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Characterological Features and Behavioral Patterns of Youth Using NPS (Mephedrone, Alpha-PVP, Spice, Psychoactive Substances in Tablet Form)

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Abstract New psychoactive substances (NPS), with frequently changing chemical formulas, have become a challenge since the mid-20th century worldwide and pose a threat due to their use and associated health complications. The cost, legal status, and accessibility through various internet channels have contributed to the rapid spread of NPS. **Objective:** To identify the patterns of NPS use among youth in Tashkent (Uzbekistan). **Methods:** The research was conducted through qualitative interviews with NPS users. The study interviewed 27 people aged between 16 to 35. Preferences for NPS included mephedrone (14 people), alpha-PVP (12 people), and one user of pregabalin tablets. The study focused on NPS consumption patterns: preferences for specific NPS, frequency and models of consumption, places and environments of use, first and last consumption, combination with other psychoactive substances (PAS), acquisition and delivery methods, cost and dosage of substances, and the number of other users in their surroundings. Data analysis was conducted using MAXQDA software. The interviews were recorded, then transcribed and coded by two independent experts. **Results:** Consumption usually began in groups (81%), then more frequently continued alone (53%). The motives and needs were predominantly recreational: pleasure, relaxation, increased sexual desire, and escaping reality. Mephedrone and alpha-PVP were the most preferred NPS among users in Tashkent. The purchase of these substances mostly (85%) occurred via online channels, and delivery was carried out through "dead drops," where the location and a photo of the spot were provided to the buying user without direct contact with the seller. **Conclusion:** Most respondents prefer to purchase drugs through online channels. Use typically begins in groups under peer influence but it often continues when user is alone. Mephedrone and alpha-PVP were the most preferred NPS among users in Tashkent. NPS consumption often begins with other PAS, and NPS are frequently combined with different PAS.

Keywords NPS, Synthetic cathinones, Spice, Mephedrone, Alpha-PVP, Qualitative interview

1. Introduction

The emergence of various synthetic drugs on the global market poses a serious threat to the world community. Different substances with varying chemical formulas were initially difficult to identify and regulate, leading to harmful consequences until the Single Convention on Narcotic Drugs of 1961 and 1971 was adopted. In the years of 2013-2016, Central Asian countries announced the presence of NPS on their territories. In Central Asia, Kyrgyzstan, Tajikistan, and Uzbekistan used the approach of listing substances in a separate registry as a legislative measure to address the NPS problem on a national level [1]. In 2016, the Ministry of Justice of the Republic of Uzbekistan amended the national list of narcotic drugs and psychotropic substances to place more than 80 NPS under national control [2]. Difficulties in identifying newly emerging substances, as well as the health complications following NPS use, ranging from seizures to psychosis, pose a serious threat to global health and a real challenge for drug policy [3], [4], [5]. In 2021, Uzbekistan registered nearly twice as many crimes related to the distribution and use of synthetic cannabinoids — 181 cases compared to 95. The majority of drug-related crimes involving NPS occurred in Tashkent — 170 cases compared to 93. This accounted for 10.1% of all drug-related crimes in the city. Increasingly, advertisements for these online "Telegram" channels, profiles, and bots are appearing on walls and sidewalks (so-called "narcograffiti"). For the first time in Uzbekistan, five cases of laboratory drug manufacturing were identified in 2021 [6]. In Uzbekistan, the term "NPS" is not widely used and is mostly familiar within medical circles

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among specialists. Scientific articles on NPS have been written by addiction specialists in Uzbekistan [7].

In the legislative documentation of the Republic of Uzbekistan, this term is absent. However, the following terms are used in the Law of the Republic of Uzbekistan "On Narcotic Drugs and Psychotropic Substances" (dated August 19, 1999, No. 813-I) [8]:

- **Narcotic drugs** – substances of synthetic or natural origin, narcotic-containing preparations and plants included in the list of narcotic drugs and subject to control in the Republic of Uzbekistan;
- **Psychotropic substances** – substances of synthetic or natural origin, included in the list of psychotropic substances and subject to control in the Republic of Uzbekistan;
- **Analogues of narcotic drugs and psychotropic substances** – substances of synthetic or natural origin, similar in chemical structure and properties to narcotic drugs and psychotropic substances, which reproduce their psychoactive effects.

Based on statistical data, in 2020, 22 individuals addicted on synthetic cannabinoids and 7 individuals addicted on synthetic cathinones were registered in Uzbekistan. In 2021, these numbers increased to 25 and 17, respectively [9]. The above data pertains to consumers of synthetic drugs. Consumers who use not only synthetic cathinones or synthetic cannabinoids but also other psychoactive substances (marijuana, heroin, hashish, opium, etc.) alongside synthetic drugs are not included in the above data. The use of other narcotic substances often accompanies the consumption of NPS [10].

In Uzbekistan, no evaluative studies have been conducted on the number of people using drugs, including NPS, other than the estimated interviews with drug and other psychoactive substance users conducted by UNODC [11]. The exact number of NPS users in Uzbekistan remains unknown.

Objective: To identify the patterns of NPS consumption among the youth of Uzbekistan.

This article uses the results of qualitative interviews conducted among the youth of Uzbekistan (Tashkent) who use NPS (mephedrone, alpha-PVP, spice, psychoactive substance tablets). This research was conducted as part of the scientific work titled: "Medical and Social Aspects of New Psychoactive Substance Use Among Youth in Tashkent (Republic of Uzbekistan): A Qualitative Analysis."

2. Materials and Methods

This study is qualitative in its methodological approach. Qualitative analysis is fundamental here, utilizing interpretative and phenomenological approaches to assess the material collected through: I) interviews with current and former consumers of NPS [12] (33 questions). Pilot interviews were conducted to clarify the full understanding of the questions posed, and additional questions suggested by the interviewed consumers during the pilot interviews were also included. A total of 27 qualitative semi-structured interviews with NPS users were conducted.

The study object was consumers of NPS undergoing inpatient treatment at the Republican Center for Mental Health, the «Detox» Rehabilitation Clinic, and the «Gratus» Rehabilitation Center, specifically focusing on the use of NPS (mephedrone, alpha-PVP, spice, prescription medications). Additionally, four consumers who had not undergone rehabilitation (former consumers) were included (n=27).

The study subject comprised patterns of NPS consumption, which included: preferences for substances among the respondents and other consumers, frequency of NPS use, first use, location of use, combinations and experiences with other psychoactive substances, methods of acquisition and delivery, cost and dosage of substances, and the number of consumers involved in their social circles.

The research method involved semi-structured interviews with NPS consumers. Recordings were made using a voice recorder, then transcribed for further analysis using MaxQDA software. Evaluation and coding were conducted by two independent experts: a psychotherapist and a narcologist. Frequency calculations were employed to describe qualitative data.

Qualitative analysis was fundamental, utilizing interpretative and phenomenological approaches to assess the material collected through interviews with current and former NPS consumers. Demographic questions were asked at the beginning of the questionnaire. The questionnaire for NPS consumers consisted of 33 questions.

The interview questions were based on surveys conducted in scientific studies [13], [14]. Data collection among NPS consumers in Tashkent (Uzbekistan) took place from April 2022 to December 2024.

A total of 27 respondents with experience using NPS underwent qualitative interviews in narcological hospitals and psychotherapy offices. The majority were male—19 people (70%). The average age of participants was 27 years, with the youngest being 16 and the oldest 36 years. Most participants (55.5%) were in the age group of 26 to 35 years. One consumer was 36 years old and participated with his wife, as they both used substances together and expressed a desire to take part in the survey.

The study revealed a low level of education among participants: nearly two-thirds had secondary or vocational education, and only 55.5% had income from full-time employment in the past month. An additional 6% had income from part-time employment. At the time of the survey, 13 (48%) of the respondents were married, with 11 of them having children (ranging from 1 to 3).

The research protocol was approved by the Ethics Committee of the Ministry of Health of the Republic of Uzbekistan, Tashkent, on September 5, 2024.

3. Results

In response to the question about preferences in choosing

NPS, 14 consumers selected mephedrone, while 12 chose alpha-PVP. However, they believed that surrounding consumers more frequently preferred alpha-PVP (12) over mephedrone (10) (Table 1). “I think it’s salts. Because even though most don’t like it, everyone gets hooked on it.” (35,36, Pos. 21) (Table 2). Additionally, five mephedrone users mentioned marijuana as a substance they preferred, alongside mephedrone. Two respondents added that pregabalin tablets were preferable to other psychoactive substances. “Mephedrone and alpha—on par. Once you get familiar with alpha, that’s it! It overshadows everything! Before alpha, it was mephedrone. Other drugs don’t interest me to this day! The desire will still be there in 10 years!" (27, 28, Pos. 19). Consumers spoke about fears and suspicion developing after using alpha-PVP, yet expressed a strong desire to use it again.

Among the respondents who chose mephedrone as the more preferred psychoactive substance, there were 14 individuals (55.5%), while 12 individuals (40.7%) preferred alpha-PVP, and only 1 individual (7.4%) preferred regapen and lyrica.

Table 1. Preferences in Choosing NPS Among Other Consumers, According to the Respondents

NPS name	Number of respondents
Alpha-PVP	12 (44%)
Mephedrone	10 (37%)
Mephedrone and Alpha-PVP	4 (15%)
Opium	1 (3.7%)

The beginning of use, according to the respondents, was as follows: "in a group or with friends" for 5 (18.5%), "was treated" for 4 (15%), "a friend or acquaintance brought/gave /recommended" for 9 (33.3%), and "relatives shared/treat" (brother, godfather, husband, boyfriend) for 4 (15%). Thus, the majority of participants in the study began using under the influence of their surroundings or during socialization in a group. Those who wanted to try it on their own were in the minority: “I wanted to escape from depression,” “I was bored,” “I decided to try.” One participant reported that they used psychoactive substances under duress, as they were in a situation of sexual violence.

Table 2. First Use of Psychoactive Substances

First use conditions	Number of respondents
In a group, was treated, shared, advised	22 (81.5%)
Wanted to try himself/herself	4 (14.8%)
Under duress	1 (3.7%)

The first experience of using psychoactive substances (Table 3) among respondents involved various substances, with 11 (40%) of the 27 users starting between the ages of 12 and 18 (the legal age of adulthood in Uzbekistan is 18 years of age) [15].

Eight (30%) respondents began using psychoactive substances with various NPS: mephedrone, alpha-PVP, and spice. Seven respondents started with various pills purchased at pharmacies or from "dealers" (street vendors) (pregabalin, gabapentin, non-narcotic opioids, etc.), the circulation of which is restricted in Uzbekistan and listed as controlled substances [16].

Table 3. Which Psychoactive Substance Did the Respondent Use for the First Time

Type of substance	Number of respondents
Mephedrone	5 (18.5%)
Alpha-PVP	2 (7.4%)
Spice	1 (3.7%)
Tablets	7 (26%)
Marijuana	8 (30%)
Cocaine	1 (3.7%)
Heroin	1 (3.7%)
Ecstasy	1 (3.7%)
LSD	1 (3.7%)

Consumers of NPS predominantly prefer secluded locations for consumption (Table 4). Although the vast majority of consumers (Table 2) start using in a group, they continue to use "at home" or "alone," as stated by most participants. Three of them added that sometimes they want to be in a group to talk and socialize with someone. There were consumers who only used with one "co-user" (husband, wife, partner, friend, boyfriend). Some respondents continued to use in the company of friends or on the street. There were respondents who stated they could use anywhere. According to them, they have used in police stations, clinics, at friends’ houses, and outside.

Table 4. Place and Conditions of Use

Place of use	Number of respondents
Alone or at home	14 (51.8%)
With wife, husband, boyfriend or girlfriend at home	4 (18.5%)
In group of company, not at home, outside of home	4 (14.8%)
Anywhere	4 (14.8%)

“Home, on the street, in the police station. In the police station, it can take a second. I opened the packet and that’s it. I could use it in a taxi. I transported it to Kazakhstan when I went to visit.” (REC 43, Pos. 13)

“In what place? Anywhere there aren’t, for example, people. You can go into the stairwell. You can do it in the car... Alone or with a partner.” (2 30, Pos. 19)

“It doesn’t matter. At friends’ houses, at home, on the street. I found it and smoke it right there… Well, I found my own, and I try it right there. Is it this or not?” (25, Pos. 20)

“On the fifth, I was brought here. I came myself. I had the substance in my leggings. While I was with my mom at the cash register paying, I finished the last bit. I lost the packet. Then I was transferred to the second floor. And I lost the packet in the pillowcase. I even used mephedrone here five days ago.” (REC 43, Pos. 12)

“Anywhere. Just take it, the pipe is ready. You use it with a straw.” (REC 24, Pos. 16)

Consumers who have used substances in the last 30 days totaled to 21 (78%) people. Among them, 10 respondents used mephedrone, 9 consumed alpha-PVP (salts, speed), 1 respondent used pharmaceutical drugs (pregabalin), and 1 respondent used a mixture of mephedrone, alpha-PVP, spice, tablets, and other psychoactive substances. 6 respondents were voluntarily undergoing long-term rehabilitation without use for a period of 1.5 to 7 months. Notably, 5 out of these 6 report experiencing cravings. The respondent who has not used for nearly 7 months stated that the craving for alpha-PVP persists and will still be relevant even in 10 years. (Table 5)

Table 5. Last Use

Last Used	Number of respondents
From 1 to 14 days ago	13 (48%)
From 15 to 30 days ago	8 (30%)
1.5 months ago	1 (3,7%)
2 months ago	1 (3,7%)
2.5 months ago	1 (3,7%)
5 months ago	2 (7,4%)
7 months ago	1 (3,7%)

The duration of psychoactive substance use varied from 1 year to 20 years. (Table 6)

Table 6. Duration of Psychoactive Substance Use

Duration of substance use	Number of respondents
From 1 to 5 years	18 (67%)
From 5 to 10 years	4 (15%)
From 11 to 15 years	4 (15%)
From 15 to 20 years	1 (3,7%)

Despite the fact that the vast majority of consumers (Table 2) start using substances in a group, they continue to use them "at home" or "alone"—this was the response given by most consumers. Three of them added that sometimes they feel like being with others, talking, and socializing. There were consumers who only used substances with one "co-user" (spouse, partner, friend). Some respondents continued to use substances in the company of friends or acquaintances, in public places. There were respondents who stated that they could use substances anywhere. According to them, they have used substances in the police station, in clinics, at friends' houses, and outside.

"At home, outside, in the police station. In the police station, it can take a second. I opened the package and that's it. I could use it in a taxi. I transported it to Kazakhstan when I went to visit." (REC 43, Pos. 13)

"In what place? Anywhere where there won't be people, for example. You can go into the stairwell. You can do it in the car... Alone or with a partner." (2 30, Pos. 19)

"It doesn't matter. At friends' houses, at home, outside. I found it, I smoke it right there... I found my stuff, I try it right there. Is it hers or not?" (25, Pos. 20)

"On the fifth, I was brought here. I came myself. I had the substance in my leggings. While I was walking with my mom to pay at the cash register, I finished the last bit. I lost the package. Then I was moved to the second floor. And I lost the package in the pillowcase. I even used mephedrone here, five days ago." (REC 43, Pos. 12)

"Anywhere. Just take it, the equipment is ready. You use it with a tube." (REC 24, Pos. 16)

Table 7. People in NPS users' surroundings who also use NPS

Number of people who also used NPS in NPS users' surroundings	Number of respondents
2-5	8
5-10	7
11-20	5
20-30	2
50	2
75-100	1
refused to answer	2

Purchasing and delivery methods were mostly through online channels (23 out of 27). Only a few people (3) said they prefer to buy directly from dealers, as they do not like purchasing through online channels and searching for hidden drop points. Two people mentioned that they do not buy for themselves (their husbands buy, or they pool money with friends).

In most cases, 23 (85%) out of 27 purchases are made through online channels (Telegram), using cryptocurrency or sums (transfers from electronic cards). Initially, according to the respondents, it was Hydra (2), then Telegram channels appeared. One respondent mentioned that there were about 15 Telegram channels in Uzbekistan and many online stores, with most of the founders of these channels believed by consumers to live in nearby foreign countries (Russia, Kazakhstan). It is possible to purchase from drug dealers ('barygs'). The prices of substances from drug dealers are significantly higher (respondent 004). Therefore, the cost of substances (both alpha-PVP and mephedrone) ranged from 50 to 100 US dollars. According to respondents, items bought from barygs are often mixed (respondent 26): '750,000 sums ($70) for 0.5 grams of mixed salts.' However, there are those who prefer to buy from drug dealers. For example, one respondent mentioned that by purchasing from drug dealers, one can gather orders from consumers and receive their own order for free. Another consumer said that it is possible to exchange weed or 'masterok' for mephedrone with a baryg. There was one respondent who did not particularly like ordering through online channels because they wanted it faster.

There are 'stockmen' who have a large supply of substances and play a role in their distribution. There are also 'stashers' who make hidden drops and receive rewards for it. These drop points are buried/hidden in residential areas where nearby residents might discover them. However, they are often buried/hidden in more remote locations, like construction sites or outskirts. People use the online Telegram channels

on their phones, sending photos of the location and coordinates. Drop points can be buried about 3 cm deep or magnetically attached (suspended with magnets to metal parts in inconspicuous places in buildings or garages). According to consumers, police now do not search pockets but take the phone and look for sent photos of the drop points. After that, they can impose penalties for violation of the law.

A consumer described the purchasing process as follows: 'Online stores. Through Telegram channels. Payment is made via card. They send coordinates. We go and get it. I used to go with 'co-consumers'. But they are not very good people. Now I go alone. It's safer. The police might come. And the police have become smart; they don't search pockets but ask for the phone and Telegram to show. If there's at least one photo of a drop point, they'll take you.' (39, Respondent 26)

The price of narcotic psychoactive substances varies depending on the place of purchase (see Table 8).

Table 8. How much does narcotic psychoactive substance (mephedrone or alpha-PVP) cost?

Price/cost of NPS	Number of respondents
50 US dollars	2 (7,4%)
65 US dollars	1 (3,7%)
70-75 US dollars	5 (18,5%)
90-100 US dollars	13 (48%)
From 60 to 100 US dollars	1 (3,7%)
Doesn't know, husband buys it	1 (3,7%)
70 dollars for 0.5 grams	1 (3,7%)

4. Discussions

The majority of respondents prefer to use internet channels for purchasing NPS, with Telegram channels being the primary platform for this purpose. This indicates that technological progress and internet platforms have become the main means of accessing drugs for this audience, providing a sense of anonymity. However, a small group of respondents still prefer buying from dealers or through intermediaries, which may be related to their unwillingness to search for hidden stashes/drop points. Nonetheless, purchasing from a seller is not without risks and can attract the attention of law enforcement.

Most respondents began using NPS during socialization with peers, highlighting the significant role of group dynamics and peer influence in the decision to start using NPS. It is also important to note that the initiation of use often occurred under the influence of others—friends, acquaintances, or relatives. This emphasizes the importance of social influence and peer pressure in the decision-making process regarding drug use. A minority of respondents expressed a personal desire to try NPS, with motivations often linked to escaping depression, a boring lifestyle, or simply wanting to try something new.

It is crucial to also highlight instances of drug use under coercion or in violent contexts, as experienced by one respondent. This underscores the need for broader discussions about drug issues among youth and the strengthening of measures to prevent violence and protect potential victims.

Most respondents who used NPS reported using mephedrone and alpha-PVP. This data highlights the need for more effective measures to control the circulation of these substances and to provide assistance to those affected by their use.

However, with the emergence of alpha-PVP (known as "bath salts" or "speed") on the market, a significant portion of respondents noted its growing popularity among other users. Thus, while mephedrone maintains its popularity, alpha-PVP is gaining more influence among drug users.

Considering the various lengths of substance use, it is important to provide individualized assistance to each person based on their situation and needs.

The information presented indicates that the prices for alpha-PVP and mephedrone fluctuate between $50 and $100 per gram, depending on the method of acquisition. Purchasing directly online or using cryptocurrency may yield lower prices, while buying from drug dealers ("barygs") typically results in significantly higher costs. The purchasing process included payment via card, obtaining coordinates, and subsequently locating or digging up the product from "stashes." Consumers were cautious and took safety measures, such as going alone to the pickup location to avoid issues with the police.

However, buying from dealers can involve the risk of acquiring mixed substances, which may affect the quality and safety of the product. Some respondents also mentioned the possibility of receiving orders for free when collecting orders from other users or exchanging marijuana for mephedrone with a dealer. This data underscores the diversity of drug acquisition channels and their pricing, as well as the associated risks and benefits for users.

5. Conclusions

NPS consumers prefer to acquire substances through internet channels (Telegram channels). This allows for anonymity and ease of purchase. In most cases, the first use occurs under the influence of friends or acquaintances, confirming the role of social influence in the decision to use. With prolonged use, consumers more often choose to consume NPS alone at home. They associate this with distrust and suspicion arising from the use of NPS. The first experience with psychoactive substances is not always with NPS. Mephedrone and alpha-PVP proved to be the most popular among consumers. Consumers rarely use only one type of NPS; they typically have experience with other drugs (such as meth, marijuana, hashish, heroin, ecstasy, LSD, spice, pills). Out of 27 respondents, 21 (78%) had used drugs in the last 30 days. The duration of use for 18 (67%) of the 27 was between 1 and 5 years. Fifteen respondents knew 2 to 10 other NPS users, while 13 knew more than 10. Purchases ranged from $50 to $100 per gram, depending on the place of acquisition.

The study emphasizes the need for a comprehensive approach to the problem of drug use, including prevention, education, support, and intervention. Only such an approach will effectively combat this serious social issue and help those suffering from drug addiction.

Limitations

The sample was mainly drawn from (23 out of 27) drug rehabilitation facilities and private rehabilitation centers, which may make the results less representative of the general population. Data were collected through qualitative interviews, which may introduce subjectivity into the research findings.

Conflict of Interest

The authors declare no conflict of interest. This work was carried out as part of the dissertation research of G. A. Zakhidova titled "Medical and Social Aspects of New Psychoactive Substance Use Among Youth in Tashkent (Republic of Uzbekistan): A Qualitative Analysis."

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