest share among online commerce worldwide. Young (2008) stated that internet sex addiction involves downloading, viewing, and trading

online pornography or involvement in adult sexual fantasy role-play rooms (14).

Furthermore, several studies have shown that engagement in online sexual activities has a lot of irreversible consequences for several life dimensions of the consumer, such as personal, interpersonal, and occupational dimensions. One of the most important problematic consequences of online sexual activities is marital problems, and 'online infidelity' has been emphasized as the most common type of infidelity among communities in the last decades (15).

In a country like Iran, with a various range of cultures and values among different generations (16, 17), online sexual activities may have unfortunate consequences for people, and our knowledge about this challenging topic, particularly among psychiatric patients, and more particularly among those like BPD clients who frequently engage in high-risk sexual behaviors, is limited. On the other hand, the developed use of smartphones and extensive internet coverage in Iran in the last decade has made this topic more important than before.

Therefore, we designed this study to investigate online sexual activities among outpatients with BPD and their correlation with the severity of symptoms in Iran.

Materials and Methods

Type of study and participants

Fifty clients with BPD who were referred to Iran Psychiatric Hospital and Tehran Psychiatric Institute in 2020, were selected with the purposive sampling method and included in this study. Inclusion criteria consisted of diagnosis of BPD by a psychiatrist; the ability to read, write and use the internet; and consent to participate in the present study. Exclusion criteria consisted of diagnosis of clients with mental disorders other than BPD by a psychiatrist a month before this study.

Data collection tools

A demographic questionnaire was used to collect the clients' demographic information including the history of suicidal attempts, age, gender, marital status, occupation, education, living status (whom the person lives with), monthly income, and religious beliefs. Borderline Evaluation of Severity over Time (BEST) and Internet Sex Screening Test (ISST) questionnaires were used.

The BEST questionnaire has been prepared to monitor BPD clients' moods and behaviors. This questionnaire consists of three parts: questions about the clients' symptoms and negative and positive behaviors. The questionnaire's probable score ranges from 12 (least severe symptoms) to 72 (most severe symptoms). The English questionnaire version showed moderate test-retest reliability ($r = 0.62$), high internal consistency (Cronbach's α : 0.83-0.92), and high discriminant validity. The Persian version of this scale was validated by Azizi *et al.*, and its Cronbach's α coefficient was reported to be 0.898(18).

The ISST is a questionnaire used to diagnose Internet sexual addiction. It was developed in 1999 by Dr. David Delmonico to evaluate online sexual behavior. We used the Persian version of the ISST questionnaire, which contains 20 questions. The validity and reliability of this version were confirmed in Iran by Shalbafan *et al.* The authors stated that the item-level content validity index ranged from 0.83 to 1.0. The internal consistency of the scale ($\alpha = 0.923$) was acceptable (19). This test consists of twenty questions with two-choice answers (yes or no). Some questions are as follows: "I use my computer more than five hours a week for sexual purposes" or "I have bookmarked some sex sites". The number of "yes" statements, which may range from one to twenty, are used to interpret this test.

The Structured Clinical Interview for DSM-IV (SCID) questionnaire is a semi-structured interview that provides DSM-IV-based diagnoses. Its implementation requires the interviewer's clinical judgment about the interviewee's responses, and therefore the interviewer must have clinical knowledge and experience in mental pathology. In this study, only the section on borderline personality disorder of SCID-II was used to confirm the diagnosis. SCID-II was previously validated in the Iranian population, and the internal consistency of all diagnoses range from $\alpha = 0.95$ to $\alpha = 0.99$, which demonstrate excellent internal reliability (20).

Statistical analysis

Data related to demographic and clinical observations of the patients were analyzed using SPSS Version 24.0. (Armonk, NY: IBM Corp). Descriptive statistical methods described the data, including central indices,

dispersion, and frequency distribution. In all tests, $P < 0.05$ was considered a significant level.

Ethics approval

In this study, clients' identifiers remained confidential and written consent was obtained from them. This study received ethical approval from the Institutional Review Board of Iran University of Medical Sciences (code: IR.IUMS.FMD.REC.1399.312).

Results

50 clients with BPD were enrolled in the study. The mean age of participants was 30.88 ± 7.2 , and 68% of participants ($n = 34$) were female. Almost one-fourth of participants had a high school diploma (24%), 14% were at the high school level, and 62% had academic education. Other characteristics of the sample are summarized in Table 1.

40 people (80%) had at least one positive answer to the ISST questionnaire. The mean ISST score was 7.82 (ranged from 0 to 17). The mean BEST score was 41.7 (ranged from 21 to 66).

According to the Spearman's correlation coefficient test, there is a positive and significant correlation between BEST scores and ISST scores, substance use, and suicide attempt (Table 2).

The finding provided evidence that there is a significant relationship between the mean score of ISST and substance use history ($P = 0.003$, $F = 25.06$).

Linear regression analysis showed that the BEST score had a significant relationship with ISST, substance use, and suicide attempt ($R^2 = 0.390$, $P < 0.001$) (Tables 3, 4).

Table 1. Demographic and Clinical Characteristics of the Study Sample (n = 50)

Variables	Patients (n = 50)	
	N / M	% / SD
Gender		
Male	16	32
Female	34	68
Marital Status		
Single	17	34
Married	17	34
In relationship	9	18
Divorced	6	12
Widow	1	2
Schooling		
Illiterate	0	0
High school	7	14
High school diploma	12	24
Academic	31	62
Substance abuse		
Yes	24	48
No	26	52

Suicide attempt		
Yes	30	60
No	20	40
Age (Years)	30.88	7.2
BEST	41.7	12.5
ISST	7.82	5.74

ISST: Internet Sex Screening Test, BEST: Borderline Evaluation of Severity over Time
 N / M: Number / Mean
 % / SD: Percent / Standard Deviation

Table 2 Correlational Analysis Matrix of Borderline Evaluation of Severity over Time Score

Variables	n = 50	
	P	r
ISST	< 0.001	0.480
Substance use	< 0.001	0.544
Suicide attempt	0.041	0.290

Table 3. Regression Analysis for Prediction of Borderline Evaluation of Severity over Time Score

Model	R	R ²	Adjusted R ²	SE
1	0.624 *	0.390	0.350	10.11

* Predictors: ISST, Substance use, Suicide attempt

Table 4. Analysis of Variance for Regression Analysis for Prediction of Borderline Evaluation of Severity over Time Score

Model	SS	df	MS	F	Sig
Regression	3006.17	3	1002.05	9.790	< 0.001
Residual	4708.40	46	102.35		
Total	7714.58	49			

* Dependent Variable: BEST score

** Predictors: ISST, Substance use, Suicide attempt

Discussion

This investigation aimed to assess online sexual activities among outpatients with BPD and its correlation with the severity of symptoms, in Iran. Our findings also revealed that clients with a substance abuse history have higher ISST scores, and 80% of participants reported at least one positive answer to the ISST.

The unsecured disorganized attachment style is a hallmark of BPD (21). They trust untrustworthy partners, which results in experiencing successive sexual traumas. In addition, high sexual preoccupations, risk-taking attitudes, and difficulties in interpersonal relationships often result in repeated harmful sexual behaviors in different settings, despite multiple experiences of traumatic events such as date rapes. We hypothesized that BPD clients would act similarly in virtual situations. Clients with BPD are more vulnerable to being coerced to have sex, experiencing date rape, or being raped by a stranger (8). These clients could be more vulnerable to all these sexual interactions in an online context and are

expected to repeat all these self-destructive sexual patterns over time.

The Internet makes it easier to find people for sexual interactions, especially those with lower self-confidence and people with unsecured attachment styles (22). In agreement with our findings, Schimmenti *et al.* reported that insecure attachment attitudes, more specifically the preoccupation with relationships, is related to the development of problematic internet use among a group of the population aged 18-19 (22).

Excessive use of the internet for sexual purposes in the general population is reported between 4.9% to 9.6% (23-26). This compulsive or uncontrolled behavior can be defined as a behavioral addiction. In 2018 (27), Wely and colleagues studied the relationship between addictive use of online sexual activity and emotional dysregulation and impulsivity. They found that emotional dysregulation and impulsivity traits can predict online sexual addictive behaviors.

On the other hand, new research elaborated that the impact of the internet and social network use on mental

health depends on the active or passive role of the consumer. Recent investigations have shown that passive use, such as tracking others' photos, videos, and profiles, which is much more prevalent among users, declines mental health over time significantly. While it's well-accepted that almost all users of online sexual activities, particularly in a society like Iran, are passive, it negatively affects people with background psychiatric problems and even healthy individuals (28).

We found a positive and significant correlation between the scores of the BEST questionnaire and the ISST score, substance use, and suicide attempt. This means that clients with more severe borderline pathology are more engaged in online sexual activities. In addition, in agreement with our findings, several studies have shown a positive relationship between the rate of internet sexual addiction and other addictive behaviors such as substance abuse (29-31). Our finding provides evidence that there is a significant relationship between the mean score of the ISST in the groups based on substance use history.

Our results heighten the importance of screening for sexually harmful online behaviors in clients with BPD and other harmful and addictive behaviors.

Implications for practice and research

Our findings emphasize the importance of attention to potentially harmful online sexual activities among clients with BPD. It's well-known that patients with BPDs are usually fragile and vulnerable to severe self-destructive reactions when facing inter-personal stressors. Therefore, engagement in online sexual activities may make them vulnerable to problems such as cyber-bullying, unstable relationships, and sex addiction. In addition, particularly in a society like Iran, psychiatrists do not always discuss online sexual activities with clients in regular visits due to cultural taboos and in order to care for patient-therapist boundaries.

Results of the current research suggest that past and current sexual history, including online sexual activities of clients with BPD, with due respect to cultural and professional considerations, should be taken into account as part of the comprehensive psychiatric interview. Mental healthcare providers should keep this issue in mind during therapeutic sessions.

We believe that future researches should investigate this topic, considering several issues. We recommend further multi-center studies with bigger sample sizes, while taking confounding factors into consideration. In addition, investigation of the mediating role of various psychological factors, like personal temperaments, using comprehensive scales is suggested for future studies.

Limitation

Some limitations to our study must be mentioned. Firstly, our sample size did not allow us to perform covariate analysis and modify the effect of substance abuse on online sexual activity scores. Secondly, some factors such as substance abuse and other addictive disorders should

be considered as confounding factors, and their effect must be minimized during case enrollments.

Conclusion

Online sexual activity can harm clients with BPD, who are more vulnerable to high-risk sexual behaviors. More severe borderline personality traits were associated with more online sexual activity, which underlines the importance of providing education about and managing such activities in clients with BPD.

Acknowledgment

We would like to thank the participants who contributed to the survey.

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Conflict of Interest

None.

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