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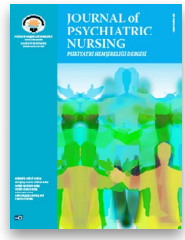

Original Article

The effects of borderline personality and sociodemographic traits on self-harm and suicidal behavior in substance use disorder

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Abstract

Objectives: Borderline personality traits (BPT), which have a negative effect on the prognosis in substance use disorder (SUD), may increase the frequency of self-harming behavior (SHB) and suicidal behavior (SB). A determination of BPT may be a protective measure against SHB and SB. The objective of this study was to analyze the predictive role of BPT on SHB and SB in individuals diagnosed with SUD. The participants' sociodemographic data were also analyzed for contribution to the context.

Methods: This cross-sectional research was conducted with inpatients at a single, private hospital psychiatric ward who had been diagnosed with SUD (n=122). The data were collected using the Borderline Personality Inventory, the Inventory of Statements About Self-Injury, and the Suicidal Behaviors Questionnaire.

Results: The results demonstrated a predictive role of BPT and gender on SHB in individuals diagnosed with SUD. BPT, socioeconomic status, and education were found to be predictors of SB in individuals diagnosed with SUD.

Conclusion: The results of the research demonstrated that the risk evaluation of SHB and SB in SUD is highly significant. BPT must be handled independently from substance abuse with the appropriate psychological interventions. The findings also indicated that the education and socioeconomic level of the patient were significant factors and that psychosocial support is essential for this high-risk group. Additional research could provide valuable information that would enable more efficient, targeted treatment strategies.

Keywords: Borderline personality; self-injury behavior; substance use disorder; suicidal behavior.

Substance abuse is an important public health problem, especially in low and middle-income countries. Related costs to the community include public safety concerns, healthcare and criminal justice expenditures, and lost productivity, and the negative consequences for individuals can also be substantial. Substance use disorder (SUD) has been defined as a pattern of symptoms resulting from continued use of a substance despite adverse effects.[1] SUD is associated with impulsivity and a lack of inhibition, often resulting in unemployment, social isolation, and in some cases, suicidal behavior (SB).[2–4] The results of a national survey in the USA indicated that among people with an SUD, SB was a leading cause of death and was 5 times more common than in the community sample.[5] Studies conducted in Turkey have reported that 27% of heroin addicts had attempted suicide and 70% had suicidal ideation.[6]

A significant relationship between SUD and self-harming behavior (SHB) has also been reported.[7] SHB has been defined as intentional behavior that is considered harmful to oneself, usually without suicidal intention. SHB typically includes direct acts resulting in tissue damage (such as cutting and burning oneself), but indirect harmful or risky behaviors, such as

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What is presently known on this subject?

- Substance abuse is known to be associated with greater risk of self-harm and suicidal behavior. It is a complex public health problem that negatively affects social, familial, and occupational functioning. Prevention and treatment can reduce the significant associated human, social, health, and economic costs.

What does this article add to the existing knowledge?

- The results of this study determined that borderline personality traits and gender were significant factors that predicted self-harming behavior in patients with substance use disorder. In addition, borderline personality traits, education level, and socioeconomic status were found to be significant factors that predicted suicidal behavior.

What are the implications for practice?

- It is important to understand the underlying dynamics of substance use disorder along with the factors that increase or decrease the likelihood of self-harm and suicidal behavior in order to successfully treat substance use disorder. Interventions that consider personality characteristics and sociodemographic details and activate other psychosocial support methods could prove to be very beneficial.

self-starvation, overeating, refusal of medical treatment, substance abuse, unsafe sex, and risky driving may also be considered SHB.[8] Substance overdose is frequently described in the literature as a form of SHB.[9,10] In 1 study, it was reported that 90% of the research group with SHB also had SUD, most used multiple substances (66.7%), and the majority had an addiction (71.1%).[6] It has also been observed that approximately 20% of the patients who came to the emergency department with a history of self-harm suffered from at least 1 SUD.[11]

The rate of SUD co-occurrence with other psychiatric disorders is also high.[12] Personality traits have been associated with the initiation and continued use of potentially harmful substances[13] and some findings have indicated a strong link between personality disorders and addiction.[14–16] In particular, borderline personality traits (BPT) and SUD are frequently diagnosed in a single individual.[16] Understanding the main features of BPT is important to understanding the nature of BPT and SUD comorbidity.

BPT are seen in some 10% of those who present at psychiatry outpatient clinics and 25% of those who receive inpatient treatment, and occurs in some 2% to 4% of the nonclinical population. A serious psychiatric condition generally appearing in young adulthood, signs and symptoms of BPT include anger control problems, intense and frequent mood changes, impulsive behavior, conflicts in interpersonal relationships, and behaviors that could potentially be life -threatening.[1,17] Impulsivity, SHB and suicidal behavior (SB), and a history of attempted suicide have been reported in 79% of individuals with BPT, and death due to suicide in 8% to 10%. Early mortality is a greater risk for those diagnosed with BPT than the general population,[18,19] at a rate that may be 50 times higher or more.[20,21]

SUD is more common in individuals with BPT, often due to impulse control difficulties. Individuals with SUD in addition to BPT may have significant problems in areas such as multiple substance use, addiction, involvement in violent crime, and abandonment of treatment.[22] There is frequently a high incidence of symptoms of BPT in individuals with SUD and SB, and SB in BPT patients is considered an independent risk factor beyond what can be explained by SUD or another Axis I psychopathology.[23]

When SUD accompanies BPT, the severity of BPT symptoms and the incidence of SHB and SB often increases.[24,25] Because these symptoms can have severe consequences in the course of both BPT and SUD, comorbidity of these disorders should be carefully investigated to arrive at a thorough and complete diagnosis. Additionally, it is important to investigate SHB and SB risk factors in the treatment of SUD. Understanding the factors and underlying dynamics that increase or decrease SHB and SB in SUD may improve existing treatment methods to reduce these symptoms and interventions.

The objective of this study was to examine BPT and demographic characteristics related to SHB and SB in patients with SUD who were hospitalized in a drug addiction treatment center. The study questions were:

- Can BPT and sociodemographic characteristics predict SHB in SUD?
- Can BPT and sociodemographic characteristics predict SB in SUD?

Materials and Method

Ethical Considerations

Ethics committee approval was obtained for this study from Balıklı Greek Hospital on May 28, 2018 and Istanbul Arel University on July 11, 2018 (2018/09, no: 4). The study was explained to the patients during the data collection phase and the patients were assured of the confidentiality of their records. Participation was voluntary and all of the patients provided written, informed consent. The study was conducted in accordance with the Declaration of Helsinki.

Sample

This study was conducted with a sample of 122 participants diagnosed with SUD according to the Diagnostic and Statistical Manual of Mental Disorders, Fifth edition criteria, who enrolled in inpatient treatment in the addiction clinic of a private hospital in Istanbul between May and July 2018. The substances used included heroin, volatile substances (such as glue or paint thinner), cocaine, amphetamines, phenazepam, and marijuana. The sample comprised patients aged 18-65 who did not show overt psychosis or organic mental disorder, who had completed rehabilitative treatment for at least 7 days after hospitalization and detoxification, who were not under the influence of substances during the evaluation, and who gave consent to the research.

Data Collection Procedure and Tools

A cross-sectional descriptive study design was used to assess a total of 122 inpatient participants diagnosed with SUD. So-

ciodemographic data of the patients and their substance use were collected between May and July 2018 using a personal information form. BPT data were collected using the Borderline Personality Inventory (BPI), self-harming behavior data were collected using the Inventory of Statements About Self-Injury (ISAS), and suicidal behavior data were collected using the Suicidal Behaviors Questionnaire (SBQ). The scales were administered in face-to-face interviews performed by a researcher (psychiatric nurse) in a private clinical setting. Each interview was 30-35 minutes in length.

Demographic Information Form

Descriptive and demographic data, such as age, gender, education level, and marital status of the participants were collected using a form. The socioeconomic status classification (upper, middle, or lower) was self-reported.

Borderline Personality Inventory

The BPI was used to measure borderline personality symptoms. The scale is based on Kernberg's theory of borderline personality organization and has been adapted into Turkish.[26,27] A higher score indicates greater severity of BPT. It has been demonstrated that the scale distinguishes individuals with BPT from other diagnostic groups and healthy control groups. Both cross-sectional and dimensional evaluation can be used. The BPI consists of a total of 53 items; 51 items are included in the score. A score >20 suggests borderline personality disorder (BPD). The internal consistency coefficient of the scale was calculated to be 0.84 in this study.

Inventory of Statements About Self-Injury

The ISAS was developed by Klonsky and has been adapted into Turkish.[28] The scale comprises 2 factors that evaluate inter- and intrapersonal behaviors and assesses the presence and frequency of 12 types of non-suicidal SHB (cutting, biting, burning, pinching oneself, etc.) as well as functions of the behaviors.[29] A higher ISAS score is correlated with a greater indication of pathological characteristics and risk. In our study, only the behavior section of the inventory (section 1) was used and scored to determine the type and frequency of SHB. The internal consistency coefficient of the scale was calculated to be 0.79.

Suicidal Behaviors Questionnaire

The SBQ was used to assess suicidal ideation, plans, threats, and possibility of repeated attempt.[30,31] Respondents are asked to reply to 4 questions using a Likert-type scale or yes/no. The possible score is 0-14, and a higher score indicates a greater threat of suicidal behavior. The internal consistency coefficient of the scale was calculated to be 0.83 in this study.

Statistical Analysis

IBM SPSS Statistics for Windows, Version 21.0 software (IBM Corp., Armonk, NY, USA) was used to conduct the statistical analysis. A p level of ≤0.05 was considered significant. Pearson correlation analysis and multiple hierarchical regression analysis techniques were used to compare the variables.

Results

The age of the participants was 18-61 years and the mean age was 28.97 years (SD= ±7.75). Table 1 provides some sociodemographic information, such as gender, marital status, and education. Table 2 shows the results of the analysis using a BPI cut-off score of 20, a mean ISAS score of 36.07 (SD= ±59.51), and mean SBQ score of 2.36 (SD= ±3.05).

Examination of the correlations between the independent variables revealed multicollinearity between predictor variables. Table 3 presents the correlation values determined between all of the study variables, including BPT, SHB, and SB levels in the SUD patients. Examination of the correlations revealed no statistically significant relationship between the age of the participants with an SUD and the BPI (r=.03, p>.05), ISAS (r=-.06, p>.05), and SBQ total scores (r=-.10, p>.05). A statistically significant correlation was observed between the mean total BPI score and the mean ISAS (r=.42, p<.5) and SBQ total score (r=.42, p<.05).

Multiple hierarchical regression analysis was used to determine predictors of SHB and SB in this SUD group. Scatter diagrams identified linear relationships between the related variables and histogram and normal distribution graphs were used to evaluate whether the scores demonstrated normal distribution. A linear relationship between the variables was determined and there were no significant deviations from normality. The data met the multivariate normality assumption.

Table 1. Sociodemographic characteristics of the sample

Sociodemographic information	n	%
Gender		
Male	118	96.70
Female	4	3.30
Marital status		
Married	37	30.30
Single	78	63.90
Divorced/Widow(er)	7	5.70
Education		
Primary school	8	6.60
Secondary school	40	32.80
High school	57	46.70
Undergraduate	16	13.10
Graduate	1	0.80
Socioeconomic status (self-identified)		
High	20	16.40
Middle	93	76.20
Low	9	7.40

Table 2. Mean borderline personality, self-injury, and suicidal behavior scale scores

Variables	SUD group	N	Mean	Standard deviation
Borderline Personality Inventory total score		122	26.69	7.95
Inventory of Statements About Self-Injury total score		122	36.07	59.51
Suicidal Behaviors Questionnaire total score		122	2.36	3.05

SUD: Substance use disorder.

Table 3. Correlation coefficients between BPT, SHB, and SB levels in SUD patients

Group	Age	BPI	Total Score	ISAS Total Score
Age	–			
SUD group				
Borderline Personality Inventory	.03	–		
Inventory of Statements About Self-Injury	-.06	.42**		–
Suicidal Behaviors Questionnaire	-.10	.42**		.31**

*p<.05; **p<.01. BPT: Borderline personality traits; SHB: Self-harming behavior; SB: Suicidal behavior; SUD: Substance use disorder.

Table 4 presents the results of multiple linear regression analysis to determine SHB predictors. In the first block of the hierarchical regression analysis, gender (male was the reference variable), age, education level, and socioeconomic status constituted the predictor variables. The model explained approximately 8% of the observed variance (F=2.37, p>.05). Gender (β=-.23, p<.05) was determined to contribute significantly to the model, but age (β=-.02, p>.05), education (β=-.11, p>.05) and socioeconomic (β=.07, p>.05) variables did not.

In the second block, the BPI total scores were added to the model, which then explained 23% of the observed variance. The BPI total scores (β=.41, p<.05) and the added variable (RΔ=.16, p<.05) contributed significantly, as did the gender variable, though to a decreased extent (β=-.23, p<.05).

Table 5 presents multiple linear regression analysis determining the predictors of SB.

In the first block of the hierarchical regression analysis, gender (with male as the reference variable), age, education level, and socioeconomic status were predictor variables. The model explained approximately 11% of the observed variance (F=3.64, p<.05). Education (β=.20, p<.05) and socioeconomic (β=.24, p<.05) variables contributed significantly to the model, though the variables of age (β=-.04, p>.05) and gender (β=-.11, p>.05) were not found to contribute significantly to the model.

In the second block of the hierarchical regression analysis, the BPI total scores were added to the model, and the model explained 25% of the observed variance. The BPI score (β=.38, p<.05) contributed significantly to the model, and the added

Table 4. Results of linear hierarchical multiple regression analysis for the predictive value of BPT on SHB in a group diagnosed with SUD

Group	Model	Independent variables	B	S.H	β	t	R^2	$R^2\Delta$	$F_{Değişim}$	F_{Model}
SUD group	1	Constant	138.94	52.78		2.63	.08	.08	2.37	2.37
		Gender1	-77.86	29.81	-.23	-261*				
		Age	-0.18	0.69	-.02	-.25				
		Education level	-8.21	6.51	-.11	-1.26				
		Socioeconomic level	8.38	11.12	.07	.75				
	2	Constant	68.12	50.36		1.35	.23	.16	24.03*	7.08*
		Gender1	-60.81	27.47	-.18	-2.21*				
		Age	-0.39	0.64	-.05	-.62				
		Education level	-9.47	5.96	-.13	-1.59				
		Socioeconomic level	0.65	10.29	.01	.06				
		BPI total score	3.05	0.62	.41	4.90*				

*p<.05; **p<.01; 1: Male gender was coded as 1. BPT: Borderline personality traits; SHB: Self-harming behavior; SUD: Substance use disorder.

Table 5. Linear hierarchical multiple regression analysis for the predictive value of BPT on suicidal behaviors in a group diagnosed with SUD

Group	Model	Independent variables	B	S.H	β	t	R^2	$R^2\Delta$	$F_{Değişim}$	F_{Model}
SUD group	1	Constant	-1.55	2.66		-.58	.11	.11	3.64*	3.64*
		Gender[1]	-1.94	1.50	-.11	-1.29				
		Age	-.02	.04	-.04	-.50				
		Education level	.73	.33	.20	2.23*				
		Socioeconomic level	1.50	.56	.24	2.68*				
	2	Constant	-4.96	2.56		-1.94	.25	.14	24.03*	7.78*
		Gender[1]	-1.11	1.39	-.07	-.80				
		Age	-.03	.03	-.07	-.87				
		Education level	.67	.30	.18	2.21*				
		Socioeconomic level	1.13	.52	.18	2.16*				
		BPI total score	.15	.03	.38	4.66*				

*p<.05; **p<.01; 1: Male gender was coded as 1. BPI: Borderline Personality Inventory; BPT: Borderline personality traits; SUD: Substance use disorder.

variable was significant to the change in the model (RΔ=.14, p<.05). In this block, the variables of education (β=.18, p<.05) and socioeconomic status (β=.18, p<.05) continued to contribute significantly to the model, but to a lesser extent.

Discussion

This study investigated the predictive effects of BPT and sociodemographic characteristics on SHB and SB in SUD. To this end, 122 SUD cases (118 males, 4 females) receiving inpatient treatment were evaluated using various scales. Analysis showed that BPT and gender were predictive for SHB, while BPT, socioeconomic, and educational factors were predictive for SB in individuals with SUD.

That the study revealed BPT to be predictive for SHB in individuals with SUD correlates with reports in the literature of high co-occurrence rates of BPT and SUD. Various studies have determined a rate of BPT among those receiving substance addiction treatment exceeding 40%, with 50% of individuals with BPD demonstrating abuse of prescription drugs.[32,33] These subjects were found to be more impulsive and clinically less stable than individuals with BPT but without substance addiction. These cases frequently exhibited SB, SHB, treatment abandonment, and shortened abstinence phases.[24,25]

The prevalence of SHB in individuals with SUD is much higher than in the general population. Various studies have shown a high co-occurrence of SUD and SHB and that substance use was be common, especially in individuals with recurrent SHB.[34,35] Substance use is said to impair logical thinking and judgment; decrease impulse control; increase agitation, external or internal aggression, and anxiety; and increase SHB.[13] In addition, significant overlap has been found between SHB and BPT, with borderline personality symptoms appearing at a rate of 37% to 52% in a clinical SHB sample.[36] Studies of women with BPT have reported that more than 95% practiced SHB for emotional relief.[21,37] A clinical study of 71 individuals with BPT found emotional abuse to be a predictor of SHB, while depression and sexual abuse were predictors of SB.[38]

Individuals with BPT tend to use substances to alleviate negative feelings or soothe themselves;[39] SHB in these individuals is generally characterized by intense emotional turbulence and impulsive actions (cutting, hitting oneself, etc., suicide attempts).[40] Psychological states such as guilt, anger, loneliness, and the urge to escape from pain and unpleasant feelings typically underlie the SHB frequently seen in individuals with BPT.[41,42] Cognitive patterns that motivate SHB, which are frequently encountered in BPT, are considered different from SB, as they represent "the inability of a disorganized identity to cope with negative emotions and punish oneself."[41]

In individuals with SUD, BPT have been identified as a unique predictor of SHB.[43] It has been observed that using psychoactive substance increases psychopathology in SHB and BPT comorbidity. The presence of SHB in individuals with both SUD and BPT suggests that SHB may be associated with various disorders. The coexistence of these diagnostic groups in the same person suggests an impulse control problem. It has been stated in the literature that drugs are frequently used to avoid emotions such as emotional pain, anxiety and distress, and to manage emotion regulation difficulties.[44] In a study conducted with structural equation modeling, it was shown that SHB was associated with a number of problematic behaviors, including dysfunctional avoidance behavior, impulsivity, aggression, substance use, and suicidality.[45] It has been reported that impulsivity is frequently seen in SUD and those with BPT, and it is also associated with SB and SHB, apart from psychiatric diseases. Studies have demonstrated that individuals who use substances are more impulsive than those who do not.[45,46]

Some specific difficulties arise in patients with SUD and accompanying BPT. The risks of impulsivity, suicide, and SHB associated with BPT have all been reported to be exacerbated by

alcohol or drug use.[47,48] Conversely the presence of BPT may contribute to the aggravation of SUD symptoms.[48] Thus the treatment for SUD becomes more complex in the presence of accompanying BPT. It has been shown that SHB in SUD cases is mostly related to the effect of the substance; and that the substance impairs judgment, reduces inhibition and restriction, and increases agitation, aggression, and stress, enabling SHB.[49,50] In cases with BPT, it has been shown to be associated with cognitive deficiencies in resolving close relationship crises.[41] Therefore, SHB may be seen in patients with both SUD and BPT, and this comorbidity may further aggravate SHB. Further research is needed in this regard.

In this research of individuals with SUD, 118 of the participants were men and 4 were women. Previous studies have also reported a predominance of men in SUD studies,[51] a finding that is consistent with studies showing that men are at greater risk for SUD than women.[52,53] One reason men may use substances more often than women is that males have frequently been shown to be more likely to take risks and have a greater novelty-seeking orientation than females.[53] In addition, social perceptions of gender roles likely contribute to less substance use among women. BPD is diagnosed more commonly in women (3.0%) than in men (2.4%); however, SUD is more common in men.[1] The gender-related difference in the psychopathologies indicates that a research group showing both SUD and BPT is an unusual sample. Studies with more female participants are needed.

This study found that BPT, education, and socioeconomic status predicted SB in SUD cases. In clinical studies conducted with individuals with SUD, the prevalence of suicide attempts was high compared to the general population, and 50.7% of the participants reported suicidal ideation.[35] Substance use can impair mental health and reduce social life support, and increased loneliness, depression, and suicidal ideation may lead to SB.[54] SUD and accompanying psychopathological factors, such as personality disorder, depression, and psychosis appear to be associated with suicide attempts.[55,56] Isolation, rejection, unemployment, and legal problems were factors related to a suicide attempt in heroin addicts.[57] However, importantly, it is not always entirely clear whether a death resulting from high-dose substance intake was a suicide attempt, so the relationship remains imprecise.[58]

Nonetheless, substance addiction appears to increase the risk of a suicide attempt, and some significant variables have been identified. Among them, limited studies evaluating the effects of personality disorders on SB in a SUD sample found that BPD was associated with SB.[58,59] Studies have revealed that BPT caused more severe functional impairment than other personality disorders. It has also been reported that those with BPD perceived more life stress and were less likely to have psychosocial support than the general population, which significantly increased suicidal ideation.[56] It has also been reported in the literature that manipulative suicides are more common in individuals with BPT; SB may at times be more related to emotional states involving interpersonal relationships than intense internal states. It has been reported that SB in those with BPT often represents an effort to eliminate anxiety rather than a desire or intention to die.[60]

The factors motivating SB in SUD and BPT patients are clinically different, but when both pathologies are seen together, the risks of impulsive behavior, suicide, and SHB associated with BPT all increase with alcohol or drug use.[48] The presence of BPT increases the severity of SUD symptoms, and SUD treatment is more complex for these patients. This study's findings support the idea that SUD patients with BPT are at high risk for suicide attempts. This is consistent with the literature, but more clinical studies are needed.

After BPT, this study found education to be the second variable predicting SB. Various studies have reported a negative relationship between education level and alcohol and substance use.[35,51,61] Unlike some previous research, we found that 46.7% of the participants had graduated from high school and 13.1% held a bachelor's degree. The fact that the majority of participants had at least a high school education may reflect the middle socioeconomic status of those in treatment in a private hospital.

Our results indicated that socioeconomic status was the third variable predicting SB. One clinical study determined the income of 43.1% SUD patients to be less than 1000 TL per month (60% of the minimum wage of that year).[51] Another study also found SUD to be more prevalent in children of low-income families than high-income families.[53] Feelings of isolation and separation from society, rejection, unemployment, poverty, and legal problems have been noted to increase the risk of SB in substance addicts.[57] Some data suggest that those with SUD often have a lower income level and a higher risk of suicide than the general population. In BPT cases, low levels of income and education were found to be associated with the deterioration of functionality of the individual.

In this study, 76% of the participants defined themselves as having middle socioeconomic status. The fact that the participants had the opportunity to pursue inpatient treatment in a private hospital may indicate that the group, in fact, had a higher income level. The fact that they found and entered treatment despite SUD and comorbid BPT suggests that environmental factors may be as important as personal factors in treatment-seeking. The personality types associated with addiction can be an obstacle to committed treatment. No matter how severe the psychopathology, reaching treatment and support plays a significant role in the rehabilitation of individuals with SUD. While results indicate that personality traits influence the onset and continuation of substance use, it also appears that external social factors profoundly affect the treatment and course of SUD. Further research with larger samples is needed on this subject.

Recommendations for Psychiatric Nursing Practices

Patients with SUD have extremely high nursing care needs but

may exhibit behaviors (such as self-harm, impulsivity, suicide attempts, and difficulty regulating emotions) that negatively affect nursing care and prevent the formation of a therapeutic environment. Accompanying BPT aggravates this picture. Thus, psychiatric nurses must be able to provide patients with the appropriate means to express complex emotions within a therapeutic setting and in alignment with treatment goals. Nurses, with the support and cooperation of other healthcare professionals, can improve patient care using psychotherapeutic methods. The results of this study can serve as a guide to psychiatric nurses in the treatment and rehabilitation of individuals with SUD and the identification of risk factors, common problems, treatment goals, and intervention structures.

Limitations of the Study

This study has some limitations. The cross-sectional nature of the research constrains the ability to establish causal relationships. In addition, most of the subjects were men and there was no control group. Furthermore, unreported illegal substance use due to fear of legal consequences may constitute a limitation in data collection. Finally, risk estimations based on individuals with SUD receiving inpatient treatment may not represent the risks of individuals actively using substances.

Prospective population-based studies are needed to reveal the protective factors and determinants of SB and SHB. Individuals with SUD should be evaluated in terms of SHB and suicide risk, and accompanying BPT should be addressed independent of substance abuse. Further research is needed to explore the role of other potential factors, including other personality factors, in this population.

Conclusion

This study is one of the few in Turkey conducted with a clinical population examining factors like BPT, SHB, and SB in individuals with SUD. The results of this study showed that in the context of SUD, BPT and gender predicted SHB, while BPT, education and socioeconomic status predicted SB. BPT accompanying substance abuse is an important public health problem, as it increases the risk of SHB and SB, and adversely affects social, familial, and occupational functioning. The research results show the importance of focusing on BPT, gender, education, and socioeconomic status in the treatment of individuals with SUD and suggest the development of interventions for BPT and other psychosocial support methods in the treatment of SUD. Our findings may be beneficial to efforts to prevent SHB and SB, including, but not necessarily limited to, psychotherapeutic interventions in the treatment of SUD.

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