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PSYCHOLOGICAL AND SOCIAL ASPECTS OF SYNTHETIC PSYCHOACTIVE SUBSTANCE USE AMONG INDIVIDUALS WITH BORDERLINE MENTAL DISORDERS: A COMPARATIVE ANALYSIS

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Abstract

Relevance. The growing prevalence of synthetic psychoactive substance use, particularly among young people, is accompanied by an increase in patients with severe forms of dependence and comorbid mental disorders, including borderline personality disorders. Identifying the psychological and social characteristics of this group is crucial for developing targeted support programs.

Objective: to conduct a comparative analysis of synthetic psychoactive substance users with and without signs of borderline personality disorders and to identify key psychological and social differences between the groups.

Materials and Methods. The present study employed a cross-sectional comparative design and was conducted over the period from January 2023 to December 2024 at the Almaty City Mental Health Center, Republic of Kazakhstan. The study was conducted in 2023–2024 at the Mental Health Center in Almaty. A total of 500 respondents were surveyed using a structured questionnaire. The sample was divided into two equal groups: individuals with borderline personality disorders (n=250) and those without (n=250). Data were analyzed using Spearman's rank correlation method.

Results. In the group with BPD, emotional disorders (88%), psychotic symptoms (40%), panic attacks (84%), suicidal thoughts (72%) and attempts (44%) were significantly more common. Significant correlations have been established between the frequency of use, the severity of addiction symptoms, mood changes, and the risks of suicidal behavior. The effectiveness of treatment in patients with BPD was lower (20% versus 36% in the group without BPD).

Conclusion. Users of synthetic psychoactive substances with borderline personality disorders demonstrate a more severe clinical profile and a lower response to therapy. These findings highlight the need for integrated assistance programs that include psychotherapeutic and social interventions, with a focus on prevention, early detection, and motivation enhancement.

Keywords: *synthetic drugs, borderline personality disorder, addiction, psychopathology, prevention.*

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Резюме

ПСИХОЛОГИЧЕСКИЕ И СОЦИАЛЬНЫЕ АСПЕКТЫ УПОТРЕБЛЕНИЯ СИНТЕТИЧЕСКИХ ПСИХОАКТИВНЫХ ВЕЩЕСТВ У ЛИЦ С ПОГРАНИЧНЫМИ ПСИХИЧЕСКИМИ РАССТРОЙСТВАМИ: СРАВНИТЕЛЬНЫЙ АНАЛИЗ

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Актуальность. Рост распространённости синтетических психоактивных веществ, особенно среди молодёжи, сопровождается увеличением числа пациентов с тяжёлыми формами зависимости и сопутствующими психическими расстройствами, включая пограничные расстройства личности. Выявление психологических и социальных особенностей этой группы имеет важное значение для разработки целевых программ помощи.

Цель: провести сравнительный анализ потребителей синтетических психоактивных веществ с признаками пограничных психических расстройств личности и без таковых, выявить ключевые психологические и социальные отличия между группами.

Материалы и методы. Настоящее исследование представляло собой кросс-секционное (поперечное) сравнительное исследование, проведённое в период с января 2023 по декабрь 2024 года на базе Центра психического здоровья города Алматы, Республика Казахстан. Анкетирование охватило 500 респондентов, разделённых на две равные группы: с пограничными расстройствами личности (n=250) и без таковых (n=250). Использовалась структурированная анкета. Применён корреляционный анализ по Спирмену.

Результаты. В группе с ПРЛ достоверно чаще встречались эмоциональные нарушения (88%), психотические симптомы (40%), панические атаки (84%), суицидальные мысли (72%) и попытки (44%). Установлены значимые корреляции между частотой употребления, выраженностью симптомов зависимости, изменениями настроения и рисками суицидального поведения. Эффективность лечения у пациентов с ПРЛ была ниже (20% против 36% в группе без ПРЛ).

Заключение. Потребители синтетических ПАВ с пограничными психическими расстройствами личности демонстрируют более тяжёлую клиническую картину и низкий отклик на терапию. Это подчёркивает необходимость внедрения комплексных программ помощи, включающих психотерапевтические и социальные интервенции, с акцентом на профилактику, раннее выявление и поддержку мотивации к лечению.

Ключевые слова: *синтетические наркотики, пограничные психические расстройства, зависимость, психопатология, профилактика.*

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Түйіндеме

ШЕКАРАЛЫҚ ПСИХИКАЛЫҚ АУЫТҚУЛАРЫ БАР АДАМДАР АРАСЫНДА СИНТЕТИКАЛЫҚ ПСИХОАКТИВТІ ЗАТТАРДЫ ҚОЛДАНУДЫҢ ПСИХОЛОГИЯЛЫҚ ЖӘНЕ ӘЛЕУМЕТТІК АСПЕКТІЛЕРІ: САЛЫСТЫРМАЛЫ ТАЛДАУ

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Өзектілігі. Синтетикалық психоактивті заттарды, әсіресе жастар арасында қолданудың өсіп келе жатқан таралуы — тәуелділіктің ауыр түрлерімен және қатар жүретін психикалық бұзылулармен, соның ішінде шекаралық тұлғалық бұзылулармен ауыратын науқастар санының артуымен қатар жүреді. Осы топтың психологиялық және әлеуметтік ерекшеліктерін анықтау — мақсатты қолдау бағдарламаларын жасау үшін өте маңызды.

Мақсаты: Тұлғаның шекаралық бұзылыстарының белгілері бар және онсыз синтетикалық психоактивті заттарды қолданушыларға салыстырмалы талдау жүргізу, сондай-ақ топтар арасындағы негізгі психологиялық және әлеуметтік айырмашылықтарды анықтау.

Материалдар мен әдістер. Бұл зерттеу көлденең (кросс-секциялық) салыстырмалы сипатта жүргізілді және 2023 жылғы қаңтардан 2024 жылғы желтоқсанға дейінгі кезеңде Алматы қаласының Психикалық денсаулық орталығының базасында өткізілді. Зерттеуге барлығы 500 респондент қатысып, олар екі тең топқа бөлінді: шекаралық тұлғалық бұзылыстары барлар (n=250) және ондай бұзылыстары жоқтар (n=250). Зерттеу барысында құрылымдық сауалнама қолданылды. Алынған деректерге Спирменнің рангілік корреляция талдауы жүргізілді.

Нәтижелер. Шекаралық бұзылулары бар топ эмоционалдық бұзылулардың (88%), психотикалық белгілердің (40%), дүрбелең шабуылдарының (84%), суицидтік ойлардың (72%) және әрекеттердің (44%) айтарлықтай жоғары таралғанын хабарлады. Сондай-ақ қолдану жиілігі, тәуелділік белгілерінің ауырлығы, көңіл-күйдің өзгеруі және суицид қаупі арасында айтарлықтай корреляция анықталды. Шекаралық тұлғалық бұзылыстары бар топта емдеудің тиімділігі төмен болды — 20% қарсы 36%..

Қорытынды. Шекаралық тұлғалық бұзылыстары бар синтетикалық психоактивті заттарды қолданушылар неғұрлым ауыр клиникалық профильмен және терапияға төмен жауап беруімен ерекшеленеді. Бұл нәтижелер алдын алуға, ерте анықтауға және мотивацияны арттыруға бағытталған психотерапиялық әрі әлеуметтік араласуды қамтитын кешенді көмек бағдарламаларының қажеттілігін көрсетеді.

Кілт сөздер: *синтетикалық препараттар, шекаралық тұлғаның бұзылуы, тәуелділік, психопатология, алдын алу.*

Дәйексөз үшін:

Козыбаева К.А., Козыбаева Ж.А., Субханбердина А.С., Бурибаева Ж.К., Изекенова А.К Шекаралық психикалық ауытқулары бар адамдар арасында синтетикалық психоактивті заттарды қолданудың психологиялық және әлеуметтік аспектілері: салыстырмалы талдау // Ғылым және Денсаулық сақтау. 2025. Vol.27 (6), Б. 109-117. *doi 10.34689/SH.2025.27.6.013*

Introduction

According to the World Health Organization (WHO), there has been a steady increase in the number of individuals using narcotic substances over recent decades [24]. Several studies emphasize that drug use is becoming more widespread among young people, which is associated with the availability of synthetic drugs and a low level of awareness about the risks involved [9]. Contemporary epidemiological research shows that the prevalence of drug addiction is influenced by various factors, including socio-economic status, level of education, and accessibility of medical care [18]. For example, in developed countries, a decline in the use of traditional drugs (such as heroin and cocaine) has been observed, alongside a rise in the popularity of synthetic psychoactive substances (PAS) [1]. This article presents the results of a comparative study of two groups of synthetic PAS users — those with borderline mental disorders (BMD) and those without. Drawing on a dataset of 500 participants and subsequent correlation testing, we observed pronounced contrasts in how often psychopathological signs appear, how well individuals adapt socially, the prevalence of suicidal thoughts, and the strength of treatment motivation. These insights highlight the imperative for a holistic, cross-disciplinary strategy to both manage and prevent addictive behaviors in people living with borderline mental disorders.

Keywords: synthetic drugs, borderline personality disorders, addictive behavior, psychotic symptoms, correlation analysis

Over the past decade clinicians and public-health specialists in Kazakhstan have recorded a steady rise in the use of clandestinely produced synthetic stimulants such as α-PVP and mephedrone. Early reports suggest that people who meet DSM-5 criteria for borderline personality disorder (BPD) begin experimenting at a younger age, consume more frequently and suffer more pronounced social fallout than users without the disorder. To examine these differences, we surveyed 500 adults attending the Almaty City Narcological Centre, collecting data on age of first use, weekly intake, and the occurrence of mood, anxiety and psychotic symptoms with a structured interview adapted from the WHO ASSIST. We also documented work absenteeism, family conflict and contact with law-enforcement. Analysing these variables side by side should clarify how synthetic stimulants interact with the affective instability that typifies BPD and help frontline services - psychiatric clinics, narcological dispensaries and primary-care practices - shape more targeted prevention and treatment plans. These observations make it clear that piecemeal remedies will not suffice; an effective response must weave together psychiatric treatment, structured psychological interventions, social-service support, and community education so that medical, behavioral, and environmental factors are addressed in concert.

Materials and Methods

The present study employed a cross-sectional comparative design and was conducted over the period from January 2023 to December 2024 at the Almaty City Mental Health Center, Republic of Kazakhstan. The research protocol was reviewed and approved by the Ethics Committee of the Kazakh Medical University of Continuing Education (Protocol No. 02-23, dated March 12, 2023). All study procedures adhered to the ethical standards of the Declaration of Helsinki (2013 revision). The research was aimed at identifying and comparing the clinical, psychological, and social characteristics of individuals using synthetic psychoactive substances, with and without the presence of borderline personality disorders.

The total study sample comprised 500 adult participants aged 18 to 50 years. Respondents were recruited from among outpatients and inpatients who were receiving diagnostic, therapeutic, or rehabilitation services at the Mental Health Center during the study period. A purposive sampling strategy was used to ensure adequate representation of both clinical subgroups. Group I included 250 individuals diagnosed with borderline personality disorders according to the International Classification of Diseases, 10th Revision (ICD-10 codes F32–F39, F40–F48, and F60), while Group II comprised 250 respondents who reported a history of synthetic psychoactive substance use but had no psychiatric diagnosis corresponding to borderline disorders. Participation in the research was entirely voluntary, and all respondents provided written informed consent after receiving detailed information about the purpose, methods, and confidentiality conditions of the study.

Eligibility criteria required participants to be within the specified age range, to have a history of synthetic psychoactive substance use for at least six months, and to possess medical documentation confirming a diagnosis of substance dependence or a borderline mental disorder. Individuals experiencing acute intoxication, withdrawal, or psychotic decompensation at the time of data collection, as well as those with cognitive impairments preventing reliable self-reporting, were excluded. Respondents who declined participation or provided incomplete data were also excluded from the final analysis.

Data collection was conducted using a structured author-designed questionnaire, developed specifically for this study to examine the psychological and social aspects of synthetic psychoactive substance use among individuals with and without borderline personality disorders. The questionnaire was based on the analysis of clinical experience and previous sociological research in psychiatry and addiction medicine and was pre-tested on a pilot group to ensure clarity and reliability of responses. It contained sections addressing respondents' sociodemographic characteristics, clinical manifestations associated with substance use, and psychological and behavioral features relevant to borderline personality traits.

The questionnaire included questions about the type, duration, and frequency of psychoactive substance use, as well as the presence of emotional instability, anxiety, panic attacks, psychotic symptoms, suicidal ideation, and social adaptation difficulties. Additional items assessed family and social relationships, motivation for treatment, and perceived effectiveness of previous rehabilitation attempts. The survey was conducted in Russian, with questions formulated in clear and neutral language to minimize misinterpretation. Most items were closed-ended, allowing respondents to select one or more predefined options, while several questions permitted short written comments to capture qualitative nuances.

Each participant completed the questionnaire independently in a confidential setting under the supervision of a trained researcher. The average completion time was 20–25 minutes. After the survey, all forms were checked for completeness and accuracy. In total, 500 valid responses were included in the final statistical analysis.

To minimize reporting bias and ensure data accuracy, all surveys were administered in private consultation settings under the supervision of trained researchers who provided clarification when necessary but refrained from influencing participants' responses. All participants were informed of their right to withdraw from the study at any stage without any consequences for their treatment or ongoing therapy.

Statistical analysis was performed using IBM SPSS Statistics version 26. Descriptive statistics were used to summarize the socio-demographic and clinical characteristics of the sample, including mean values, standard deviations, and frequency distributions. To identify associations between the frequency of psychoactive substance use, the severity of withdrawal and dependence symptoms, affective and psychotic manifestations, and indicators of suicidal behavior, Spearman's rank correlation coefficient was applied. Differences between the two groups were analyzed using non-parametric methods (Mann–Whitney U test) for continuous variables and the chi-square (χ^2) test for categorical data. The level of statistical significance was set at $p < 0.05$.

Throughout the study, strict adherence to ethical research principles was maintained. Confidentiality of personal data was ensured by assigning anonymous identification codes to each participant and by storing all electronic and paper-based materials in secure locations accessible only to the research team. The findings were used exclusively for scientific purposes, and no identifying information was disclosed in any publication or presentation. The methodological approach adopted in this research allowed for a detailed comparative assessment of psychological and social determinants of synthetic psychoactive substance use, depending on the presence or absence of borderline personality pathology, thus ensuring both the scientific rigor and ethical integrity of the investigation.

Results

Drug addiction is accompanied by severe somatic consequences, including liver damage, cardiovascular diseases, and immunodeficiency conditions [13, 17, 20]. The analysis of the survey data from users of synthetic drugs without borderline personality disorders revealed that the predominant substances were synthetic cannabinoids (50%) and synthetic cathinones (30%). The analysis of the survey data revealed that the predominant substances were synthetic cannabinoids and synthetic cathinones (Figure 1).

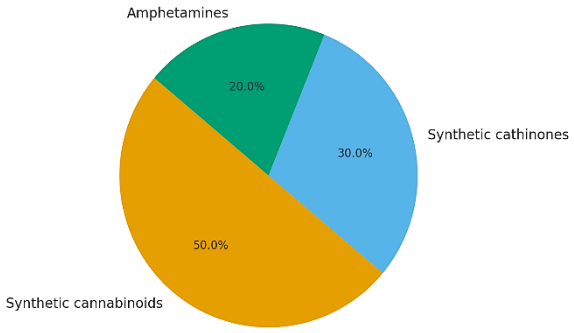

Figure 1. Distribution of Synthetic Psychoactive Substances

The most common reasons for initial use were curiosity (40%) and peer influence (35.2%), both of which can be viewed as negative motivational factors. These motives point to limited understanding of the risks involved and to poorly developed skills for resisting peer influence.

A vast majority of participants (80%) mentioned feelings of euphoria or relaxation after taking the drugs—sensations that can strongly reinforce repeated use and, in turn, elevate the likelihood of addiction.

Similarly, eight in ten respondents acknowledged an urge to consume the substances again, signalling that psychological dependence is taking hold and that stopping without help is exceptionally hard.

Frequent intake - reported by 60% of the sample as occurring several times a week or even daily—inevitably harms both mind and body, sharply raising the chance of entrenched addiction and secondary psychiatric problems.

Finally, the high rate of failed quit attempts (44.8%) reveals deficits in self-regulation and underscores the urgency of a comprehensive treatment programme that tackles psychological as well as social dimensions of use.

About one-half of the participants - roughly 50 percent- reported episodes of intrusive, anxious rumination ranging from occasional to almost constant. Such thoughts weigh heavily on psychological well - being and can pave the way for chronic anxiety conditions, underscoring the need to weave cognitive - behavioural techniques and structured anxiety-management modules into any full-scale rehabilitation plan.

Although psychotic features such as hallucinations and delusional ideas appeared in a smaller subgroup (close to 30 percent), their impact is profound: these symptoms erode mental health and markedly diminish quality of life. Even a minority showing such signs constitutes a serious clinical red flag. These manifestations require immediate medical intervention and long-term psychiatric care to prevent severe mental health deterioration.

Mood changes, including sudden shifts (40%), irritability (30%), and depression (20%), negatively affect respondents' social adaptation and personal functioning, confirming the impact of psychoactive substances on affective disorders. The presence of mood disturbances in a significant portion of respondents indicates serious psycho-emotional consequences of drug use. An important task is the early detection of such disorders and the provision of adequate psychological assistance aimed at improving emotional well-being and social integration. These findings are illustrated in Figure 2, which presents the prevalence of key psychological and psychiatric manifestations among respondents.

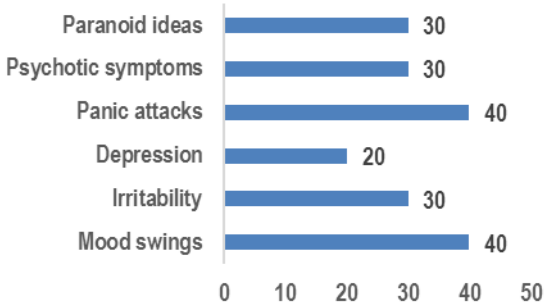

Figure 2. Prevalence of major psychological and psychiatric manifestations among synthetic PAS users (n = 500).

Drug addiction poses not only medical but also significant social consequences. The psychological aspects of addiction include the development of depressive and anxiety disorders, cognitive decline, and personality distortion [15]. Recent findings point squarely to psychosocial stress as a principal driver of substance dependence, reinforcing the case for robust prevention initiatives and prompt psychological aid [12]. Within our sample, six out of ten users admitted that their dosage crept upward over time - a trajectory that undermines both physical and mental health by accelerating tolerance and deepening addiction. Taken together, these insights argue strongly for proactive screening and ongoing follow-up of synthetic PAS consumers, ensuring that preventive and therapeutic support can be deployed without delay.

Ingesting psychoactive substances (PAS) on an empty stomach - a behavior acknowledged by 40 percent of participants - is particularly hazardous, because it amplifies each compound's toxicity within the body and hastens the pathway to dependency. These data highlight the urgency of comprehensive, ongoing, community-focused educational initiatives that alert users to such risks while advancing evidence-based harm-reduction practices.

Roughly four out of five participants - about 80 percent - described withdrawal discomfort ranging from mild unease to severe distress, a plainly harmful consequence. These symptoms usually point to a blend of physical and psychological dependence, and the literature consistently notes how hard it is to manage withdrawal without assistance. Reaching specialist services and evidence-based pharmacological support can greatly soften this phase and measurably raise the likelihood of lasting recovery.

Roughly two in five participants - around 40 percent - described experiencing panic episodes of differing intensity, a pattern that demonstrably erodes both quality of life and everyday social engagement. Panic phenomena linked to psychoactive-substance use greatly diminish a person's capacity to relate effectively to their surroundings and therefore demand focused therapeutic attention. If left unaddressed, such episodes can evolve into chronic anxiety and agoraphobic avoidance, further intensifying social withdrawal and narrowing the prospects for long-term recovery.

Memory and attention problems, reported by nearly 50% of respondents, also adversely affect their daily functioning, as well as their social and professional activity.

The expressed desire for self-harm among 30% of respondents indicates a pronounced level of emotional instability and despair associated with substance use.

Suicidal thoughts, although reported by 20% of respondents, are unequivocally a critical risk factor that necessitates active monitoring and timely psychological intervention, indicating a high risk of suicidal behavior.

Suicide attempts, recorded in 15% of respondents, underscore the detrimental impact of PAS use on mental health.

These findings are illustrated in Figure 3, which presents the distribution of self-harming urges, suicidal thoughts, and suicide attempts among respondents.

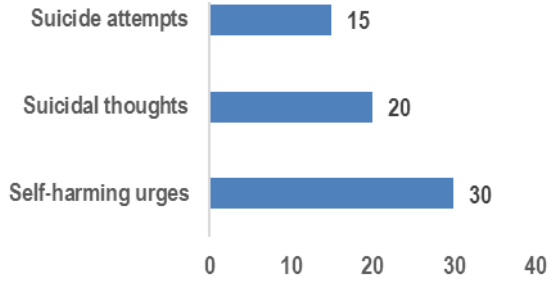

Figure 3. Indicators of self-harming and suicidal behavior among respondents (n = 500).

Feelings of persecution or paranoid symptoms, though less frequent (around 30%), are alarming indicators that negatively affect psychological well-being.

The nature of family relationships is assessed as positive by the majority of respondents (50%), which is a favorable factor contributing to successful rehabilitation and social reintegration. However, the presence of conflictual or absent family relationships among a significant portion (20%) highlights the need for family therapy and social support to restore and strengthen family bonds.

Relationships with friends are also predominantly positive (60%), representing an important source of social

support. Nevertheless, superficial or conflict-laden friendships, as well as the absence of close social connections among the remaining respondents, are negative indicators that require targeted efforts to foster a supportive social environment.

The pronounced call for both psychological counselling and pharmacological support among participants underscores the value of a truly integrated model of addiction care - one capable of meeting the many-sided needs of those grappling with substance dependence. Yet the data show that only about 40 percent have actually reached out to addiction clinicians or mental-health professionals, hinting at either limited service accessibility or lingering scepticism toward formal treatment. Encouragingly, half of the respondents expressed a desire to stop using drugs, revealing a reservoir of motivation that well-designed interventions could actively cultivate.

The correlation analysis based on the survey results revealed several significant relationships and trends. Spearman's method was used to conduct the correlation analysis. It was found that the frequency of psychoactive substance use is positively correlated with the severity of addiction symptoms. Respondents with a higher frequency of use more often reported intense cravings, severe discomfort during withdrawal attempts, and a need to increase dosage over time.

Volkow N.D. et al. [22] note that frequent use intensifies changes in the brain's neurotransmitter systems, which in turn exacerbates addiction symptoms. *Petrov V.S.* [16] emphasizes that regular consumption of synthetic drugs accelerates the development of dependence, increasing both cravings and withdrawal-related discomfort.

A significant association was found between the frequency of substance use and the severity of psychiatric symptoms, such as sudden mood swings, irritability, and depression. An increase in dosage was also linked to a higher frequency of psychotic symptoms, including hallucinations and paranoid ideation. *Kuzmin A. et al.* [8] report that prolonged use of synthetic drugs significantly increases the risk of psychotic episodes, as well as persistent changes in the emotional domain.

Table 1.

Spearman's correlation coefficients.

Variables correlated	Spearman's r	p-value	Interpretation
Frequency of use ↔ Severity of dependence	0.84	<0.01	Strong positive correlation
Frequency of use ↔ Psychiatric symptoms (mood, irritability, depression)	0.72	<0.01	Strong positive correlation
Dosage increase ↔ Psychotic symptoms	0.68	<0.05	Moderate positive correlation
Psychotic symptoms ↔ Suicide attempts	0.90	<0.01	Very strong correlation
Mood dysregulation ↔ Suicidal ideation	0.77	<0.01	Strong correlation
Frequency of use ↔ Cognitive impairment	0.65	<0.05	Moderate correlation

Particular attention was paid to the study of suicide risk. The analysis revealed a strong correlation between the severity of psychiatric and psychotic manifestations and the frequency of suicidal thoughts and suicide attempts among respondents. Nelson et al. [12] emphasize that mental disorders and psychoactive substance abuse are key risk factors for suicidal behavior.

Furthermore, a correlation was identified between the regular use of psychoactive substances and a decline in cognitive functioning, particularly memory and attention impairment.

In recent years, treatment methods for substance dependence have expanded significantly, including pharmacotherapy, psychotherapeutic interventions, and rehabilitation programs [4]. The effectiveness of treatment largely depends on a comprehensive approach that integrates medical management of withdrawal symptoms, cognitive-behavioral therapy, and social rehabilitation [10].

The highest risks to mental and physical health were observed among respondents with a high frequency of use, pronounced symptoms of dependence, and the need for gradual dose escalation. At the same time, respondents in older age groups demonstrated a greater degree of social stability, which may serve as a protective factor against severe manifestations of addiction.

These findings highlight the critical need for an integrated treatment approach that combines psychological support, pharmacological therapy, and social assistance, aimed at mitigating the adverse effects of synthetic drug use.

The modern consumer of synthetic psychoactive substances (PAS) with borderline personality disorders is represented by an approximately equal gender distribution: 52% male (130 individuals) and 48% female (120 individuals). The age category is predominantly young, with a majority between the ages of 18 and 25 (44%), followed by those aged 26 to 35 (36%). Individuals over the age of 35 are less commonly represented. Most respondents reported having a secondary (48%) or vocational education (32%), while only 20% had attained higher education. The employment rate among participants was low: approximately half were unemployed (48%), 36% were employed, and 16% were still in education.

The predominance of males (52%) is notable; however, the significant proportion of females (48%) points to a narrowing gender gap in the use of synthetic PAS and the associated psychopathology. Marital status indicates a low level of social adaptation: the majority of respondents (68%) are single or not in a formal relationship. Family relationships are predominantly formal or conflictual (64%), which may act as a risk factor for further social maladjustment and a barrier to successful rehabilitation. Drug use often leads to family breakdown, loss of employability, and social marginalization [9, 25]. Several studies have also identified a strong correlation between substance dependence and criminal activity, particularly among adolescents and young adults [5, 6, 23].

The average user of synthetic drugs with borderline personality disorders has a history of use spanning 3 to 5 years and primarily consumes synthetic cannabinoids

(52%), synthetic cathinones (36%), and amphetamines (24%). A significant proportion of respondents (around 88%) use drugs regularly, with the vast majority consuming them daily or several times per week.

The most common motive for using synthetic PAS is the desire to experience euphoria and joy (44%), while a portion of users (20%) report feelings of anxiety and panic following use. This highlights the complexity of the users' psycho-emotional state and the ambiguity of the perceived effects of the substances.

Initial attempts to stop using drugs are rarely successful: the majority (56%) report relapses despite undergoing treatment. Only 12% of respondents have managed to abstain from use for an extended period. Additionally, more than half (60%) experience moderate to severe discomfort when attempting to quit, indicating the presence of a pronounced withdrawal syndrome.

Among psychopathological manifestations, emotional disturbances are the most prevalent: 48% of respondents reported sudden mood swings, 32% experienced irritability, and 16% suffered from depressive states. Psychotic symptoms were also prominent, with 40% of respondents reporting psychotic episodes of varying frequency (from occasional to regular occurrences).

Particularly alarming is the high prevalence of suicidal tendencies: 44% of respondents reported having attempted suicide (24% once, 20% multiple times), and approximately 56% regularly experience self-harming urges.

Feelings of persecution (76%) and panic attacks (84%) were also frequently reported, indicating pronounced anxiety-paranoid and panic disorders associated with the use of synthetic drugs.

Approximately half of the respondents (48%) had previously sought help; however, in most cases (32%), treatment was reported as ineffective. Notably, nearly half (48%) had never sought specialized assistance at all, reflecting either limited access to services or a lack of trust in mental health systems.

Less than half of the participants (48%) expressed a desire to stop using drugs, while a significant portion remained undecided (24%) or were not ready to quit (28%), complicating prospects for rehabilitation and social reintegration in this patient population.

The correlation matrix analysis of the survey results among respondents who use synthetic drugs and have borderline personality disorders revealed several important relationships. A strong positive correlation was identified between age at first use and frequency of use ($r = 0.87$).

This may indicate that the earlier an individual begins using synthetic drugs, the more frequently and intensely they tend to consume them. A very strong positive linkage emerged between the presence of psychotic features and actual suicide attempts ($r = 0.90$), while mood dysregulation showed a sizable association with suicidal ideation ($r = 0.77$). In light of these results - derived from an in-depth survey of synthetic PAS users meeting criteria for borderline personality disorder - there is a compelling rationale for conducting a head-to-head comparison. Such an analysis would clarify both the distinctive and overlapping psychopathological, social, and clinical profiles of individuals who do and do not have BPD, ultimately informing finely tuned prevention and treatment strategies for each subgroup.

Nearly nine in ten participants who met diagnostic criteria for borderline personality disorder (BPD) - about 88 percent - described intense emotional turbulence, including irritability, dramatic mood swings, and depressive spells; by contrast, only 41 percent of those without BPD reported similar difficulties. This stark gap illustrates how powerfully BPD magnifies affective instability and reinforces the case for sustained, high-intensity psychological and psychotherapeutic support.

The pattern is echoed in psychotic symptoms. Roughly two-fifths of the BPD group (40 percent) admitted to hallucinations or delusional ideas, whereas such experiences were noted by just 15 percent of the non-BPD cohort. These figures argue strongly for integrated care plans that blend appropriate pharmacotherapy with targeted psychotherapy to curb psychosis and restore emotional equilibrium.

Among individuals diagnosed with borderline personality disorder (BPD), panic episodes are reported with striking frequency - 84 percent - compared with just 18 percent in those without the diagnosis. This stark disparity points to severe anxiety-phobic disturbances intertwined with emotional volatility and social apprehension. It strongly supports the proactive roll-out of cognitive-behavioural therapy (CBT) and dialectical behaviour therapy (DBT) programs.

In the group living with borderline personality disorder, close to three-quarters (72 %) acknowledged thoughts of suicide, while the rate in the comparison group barely reached 9 %. This stark gulf signals a sharply elevated threat of self-harm for individuals with BPD and demands swift preventive action alongside vigilant clinical surveillance for this high-risk population.

Criminal behavior is more prevalent among patients with borderline personality disorders (48%) compared to those without BPD (24%). This highlights the severity of social maladaptation in the BPD group and underscores the need for the development of specialized programs focused on social reintegration, legal support, and the prevention of criminal behavior.

Nearly two-thirds of participants living with BPD - around 64 percent - described their family ties as conflicted or altogether absent, versus only 36 percent in the comparison cohort. This stark imbalance underscores the urgency of weaving robust family involvement, structured counselling, and family-centred rehabilitation schemes into any truly comprehensive care plan.

Therapeutic drive sits at a middling level in both cohorts - about 48 percent of those with BPD and 44 percent of those without report willingness to pursue care. Even so, ambivalence and hesitation surface more often among the BPD participants, suggesting heavier dependence and a thinner layer of self-awareness. Such dynamics complicate treatment and point to the need for bespoke motivational interviewing and stepped-up engagement tactics.

Therapeutic outcomes split sharply between the two cohorts. Roughly 36 percent of participants without BPD attained a moderate level of benefit, whereas efficacy in the BPD subgroup dropped to just 20 percent—an alarmingly low figure. This highlights the urgent need to revise therapeutic approaches by increasing the duration, intensity, and multidimensionality of treatment for patients with borderline personality disorders.

Discussion

Our comparative findings reinforce current evidence that the co-occurrence of borderline personality disorder and substance use disorders reflects overlapping disturbances in emotion regulation, stress reactivity, and reward processing, which together amplify impulsive drug use, relapse, and suicidality in dual-diagnosis patients. Contemporary comprehensive reviews further underscore the broad comorbidity burden in BPD - spanning mood, anxiety, psychotic-spectrum, and substance-related problems - consistent with the more severe psychiatric load, social maladaptation, and cognitive difficulties we observed in the BPD subgroup [10].

The substance profile in our cohort (predominance of synthetic cannabinoids and cathinones) aligns with recent toxicological syntheses. Synthetic cannabinoids are increasingly linked to acute anxiety, psychosis, and measurable decrements in attention and memory - effects that plausibly intensify affective lability and psychotic features among individuals with BPD [11]. Synthetic cathinones, meanwhile, are now the second most frequently seized class of new psychoactive substances; their neurotoxic potential (neuroinflammation, monoaminergic dysregulation) and sympathomimetic toxicity contribute to clinical instability and relapse risk in this population [2]. These mechanistic liabilities help explain the stronger symptom load and heightened clinical risk we documented in the BPD group [2, 11].

The external risk environment is also evolving. Early-warning surveillance in 2025 points to the rapid global emergence of high-potency nitazene opioids, often encountered as adulterants, which complicates clinical triage and magnifies overdose risk for people using synthetic stimulants or cannabinoids [19]. Integrating such early-warning intelligence into assessment, patient education, and relapse-prevention plans is therefore essential for dual-diagnosis services [21].

Therapeutically, our observation that standard addiction programs yield limited benefit in the BPD subgroup converges with current efficacy syntheses: dialectical behavior therapy shows the strongest, most consistent evidence for reducing self-harm, suicidal ideation, and service utilization in BPD, with growing support for SUD-focused adaptations (e.g., dialectical abstinence, “clear mind,” contingency strategies). These data argue for integrated, DBT-informed care pathways delivered by joint addiction–psychiatry teams, supplemented by pharmacological support and family-inclusive interventions, to address the multi-determinant risk profile evident in our sample.

Limitations and future directions. The cross-sectional design limits causal inference, and self-report may underdetect polysubstance exposure. Prospective studies should track dynamic couplings among emotion dysregulation, exposure to high-potency synthetics, and suicidality, pairing repeated neurocognitive measures with toxicology. Pragmatic trials comparing DBT-informed integrated care versus standard addiction treatment in BPD+SUD - stratified by synthetic cannabinoid/cathinone exposure - would directly test the clinical propositions emerging here.

Conclusion

Individuals with borderline personality disorders (BPD) who use synthetic psychoactive substances are significantly more vulnerable to severe forms of addiction and complex psychopathological manifestations. The high prevalence of suicide attempts, pronounced anxiety-depressive and psychotic symptoms, and low responsiveness to standard treatments underscores the urgent need for a comprehensive care model. This model should combine pharmacotherapy, evidence-based psychotherapy -including dialectical behavior therapy (DBT) and cognitive-behavioral therapy (CBT) - as well as structured social rehabilitation to address the multifaceted needs of this high-risk population.

Future efforts to address this issue must include the expansion of access to specialized treatment and rehabilitation centers, the training of qualified professionals in psychotherapy and social work, and the development of preventive programs aimed at early identification of high-risk groups.

An important area of focus is increasing public awareness about the consequences of synthetic PAS use and involving patients’ close social networks in the rehabilitation process.

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