Early recovery processes of persons with substance use disorder, using novel psychoactive substances

PhD dissertation

Ferenc Császár MD, MSc

Doctoral School of Clinical Neurosciences (D221)

Head of Doctoral School: Prof. József Janszky MD, PhD, DSc

Psychiatry program (B-1/2012)

Head of Program: Prof. Tamás Tényi MD, PhD, DSc

Supervisor: Prof. Gábor Kelemen MD, PhD

Co-supervisor: Dr.Márta B. Erdős PhD

University of Pécs Medical School, OGYDHT Pécs

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2. List of abbreviations

- 5-HT: 5-hydroxytryptamine
- 5-HT2A: 5-hydroxytryptamine receptor 2A
- 5-MeO-DIPT: 5-Methoxy-N,N-diisopropyltryptamine
- AA: Alcoholics Anonymous
- ADHD: Attention Deficit Hyperactivity Disorder
- AGGR: Aggressiveness
- AH-7921: 3,4-dichloro-N-{[1-(dimethylamino)cyclohexyl]methyl}benzamide
- ALC: Alcohol
- AMPH: Amphetamine
- BFICP: Betty Ford Institute Consensus Panel
- cAMP: cyclic adenosine monophosphate
- CB: cannabinoid
- CBD: cannabidiol
- CBN: Cannabinol
- COCA: cocaine
- COP: Cry of Pain
- COVID-19: Coronavirus Disease 2019
- CRACK: cocaine freebase
- DISC: Disconstraint
- DSM-5: Diagnostic and Statistical Manual of Mental Disorders 5
- EMCDDA: European Monitoring Centre for Drugs and Drug Addiction
- FLI: Foley Life Interview
- GHB: gamma hydroxybutyrate
- HIV-1: human immunodeficiency virus type 1
- HNC: Hungarian National Corpus
- HPPD: hallucinogen-persisting perception disorder
- HRN: heroine
- INTR: Introversion/Low Positive Emotionality

- IQ: intelligence quotient
- KETA: ketamine
- KSH: Központi Statisztikai Hivatal
- LIWC: Linguistic Inquiry and Word Count
- LPE: Low Positive Emotionality Scale
- LSD: Lysergic acid diethylamide
- MBT: Mentalization Based Theory
- MDMA: 3,4-Methylenedioxymethamphetamine
- MDPV: methylenedioxypyrovalerone
- MESC: mescaline
- MMPI: Minnesota Multiphasic Personality Inventory
- MMPI-2 RCs: Minnesota Multiphasic Personality Inventory Restructured Clinical Scales
- MT-45: 1-Cyclohexyl-4-(1,2-diphenylethyl)piperazine
- NarrCat: Narrative Categorical Content Analysis toolkit
- NBOMe: N-benzylphenethylamines
- NEGE: Negative Emotions Scale
- NMDA: N-methyl-D-aspartate
- NOI: Narrative-oriented inquiry
- NPS: Novel Psychoactive Substances
- PSY-5: Personal Psychopathology 5 Scales
- PSYC: psychoticism
- PSYL: psilocybin
- PTE KK-RIKEB: Pécsi Tudományegyetem Regionális Kutatásetikai Bizottság
- PTSD: post-traumatic stress disorder
- SAMSHA: Substance Abuse and Mental Health Services Administration
- SCB: synthetic cannabinoids
- SCH: synthetic cathinones
- SES: Socio Economic Status
- SHG: synthetic hallucinogens
- SMH: Self-Medication Hypothesis

- SOP: synthetic opiates
- SPSS: Statistical Package for Social Sciences
- SU: Substance use
- SUD: substance use disorders
- SYNSOL: synthetic solvent
- TC: therapeutic community
- TF-CBT: trauma-focused cognitive behavioural therapy
- THC: delta-9 tetrahydrocannabinol
- UNODC: United Nations Office on Drugs and Crime
- XTC: Extasy

3. Introduction

This study aims to analytically explore some aspects of the paradigm shift brought on by the use of novel psychoactive substances, as outlined by Rácz (2016).

The psychopathology of novel psychoactive substance (NPS) users and polydrug-dependent patients is explored, as well as the traumatic experiences they have faced both in the past and concurrently with their drug use. Addiction is a complex phenomenon that affects individuals not only on a physiological level but also mentally and socially.

Initially introduced by George Engel in 1977, the bio-psycho-social model has been widely accepted as a framework for understanding the health-illness spectrum. This model emphasises the need to consider an individual's physiological-somatic processes and their psychological and social factors. However, Sulmasy (2002) criticised this model for its inability to capture a person's wholeness. Hence, they propose to extend Engel's model with the dimension of spirituality, thereby developing the bio-psycho-social-spiritual model. This framework stresses the need for a holistic approach to a person that includes exploring, understanding, and considering transcendence in all areas of the health-illness spectrum (Teleki et al.,2023).

Recovery is a biopsychosocial-spiritual paradigm; its prelude is basically the 12-step self-help movement. As we have seen, the recovery model is defined against the biomedical approach; however, the common feature of the two also points to a positive identity and purpose to travel on a leading individual road towards life goals. The recovery experiences appear in told stories; the scene of the telling is the community, basically the self-help group (Petke et al., 2018).

Lampek et al. introduced the concept of health behaviour in 2022: “the totality of individual behaviours and attitudes that are intended to maintain, promote, or restore an individual’s health status, regardless of whether the behaviours are actually effective or beneficial to the state of health.” It is well known that rather unfavourable morbidity and mortality data characterise the Hungarian population, and these are due, if not exclusively, to a significant extent to unfavourable health behavioural and lifestyle factors.

In his thesis on recovery processes, a Hungarian researcher distinguished two approaches when treating addiction: “…a so-called pathology-centred, nosologically oriented bio-medical approach, usually referred to as harm reduction, considers the discovery of the causes of the drug and alcohol problem, the establishment of an accurate diagnosis, and the treatment - mostly

carried out within the institutional framework of health care, mainly using (psycho)therapy with pharmaceutical support on the way to recovery. The holistic approach, on the contrary - one striking example of which is the approach of 12-step programs - places the concept of resilience, the culture of remission,12-step health education and salutogenesis at the centre of the recovery process" (Nagy, 2015, p. 11).

Harmful impacts are felt at every level of human existence, from the affective and cognitive to the behavioural, resulting in a widespread and fundamental change physiologically and psychologically for those struggling with addiction.

The misuse of NPSs and their treatment has been a significant public health and legal issue in Hungary since its debut in 2009. The emergence of new groups of individuals who are addicted to harmful substances, such as NPS, has become a growing concern recently. The issue has particularly been pronounced among citizens residing in poverty-stricken areas, which were previously isolated from drug-related problems. This trend has been identified as a severe challenge that requires immediate attention from policymakers and other relevant stakeholders. The prevalence of drug abuse, including Novel Psychoactive Substances (NPS), has exhibited an escalating trend not only in rural areas but also in urban ghettos, juvenile facilities, youth shelters, and within the homeless demographic. This underscores the gravity of concurrent social exigencies (Csák, 2019; Kaló, 2018; EMCDDA, 2020; Van Hout, 2018).

With the emergence of new user groups, individuals who previously used "traditional" legal or illicit substances have shifted to using these cheap and easily accessible substances, making it challenging to reduce the supply to them. Hoyer (2011) introduces craving as an experience based on an unfulfilled need that drives substance users to compulsory substance abuse.

NPS use has been shown to cause severe and lasting harm to individual organs. Additionally, it may result in acute psychosis, safeguarding concerns, an increased risk of overdose, and both auto- and heteroaggression. Mortality rates are also elevated in individuals who use NPS. These dangerous consequences underscore the need for effective prevention strategies, particularly among vulnerable populations. (EMCDDA, 2020; Rácz, 2017)

Kaló and Felvinczi (2017) have identified two main different groups of drug users. The first group comprises users of synthetic cathinones (SCH), commonly known as "crystal" or "music." These users generally belong to socially marginalised groups. On the other hand, synthetic

cannabinoids (SCB), mainly referred to as "spice", are used by various social groups due to peer pressure or as an attempt to fight withdrawal from SCHs. Some users also believe that SCBs can have useful health-related effects, although this is not the case (EMCDDA, 2020). Some individuals, known as "psychonauts," may use certain substances to expand their minds and follow a lifestyle of pushing boundaries. (Orsolini, 2015). Conducting research on NPS users is challenging due to several reasons. A meta-analysis revealed that self-reported drug-use related interview data is generally reliable at only 42% (Magura, 1996; McKernan, 2015). Testing subjects is also complex, as some substances are costly and complicated to detect. The engagement of NPS users in traditional research methods, where multiple variables are precisely controlled, can be challenging, akin to involving other drug abusers. Addressing the unique challenges associated with research involving such populations is essential to ensure that their perspectives are accurately represented and that the resulting insights inform effective interventions and policies. Studies involving the recollection and reconstruction of the period of substance abuse are typically conducted in specialised rehabilitation centres or medical institutions. The recovery process involves reframing the narrative of substance abuse within a new framework. As such, these studies are crucial in gaining a deeper understanding of addiction and developing effective treatment strategies. It is no longer possible to gain insight into the thought processes of an active drug user. Instead, we can rely on the perspective of the recovering addict. They selectively choose elements from the cultural stock of stories of the rehabilitation institution and other available cultural resources that they deem essential to their life story. This approach, as noted by Hanninen (2004), allows for a more comprehensive understanding of the individual's journey towards recovery.

NPS use shares many similarities with the abuse of traditional drugs. It is often driven by a complex interplay of motivations, including the desire to cope with negative emotional states, satisfy curiosity, conform to peer pressure or group norms, and engage in exploratory or risk-taking behaviour. These various factors can combine to create a powerful impetus for individuals to experiment with NPS, even in the face of potential risks and harmful consequences. Marginalised user groups dominantly had instrumental user characteristics (Felvinczi et al., 2019). Benchop et al. (2020) have proposed a motivational framework for NPS use based on previous models and empirical research. This framework comprises five factors: sensory experience seeking, peer pressure, conformity, coping, and mind expansion experience. These

factors are posited to underlie the motivations behind NPS use. The framework provides a valuable lens through which to understand NPS's complex and multifaceted nature.

3.1 Overall goals of the research

Highlighting the unique nature of NPS is crucial for both healthcare and scientific research. Treatment plans are incomplete without reliable data on user habits, psychological traits, preceding life events, social circumstances, chemical properties of abused compounds, and potential recovery indicators.

3.1.1 Recovery

According to SAMSHA (2012), recovery involves improving one's health, wellness, and autonomy while striving to reach one's full potential. It emphasises the importance of human relationships and describes the experience as "deeply human" and facilitated by the responses of others (Anthony, 1993). The principles and practices of recovery have influenced professional theories and models in addiction treatment (Madácsy, 2020; Arbour, 2023), with self-help groups playing a vital role in these developments. Recovery communities, drawing on the expertise of those who have gone through the experience themselves, are essential to the recovery process (Mudry, 2019; Harrison, 2020).

Although abstinence does not equate to sobriety, programs that require abstinence are more effective. According to the perspectives of individuals undergoing recovery, the process encompasses the adoption of new lifestyles, the promotion of well-being, self-improvement, the acceptance of life's challenges, practising abstinence, identifying and addressing problems, as well as seeking assistance when necessary. (Laudet, 2007). The survey conducted by Kaskutas et al. (2014) delineated four distinct domains associated with the recovery process: abstinence in recovery, essentials of recovery, enriched recovery, and spirituality of recovery. (p. 999). The process of essential recovery entails cultivating self-honesty, effectively managing adverse emotions, and upholding abstinence while embracing a substance-free lifestyle characterised by fulfilment and enjoyment. The enriched recovery domain focuses on growth, responding to life's challenges in a balanced way, and taking responsibility for what one can change (Kaskutas et al., 2014). In a study conducted by Jacob et al. (2015), it was discovered that the perspectives of

carers and consumers on recovery were divergent. Carers predominantly emphasised the results, which they primarily defined as being symptom-free. On the other hand, consumers viewed recovery as a multifaceted process that entails personal growth and transformation, resulting in a new outlook on life filled with purpose and significance. Elements such as social support, reciprocal relationships, follow-ups, and ownership of one's health were identified as crucial recovery components.

The process of recovering from addiction is widely recognised as a profound transformation of one's identity. This journey is marked by challenges that ultimately lead the individual toward a state of sobriety and a newfound sense of purpose that enriches every aspect of their life. It is a complex, nonlinear process that demands deep introspection and a restructuring of daily habits (BFICP, 2007; Costello, 2020). Mudry et al. (2019) claim that the process of recovery requires a growing commitment to the healing process and learning from one's mistakes. The research also highlighted the significant changes in relational patterns, which shifted from pathologising modes to healthy healing patterns.

3.2 NPS classification

This section aims to classify novel psychoactive substances available on the market from a biochemical perspective. However, this task proves daunting, as dozens of new molecules and compounds are introduced to the market each week with no signs of abating. Nonetheless, it is still prudent to differentiate such substances based on their fundamental characteristics, such as their therapeutic range, range of effects, method of administration, and market designation. By doing so, we can better understand the individuals afflicted with adverse side effects from using various chemicals, which they often acquire with little knowledge of their properties.

The NPS family comprises four main groups: synthetic cannabinoids (SCB), synthetic cathinones (SCH), synthetic hallucinogens (SHG), and synthetic opiates (SOP). These groups are known for mimicking the effects of naturally occurring substances. Synthetic cannabinoids, for instance, bind to the same receptors as cannabinoids in cannabis, while synthetic opiates act on the same receptors as naturally occurring opiates. Synthetic cathinones mimic the effects of the stimulant found in the khat plant. In contrast, synthetic hallucinogens produce similar effects to those of naturally occurring hallucinogens, such as psilocybin. Understanding the differences

between these groups is crucial for the safe and effective management of substance misuse and addiction.

3.2.1 Synthetic Cannabinoids or SCB

Natural marijuana contains more than sixty different cannabinoids, among them delta-9 tetrahydrocannabinol (THC), cannabidiol (CBD), and cannabinol (CBN). Synthetic cannabinoids, on the other hand, are chemically produced analogues of their naturally occurring counterparts. Their presence was first reported in Europe in 2004 and debuted in the United States in December 2008 (EMCDDA, 2014). The synthetic compounds are often blended with plant materials to mimic natural products, with the resulting mixture being marketed as "incense" or "herbal remedies." These concoctions are sold under a variety of names, such as "K2," "spice," "crazy monkey," "chill out," "spice diamond," "spice gold," and "chill X" (EMCDDA, 2014; Musselman, 2014; Nelson, 2014; Rosenbaum, 2012; Wells, 2011; Ashton, 2012). Although synthetic cannabinoids can produce clinical effects like those of natural marijuana intoxication, they can also lead to more severe and potentially life-threatening symptoms. Additionally, the chemical analogues of THC utilised in these products are subject to frequent modifications to evade regulatory oversight and quality controls, which can result in additional toxic effects (Adams, 2017). Recreational use of synthetic cannabinoids has become a growing concern in both the United States and Europe due to their significant toxicity (EMCDDA, 2014; Trecki, 2015; Law et al., 2015). Typically, this behaviour is exhibited by young men in their 20s and 30s (Hoyte, 2012), while some United States adolescents report regular use, often alongside other substances (Palamar et al., 2017). Medical toxicologists have found that teenagers between the ages of 13 and 18 make up a quarter of patients seeking treatment for acute synthetic cannabinoid poisoning (Riederer et al., 2016). The EMCDDA Early Warning System shows that synthetic cannabinoids were responsible for two-thirds of all new substances reported from 2005 to 2011, indicating increased use in the EU (EMCDDA, 2014).

Many physiologic effects of synthetic cannabinoids are similar to cannabis (marijuana) and include tachycardia, conjunctival injection, increased appetite, nystagmus, ataxia, and slurred speech. In comparison to cannabis, synthetic cannabinoids pose a greater risk for severe neuropsychiatric toxicity, including but not limited to hallucinations, delirium, and psychosis.

This has been documented in numerous studies, such as those conducted by Lapoint (2011), Hoyte (2012), Cohen (2012), Harris (2013), Hermanns-Clausen (2013), and Winstock (2013). Synthetic cannabinoids exhibit distinct differences from their naturally occurring counterparts regarding their clinical effects and potency. These compounds can act as partial or full agonists at cannabinoid receptors, with varying levels of potency and clinical impact observed across a range of synthetic cannabinoids (Auwärter, 2009; Ammann, 2012; EMCDDA, 2014).

Like natural cannabinoids, synthetic cannabinoids act as agonists at cannabinoid (CB) receptors, predominantly CB1, leading to psychoactive effects (Ashton, 2012; Kemp, 2016) and synthetic cannabinoids are typically much more potent agonists, with reported potencies ranging from 2 to 800 times greater (Musselman, 2014). These synthetic cannabinoids have been categorised into various structural groups, as identified by several sources over the years (Dresen, 2010; Wells, 2011; Ashton, 2012; Rosenbaum, 2012; EMCDDA, 2014; Nelson, 2014; Kemp, 2016; Musselman, 2014). Synthetic cannabinoids have a wide range of clinical effects that occur shortly after inhalation or insufflation and can last for several hours to days (Seywright, 2016; Hill, 2016; Lapoint, 2011; Hoyte, 2012; Cohen, 2012; Harris, 2013; Hermanns-Clausen, 2013; Winstock, 2013; and Kronstrand, 2013).

3.2.2 Synthetic Cathinones or SCH

Synthetic cathinones, analogues of a naturally occurring compound found in Khat leaves, were introduced, and abuse of these new substances (commonly known as "bath salts") emerged in Europe in 2009 before spreading to the United States a year later. The name "bath salt" was chosen as a marketing strategy in the United States to sidestep restrictions under the Controlled Substances Act. Phenethylamines, which include traditional amphetamines and newer synthetic compounds, share a range of pharmacodynamic properties. Phenylethylamines stimulate the release of neurotransmitters like dopamine, serotonin, and norepinephrine and may also inhibit their reuptake. Some types of phenylethylamines even cause the release of serotonin from central axons, while others act as serotonin receptor agonists (Hill, 2011; Prosser, 2012).

Excessive amounts of dopamine and serotonin can cause psychotic symptoms in cases of overdose. "Designer" modifications and ring substitutions have given rise to various psychoactive properties. It appears that hallucinogenic properties are more pronounced with

increased 5HT-2A receptor agonism. While there is limited knowledge about the mechanism of action for many synthetic cathinones, some specific mechanisms are known. For example, methylone and pyrovalerone inhibit the reuptake of norepinephrine and dopamine with few effects on serotonin, while mephedrone facilitates dopamine reuptake inhibition (Hill, 2011). Methcathinone was widely abused in the former Soviet Union, Eastern Europe, and the United States in the 1990s and has since been banned worldwide (Emerson, 1993). The most common cathinones in outbreaks of abuse include mephedrone (4-methylene methcathinone), MDPV (methylenedioxypyrovalerone), mephedrone (4-methoxymthcathinone), methylone (3,4-methelenedioxy-n-methcathinone), and flephedrone (4-fluoro methcathinone) (Prosser, 2012; Spiller, 2011). Many synthetic cathinones share structural similarities with amphetamines, resulting in similar characteristics (Prosser, 2012). Amphetamines and SCH are lipophilic compounds that can easily cross the blood-brain barrier (Baselt, 2004). Clients suspected of amphetamine use may be exposed to other harmful substances as well. For instance, a survey of 947 reported mephedrone users found that over 80% of them also abused other substances, including alcohol, cannabis, ecstasy (MDMA), and cocaine, both together and separately (Winstock, 2011). Symptoms of heightened sympathetic activity or agitated delirium are the primary indicators of amphetamine and synthetic cathinone intoxication (Spiller, 2011; Chiang, 2011; Warrick, 2013). These symptoms may manifest as rapid heartbeat, high blood pressure, elevated body temperature, excessive sweating, and dilated pupils. Mental changes may include anxiety, restlessness, aggressive behaviour, and seizures. (Chiang, 2011).

3.2.3 Synthetic Hallucinogens or SHG

Hallucinogens can alter sensory perception, mood, and thought patterns. They have been used in ritual and religious activities for thousands of years. The first synthetic hallucinogen, LSD, was accidentally discovered in 1943 by chemist Albert Hofmann. Initially marketed as an anaesthetic and adjunct to psychoanalysis, LSD became a popular recreational drug in the 1960s. However, its use has declined due to increased regulation and awareness of its potential risks.

Hallucinogens are substances that are known for their ability to produce psychedelic effects. These desired effects usually involve intensifying or distorting sensory perceptions and enhancing emotions and self-reflection. Most hallucinogens may cause some mild physical

effects such as an increased heart rate, high blood pressure, dilated pupils, sweating, and raised body temperature, which are generally considered to be sympathomimetic responses (Blaho, 1997). Unlike generally pleasant flashbacks, hallucinogen-persisting perception disorder (HPPD) is a condition in which patients re-experience symptoms that are distressing and intrusive and may affect their daily functioning (Lerner, 2003). While hallucinogens are not believed to cause psychotic disorders, they may reveal underlying psychiatric conditions (Halpern, 1999). The neurobiological background behind hallucinogenic compounds is intricate and involves the interaction of various neurotransmitters, such as dopamine, glutamate, and serotonin. While the exact mechanism that causes hallucinations is still unclear, most of the drugs in this category share the ability to bind to 5-HT2A receptors, particularly those present in neocortical pyramidal cells (Nichols, 2004; Fantegrossi, 2008). Hallucinogens like MDMA, LSD, and 5-MeO-DIPT ("Foxy Methoxy") are known to cause sympathomimetic effects, such as mydriasis, tachycardia, hypertension, and hyperthermia (Nichols, 2004). 5-MeO-DIPT, or "foxy" and "Foxy Methoxy," was first synthesised in 1980 and gained popularity in the late 90s due to its online availability and use as an erotic enhancer in clubs and raves. Mescaline belongs to the phenethylamine class, which includes amphetamines, methamphetamines, MDMA, and designer drugs like the 2C series and related NBOMes. These synthetic phenethylamines were initially advertised as substitutes for scheduled amphetamines and are commonly acquired through online sources (Kyriakou, 2015).

3.2.4 Synthetic Opiates or SOP

While there is limited information available regarding the specific subjective effects of NPS opioids that differentiate them from already established recreational opioids, reports from self-experimentation suggest that some may have notably longer durations of action (Katselou, 2015; Siddiqi, 2015). These substances produce their euphoric effects by acting on presynaptic μ-opioid receptors. Interestingly, novel opioids such as AH-7921, MT-45, and novel fentanyl appear to have similar mechanisms of action (Katselou, 2015; Coppola, 2015). AH-7921 has a higher risk of overdose compared to morphine (Katselou, 2015). When opioids are consumed, they activate specific neurotransmitter receptors (mu, kappa, delta) that couple with G proteins - molecular intermediaries that initiate the intracellular communication process. This stimulation

begins the signal transduction process. The activation of endogenous μ-opioid receptors causes the prototypic opioid effects of reward, withdrawal, and analgesia (Cami, 2003).

3.3 Trauma and Substance Use Disorder

According to Kassai et al. (2017), the use of SCB can be considered a traumatic experience in itself, and the recovery process differs from that of users of traditional substances. NPS users often experience unpredictable and rapid shifts between positive and negative experiences, which can lead to a more fragmented sense of self. Unlike traditional recovery narratives that emphasise the user self, hitting rock bottom, and the emergence of a new, sober identity, these elements were not present in the initial narratives of synthetic cannabinoid users. Kassai et al. (2017) suggest that NPS users struggle to organise their experiences into coherent structures and to construct shared meanings.

Complex post-traumatic stress disorder (cPTSD) is a highly debilitating mental condition that can arise as a result of experiencing traumatic life events. It is characterised by three primary symptom clusters and persistent disruptions in emotional regulation, self-identity, and interpersonal relationships. Those who suffer from cPTSD typically have a history of prolonged or repeated exposure to traumatic events, such as childhood abuse, domestic violence, or community violence (Cloitre, 2021). Extensive research has shown that cPTSD may act as a mediator between traumatic experiences and various SUDs, including cocaine and opioids (Goodrum et al., 2022), problematic drinking behaviour (Watt et al., 2012), adult substance use, early substance use (Kobulsky et al., 2016), and early drinking among adolescents (Park et al., 2019). Research has uncovered a strong link between SUD, psychological trauma, and difficulties with regulating emotions (Van den Brink, 2015).

Emotion regulation refers to the ability to recognise, identify, evaluate, control, or modify one's emotional responses (Kostiuk & Fouts, 2002). When individuals are struggling with emotion regulation, which can manifest as an inability to regulate or tolerate negative emotions, it is often associated with interpersonal trauma and posttraumatic stress disorder (PTSD) (Dvir et al., 2014; Nagulendran & Jobson, 2020). SUD, which is characterised by impulsive behaviour, may co-occur with PTSD (Dvir et al., 2014; Van den Brink, 2015; Roberts, 2021; Hien et al., 2022). Research has shown that individuals with SUD have a high likelihood of also

experiencing PTSD, with lifetime prevalence rates ranging from 26% to 52%. Furthermore, poor emotion regulation is often associated with comorbidity between PTSD and SUD (Roberts et al., 2015, pp. 26-27). Additionally, Werb and colleagues (2015) found that sensation-seeking, often misinterpreted as pure pleasure-seeking, can be linked to childhood sexual abuse. Individuals who struggle with SUD may experience feelings of emptiness and a flood of emotions that they cannot manage. They may also have difficulty recognising their own emotions and may dissociate from their thoughts (Fonagy et al., 2002; Bateman & Fonagy, 2019). Mentalisation failures can lead to intense negative emotions like anxiety and anger that become unmanageable (Bateman & Fonagy, 2019). Substance use can be seen as a form of self-medication that offers an escape from dysphoria rather than a pursuit of euphoria, according to Khantzian (2011). Khantzian also developed a typology based on one's drug of choice. Koski-Jännes (2004) highlighted the automatic coping mechanisms that individuals with SUD develop to manage their difficulties with regulating emotions and argued that the self-medication model overlooks social factors and fails to capture the phenomenon's complexity.

3.4 Research Methods

3.4.1 Sample

The total sample of this study is a purposive sample of 77 persons, either from an in-ward environment or one of three in-patient rehabilitation centres. All of them were at the beginning of their treatment, right after the detoxification phase (about one week). This sample comprised several sub-samples in the individual research phases, from the first explorative phase, where 42 subjects were included at the beginning of their recoveries, to the second one, where 77 subjects were included at the beginning of their recoveries, to the concluding one, in which the data obtained from the ten respondents in recovery who were available for repeated testing and interview were compared to their initial results.

3.4.2 Procedure

Eligibility criteria for inclusion were SCH or SCB (gas or liquid chromatographic analysis of hospital samples in the toxicology laboratory of the University of Pécs) detected in a biological sample (Engelgardt et al., 2022; Marchei et al., 2021; Majchrzak et al., 2018) or a forensic toxicological report confirming the use of SCB and/or SCH not older than six months prior and a concomitant diagnosis related to drug use (Nicole et al., 2020; David et al., 2023).

Foley Life Interview (FLI) along with MMPI-2 were recorded on site. FLI was transcribed verbatim, and MMPI-2 was recorded in pen-paper style. Results were recorded manually and evaluated using a computer program. FLI is a qualitative thematic analysis of the emotionally valent low point episode of a structured interview scheme for studying identity (Foley Life Interview) (McAdams & de St. Aubin, 1992; McAdams, 2006a; 2006b; McAdams & Guo, 2015). This interview scheme was translated and has been used in Hungary for almost two decades (Rácz, 2006). The original version is available at https://cpb-us-e1.wpmucdn.com/sites.northwestern.edu/dist/4/3901/files/2020/11/The-Life-Story-Interview-II-2007.pdf. Socioeconomic Questionnaire was recorded in pen-paper style on-site and recorded electronically for statistical purposes. Research subjects were provided sufficient time and space to evaluate their responses. Subjects consented to involvement in the study and using anonymised data for research purposes. The ethical approval for the research was issued by PTE KK RIKEB. (No. 7846.)

3.4.3 Biological sampling

Rapid urine drug screens will not detect synthetic cannabinoids because the chemical compounds and their metabolites do not cross-react with delta-9 tetrahydrocannabinol (THC) or its metabolites, the agents that these screens are designed to detect (Arntson, 2013). Confirmatory reference laboratory tests via liquid chromatography and mass spectrometry are available but do not return promptly and will not help with immediate diagnosis or clinical care (Sobolevsky, 2010; Penn, 2011; Moran, 2011; Hutter, 2012; Freijo, 2014). If the original consumed product is available, it can often be examined through forensic analytic laboratories; however, because the chemical structures and compounds are constantly changing, they can still be challenging to

identify, even for reference laboratories (Nicole et al., 2020; David et al., 2023). Although reference laboratory testing of the patient's urine or forensic testing of the product can confirm exposure, such studies are not readily available, do not impact clinical care, and are typically not performed in clinical settings (Marchei et al., 2021; Stefani et al., 2022). These reasons demonstrate the need for guidelines for a complex treatment from diagnosis to therapy (Ferrari et al., 2022; Corkery, 2020).

3.4.4 Sociodemographic questionnaire

In addition to the usual sociodemographic characteristics (sex, age, level of education, occupation), the questionnaire also included questions on parental substance use, education, and material deprivation (KSH, 2018), as these factors may influence NPS use.

3.4.5 MMPI-2

The MMPI is a widely recognised psychometric test for assessing adult personality traits and identifying potential psychopathology (Camara, 2000). Mental health professionals use various versions of the MMPI to develop personalised treatment plans and aid in differential diagnosis. Moreover, the MMPI plays a vital role in therapeutic assessment procedures in clinical and outpatient environments (Butcher & Williams, 2009; Whiston, 1989). MMPI-2, the first significant update, was standardised on a new national sample of adults in the United States and was published in 1989 (Butcher et al.). In 2003, the Restructured Clinical Scales were added to MMPI-2 as a reconstruction of the original Clinical Scales. This update addressed known psychometric flaws that complicated their interpretability and validity (Tellegen et al., 2003). Over the years, certain test elements have been revised, and a wide variety of sub-scales have been introduced to help clinicians interpret the results of the original ten clinical scales. Today's MMPI-2 has 567 items and typically takes one to two hours to complete, depending on reading level. It is designed to require a sixth grade reading level (Gregory, 2007, p.392).

3.4.6 Content analysis

Content analysis has many different directions, but the main approaches focus on word frequencies and exploring the context of a keyword or thematic analysis (Ehmann, 2002). With thematic analysis, the goal is often to build a conceptual network representing the key themes and their connections. ATLAS.ti 8.00 (2020) software for computer-aided qualitative analysis was used in this study. The individual studies describe the exact procedures in parts 4, 5, and 6. To enhance validity, researcher triangulation was used. Qualitative validity criteria are different from the ones used in quantitative studies. These are credibility, dependability, confirmability, transferability, and reflexivity (Stenfors et al., 2020)

3.5 Structure of the Dissertation

This dissertation is an analysis of the early recovery journey for patients. This dissertation utilizes the theoretical and empirical results of three articles (Chapters 4., 5. and 6.), the original versions in Annexes 12.2., 12.3., and 12.4. As the data collected are overwhelmingly rich, the current focus is on trauma, emotional management, and recovery processes.

1. Novel psychoactive substance users' highly valenced life story episodes: a content analysis (Császár et al., 2021). This study was based on a sub-sample already available in the first year of the research and gives insight into clients' psychosocial characteristics when commencing treatment. The author translated the main contents of the original publication.

2. Novel psychoactive substance use and psychological trauma: A multimethodological analysis. A shortened version of this chapter has been published online (Császár et al., 2024a). The chapter is a more advanced exploration to identify the main psychological problems in the total sample of 77 persons, employing a methodological integration (methodological triangulation to enhance the validity of the results).

3. Narrative Means to Recovery Ends. Novel Psychoactive Substance Users in Early Recovery. (Császár et al., 2024b). This chapter is an exploration of a group of NPS users who are in early, sustained recovery to identify potential differences between their states on entering treatment and at one-year follow-up.

All the co-authors have agreed to use the contents in my doctoral dissertation.

4. Novel psychoactive substance users' highly valenced life story episodes: A content analysis

4.1 Background

This research phase aims to analyse highly valenced emotional episodes of novel psychoactive substance abusers' life narratives. The widespread availability of NPS and the treatment of their abusers has been a major issue in Hungary since 2009. New groups of substance abusers have emerged, for instance, in high numbers among citizens living in deep poverty in settlements previously isolated from drug-related problems. Besides rural areas, the incidence of drug abuse has increased in metropolitan ghettos, juvenile facilities, youth shelters, and among the members of the homeless population, along with other serious social emergencies (Csák, 2019; Kaló, 2018; EMCDDA, 2020a; Van Hout, 2018).

Along with newly emerged user groups, people formerly abusing other legal or illegal substances have altered their habit to the use of these cheap, easy-to-purchase substances, making the supply reduction effort towards them relatively problematic. The use of NPS has been correlated with causing enduring harm to individual vital organs and inducing acute states of psychosis. the chance of overdose increases, auto and hetero aggression is common, and mortality is increased (EMCDDA, 2020a; Rácz, 2017).

Among drug abuse cases where hospitalisation was necessary, the most common one was due to cannabis (a substance easy to identify), the second one at 26% due to SCB, the third one at 21% due to SCH providing a shocking display of fast spread of NPS by 2014 (EMCDDA, 2020b). By 2015, the life prevalence of SCBs proved to be the third most popular illegal substance after cannabis and ecstasy, respectively; SCHs scored in fifth place (Paksi, 2018). A study published in 2017 (Csorba et al.) analysed drug paraphernalia for drug remnants and found 200 different substances in the duration of 17 months, 57% of which were SCHs. The most up-to-date data indicates that 16,1% of all drug abusers are NPS users. The average study population is 29 years; 89,5% are males, and 10,5% are female. Their involvement in therapy is still difficult, even though 47,9% of NPS users are heavy users, and their way of drug abuse carries high risks (EMCDDA, 2020a).

In recent research, Kaló and Felvinczi (2017) identified two distinctive groups based on the abused drugs. Synthetic cathinone users (so-called “crystal” or “music”) were members of socially marginalised groups, while synthetic cannabinoids are commonly (mostly “spice” or SCB) used by various groups of society due to peer pressure or as an attempt to fight withdrawal from SCHs, or for their wrongly anticipated useful health-related effects (EMCDDA, 2020a). These substances may also emerge among people called “psychonauts,” with the aim of mind expansion and leading a lifestyle based on constantly breaking the limits (Orsolini, 2015).

A recent study in six European countries categorised NPS users based on the spatial characteristics of NPS use and found marginalised, nightlife, and online-based user groups (Van Hout, 2018; Benschop, 2020; Felvinczi, 2019). Members of marginalised groups that had more intensive and riskier user characteristics (Felvinczi, 2019), at whom drug abuse more often and on a longer term led to physical and mental damage (Van Hout, 2018), were overrepresented in Hungarian and Irish samples. NPS use, just like the abuse of classic drugs, is fuelled by various types of motivation, such as coping with negative emotional status, curiosity, peer pressure, group conformity, and sensation-seeking behaviour. Marginalised user groups dominantly had instrumental user characteristics (Felvinczi, 2019). Based on previous models and empirical research, Benchop et al. suggest a five-factor motivation system. Such a system enlists sensory experience seeking, peer pressure, conformity, coping, and mind expansion experience as possible motivational factors for NPS use (2020).

Numerous factors render NPS-user-related research difficult. A meta-analysis found the general reliability of self-report drug-use related interview data at 42% (Magura, 1996; McKernan, 2015). Testing the subjects is complicated as certain substances are expensive and difficult to detect. NPS users, just like other drug abusers, are hard to involve in classic research types where multiple variables are under control. Such research may only happen in rehabilitation or other medical institutions where the process of recovery involves recalling and reconstructing the period of substance abuse, and the narrative of substance abuse is given a new framework. We cannot study the identity of an active drug user but of the recovering addict, who selects the elements from the “cultural stock of stories” (Hanninen, 2004) and the discourses of the rehabilitation institution, which seem essential for telling their life story.

4.1.1 NPS use in the aspect of previous theories

Some previous explanations related to substance use seem to apply to a greater or lesser extent in the case of NPS. Thus, for example, according to Khantzian (self-medication theory, SMH: Khantzian, 1985; 1997; 2017), substance use is but a maladaptive self-healing experiment that allows the user to interpret their negative experiences, such as feelings of emptiness, being overwhelmed with negative emotions, dissociative states, and the environmental reactions to these, which stem from one's own life status and impediments to personality development. This is how the drug user tries to deal with the recurring experience of not being able to recognise and control their feelings or behaviour, not having realistic self-esteem, and inability to form good relationships with those who are important to them. Several previous theories emphasise the importance of emotional disturbances in the development of substance use. Dodes (2009) highlighted the role of helplessness and anger; Director (2005) focused on the desire to experience omnipotence; Walant (1997) emphasised the role of alienation from one's self, the role of early separation traumas, and uncertain self-boundaries. According to Walant, the function of substance use is to reshape the situations of emerging inertia and to control omnipotence (Walant, 1997; Khantzian, 2011; Flores, 2001; Wojtynkiewicz, 2018a; 2018b).

In light of these theories, substance use is not aimed at seeking euphoria but at overcoming dysphoria, in this sense supporting the statement of Csák et al. (2020) regarding NPS use, which is seen as a survival strategy by the authors. According to SMH, it is through the loss of control, risk-seeking behaviour, and substance use that a person feels their experience is more predictable, explainable, and controllable and that they can control their emotions: they seek the controlled loss of control (Hayward, 2004). However, NPS use questions some aspects of SMH at two points. Compared to classic drugs, the effect here is much more unpredictable (including the fact that the consumer often does not even know what drug they purchased). Thus, the result will be much more of a repetition of trauma with the reproduction of uncontrollable, incomprehensible, unsolvable, entrapped life situations, where chaos replaces the feeling of emptiness and the hopelessness that comes with it. This finding is consistent with the conclusion of phenomenological research by Kassai et al. (2020, 2017), who interpret the use of synthetic cannabinoids as a form of trauma.

The other problematic point relates to Khantzian's classification of drugs. He argues that some psychiatric problems are self-medicated by a specific type of drug (Wojtynkiewicz, 2018a; Wojtynkiewicz, 2018b); for example, opiates help cope with narcissistic anger and restlessness, while stimulants will be the drug of choice for internal emptiness, depression, or ADHD. Depressants make rigid denial more flexible, and the anxiety experienced in social situations is more manageable (McKernan, 2015; Khantzian, 2017). However, in the case of NPS, such a division is unlikely to work because the effects of (often unidentifiable) agents are usually mixed, chaotic, and unpredictable.

Attachment disorders and difficulties of emotion regulation are most often discussed today within the framework of mentalisation theory (Bateman, 2019; Fonagy, 2002; Simicz-Futó, 2018). They can be traced back to early attachment disorders and lead to the incomprehensibility of one's own and others' mental contents and emotions, with problems such as psychic equivalence, the assumption of exclusivity of one's perspective, teleological, behavior-only, or "pretend" (dissociative) mode (Bateman, 2019). The importance of MBT (mentalization-based therapy), in addition to its focus on substance use disorders, is to increase therapeutic compliance to reduce non-adherence and polydrug use associated with prescription drugs (EMCDDA, 2019).

Koski-Jannes (2004) warns us that when providing a complex model of substance use, any model based on linear causality — including SMH and other psychodynamic theories — can oversimplify our complex human reality. Thus, most models pay little attention to social, societal, and cultural factors.

4.1.2 The main issues of the study

The investigation of emotionally significant episodes has been the subject of numerous studies (Cox & McAdams, 2014; Stephenson et al., 1997), and research was aided by the LIWC computer content analysis program developed by Pennebaker et al. (2007). What do new psychoactive substance users consider to be the high or low point in their lives? What are the emotional attitudes of new psychoactive substance users in these situations? How do these two privileged points relate to the use of NPS? Can this research phase further nuance and support the results of previous research on trauma/recurrence in other ways? Based on Hungarian

scientific literature, this research phase also considers it essential to clarify the study group's most important socio-demographic and socio-economic characteristics. To what extent is material deprivation typical of them? What is the parental pattern of substance use?

4.2 Methods

The research was conducted among NPS users entering treatment. After eligibility criteria were met - SCH or SCB (gas or liquid chromatographic analysis in the toxicology laboratory of the University of Pécs) detected in a biological sample or forensic toxicology report not older than 6 months confirming NPS use– the elements of the test battery acquired during admission were added to the research, such as the sociodemographic questionnaire and the life interview. In the case of re-admission to a hospital/admission to a rehabilitation institution, a toxicological report confirming the use of SCB and/or SCH not older than six months ago and a concomitant diagnosis related to drug use were the inclusion criteria. Individuals were excluded who:

- have already spent more than a week in a rehabilitation institution,
- had less than five grades of finished primary education,
- have experienced acute alcohol and/or drug-induced psychosis or any degree of mental retardation.

4.2.1 Life interviews. Content analysis of highly valanced emotional episodes

Several studies have used the Foley Centre's structured life interview (Cox & McAdams, 2014; Cox et al., 2019). The interview covers life events and turning points that influence identity development, its evaluation, and the development of personal values and ideologies. In the present study, we aimed to analyse the high and low points in the life story as emotionally significant episodes.

The interviews were recorded by the first author, and after the anonymisation, the texts of the interviews were transcribed verbatim. In the first phase of the analysis, we used researcher triangulation and performed a traditional thematic analysis, in which the codes were developed following the traditions of the grounded theory (Corbin, 2015). We first described the characteristic contents of the texts with a relatively large number of codes by reading the texts

several times (open coding), then merged the codes (axial coding) based on their relationship with each other (density) and frequency, and the codes that proved insignificant were omitted from the analysis.

In the iterative coding process, we refined the interpretations through multiple discussions. Qualitative content analysis was performed using ATLAS.ti 8.00 (2020) software allowing for the systematic analysis of the data, identification of the relations, and ensuring the transparency of the analysis. Interviewees are numbered in each citation provided, and the numbers identify the speakers. This exploratory, interpretive, meaning-focused phase was complemented by a more traditional quantitative content analysis, in which the frequency of individual words was examined, and the results obtained and their relationship to other data in the study were also analysed by statistical methods. In addition, frequency-based coding can bring entirely new aspects to the analysis. Function words are also known as “procedural” content from a pragmatic point of view because we follow a procedure in understanding (e.g., in the case of a simple denial, we try to eliminate the evoked content). When referring to “I,” we look for the current speaker in the social situation, etc. (Reboul, 2005). Function words frequently occur in speech. However, their use is barely conscious or planned. Perception takes 100-300 milliseconds in subliminal perception tests in speech and less in reading, while their recall is weak. Function words are directly related to the area of the brain that controls social skills, localised in the Broca area: understanding the procedures recorded in speech also requires an interpretation of socio-cultural situations (Pennebaker, 2007).

Although style is related to personality states, verbal behaviour is also influenced by psychological states, themes, and situations (Pennebaker, 2007; Wiener, 1968; Kézdi, 1988; 1995; Osváth, 2000; Oravecz, 2004; Pohárnok, 2004; Hargitai, 2005). Pre-built dictionaries for quantitative analysis, such as LIWC, are unavailable in Hungary (Pennebaker, 2007; Ehmann, 2002), though the Hungarian NarrCat has been a progress in this area (László, 2013). ATLAS.ti, with some limitations (sometimes with minor benefits), can be used for a similar quantitative study. When compiling a text-specific search bibliography, we can adapt to the linguistic characteristics of the given group. The search bibliography contained all the words occurring with more than 0.10% frequency rate. Expressions that were found significant in the qualitative part (e.g., 'poor') or proven relevant in previous studies (negative code, agency, etc.) were also included (Kézdi, 1995; Osváth, 2000; Kaló, 2012; Kelemen, 2003; Erdős, 2006).

text (hermeneutical unit)	coded word count	number of all words (token)	coded/all %	type	type/token %
low point	3961	10966	36	2890	26
high point	3249	8456	38	2380	28

Table 1. Proportion of coded words

SPSS Statistics V26 was used to analyse socio-demographic data (descriptive statistics) and statistically analyse the results of quantitative content analysis (cohesive sample t-test).

4.3 Results

4.3.1 Sociodemographic data

This research phase included nine women and 33 men aged 18-45 (M = 29.76; SD = 7.85). Most are single (N = 36), four are married, and two are divorced. Most of them graduated from secondary school.

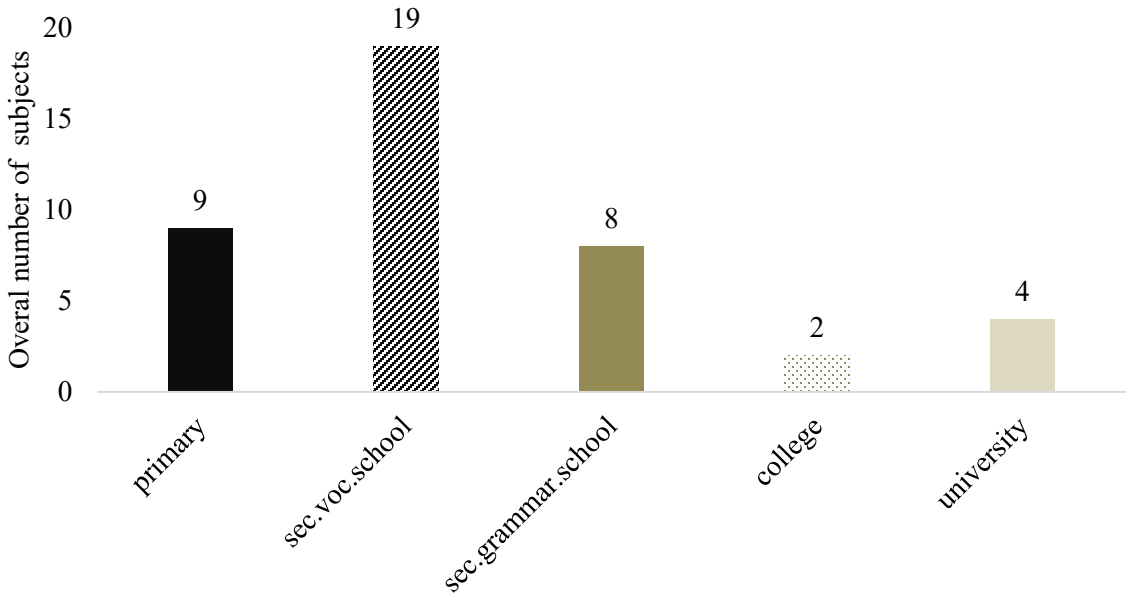

Figure 1. Subjects' highest level of education

Thirty-three subjects (78.6%) have blue-collar jobs, and 9 (21.4%) have white-collar jobs. Most respondents live in cities (23 persons) or the Budapest agglomeration (11 persons), with less than one-fifth of patients coming from a village (7 persons) or a farm (1 person).

According to the respondents, most mothers were not drug users (71.4%). In the case of fathers, a different picture emerges. Only 17 respondents' father was free from drug use (40.5%)

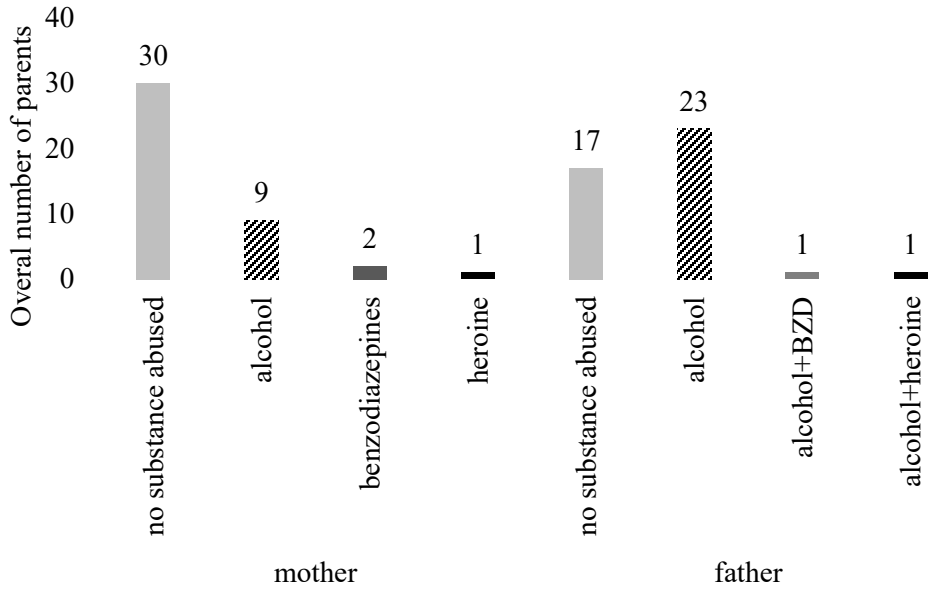

Figure 2. Parents' abused substance

The highest education of parents is an indicator of socioeconomic status. The majority of both mothers and fathers attended secondary vocational school.

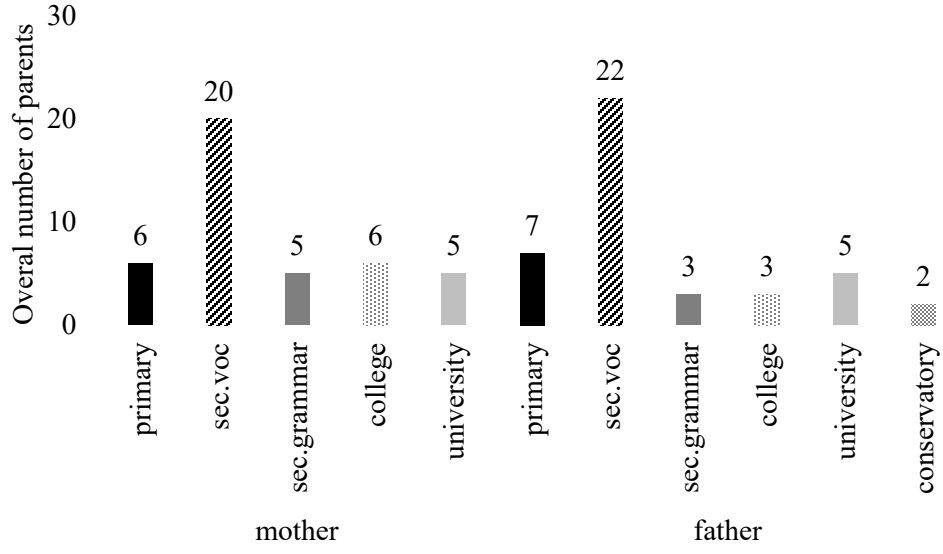

Figure 3. Highest level of parents' education

Based on the answers given to the questions on material deprivation, 19 people grew up in poverty (45.2%) (for comparison, according to the 2018 Hungarian census report, people living in poverty accounted for 18.9% of the country's population (KSH, 2020).

Data on drug use is shown in ***Figure 4***.

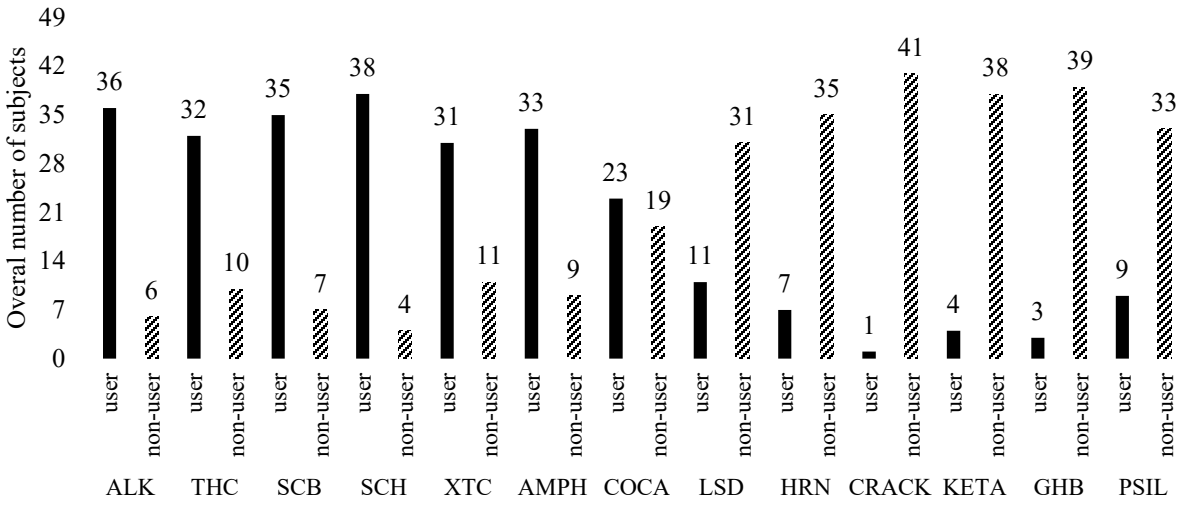

Figure 4. Overal use of individual substances among subjects

The two most common groups are SCBs and SCHs, in line with the national data and the inclusion criteria. The use of alcohol is also common, with ecstasy (XTC) and amphetamines (AMPH) also being popular. Data shows that there are significant overlaps, meaning the 42-person group is characterised by polydrug use - as is known from other research among NPS users (Van Hout, 2018; Felvinczi, 2019).

4.3.2 Qualitative Content Analysis

4.3.2.1 High point, positive experience

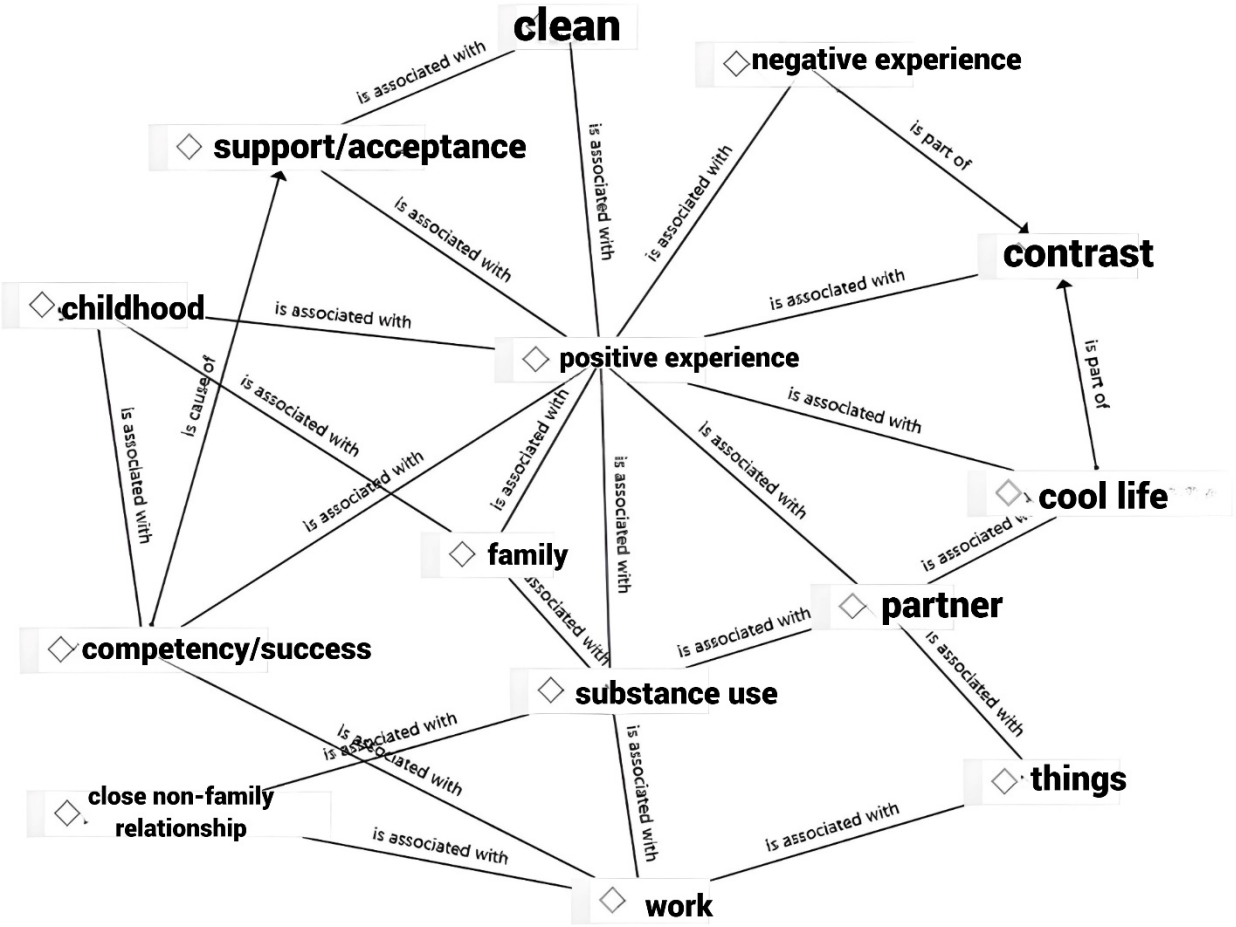

Figure 5. Codes that best describe high-point texts and the relationships between them

The figure above shows the codes that best describe the high-point texts and the relationships between them. In addition to the initial experience of substance use, the high point is linked in these texts to relationships, the hedonistic values of a "cool" life (often through foreign experience) and achieved success.

Eight interviewees mention positive experiences in childhood or adolescence: these are related to sports, school success, or adolescent love. Later in life, the desired, periodically occurring experiences cannot be obtained through accessible means.

The instrumental attitude towards human relationships is typical. One of the interviewees puts it this way: 22: "*Although I love my mother, I ask her for something. Even though I love Dad, I want something from him as well."*

In eight cases, interviewees spontaneously talk about negative experiences in their high-point texts, such as victimisation, forced inferiority, self-blame, aggression, criminalisation, suicide, and betrayal by significant others. However, these are not stories of contamination (Cox & McAdams, 2014) because narrators do not invalidate a previous positive experience.

Characteristic contents related to some key codes are the following (respondents are identified by numbers):

- Substance abuse

11: *So, in retrospect, it was a very good point for me, wasn't it? So I was glad I was sober, then I found my junkie partner, a girl, and started to relapse.*

21: *Well, it was really a good thing until we started until she started taking drugs, and we changed a lot, so there were a lot of quarrels from then on, so it was bad.*

19: *My first injection shot was on Shipyard Island; there was an acquaintance of mine named C. who first injected this drug in me, then the girl named D., who was my partner at that time, my ex-partner, she was there too, and that it gave such a good feeling that, that, that I cannot describe it in any way.*

33: *I would say the highest point when I worked in Slovakia. I came home, I pooled money, I used weed, but I could keep it under control*

Although quoted from the high-point texts, the following sections indicate the verbal correlates of crisis: denial, chaotic temporal structure, lack of coherence, and reference to self (Kézdy, 1988; Hargitai, 2005; Ehman, 2002; Neimeyer, 2000).

35: *That I want to get out of this and live in a normal family so that I don't have to, I don't have to be guilty, and I don't see in my daughter's eyes that she's scared because Dad is drinking beer again.*

40: *I had one, one, one, one, one client who brought me; I brought a 100K for me so that because I had a birthday, and to be together, and so that I would tell him what was wrong with*

me, and such and I while drinking, I called him, and while telling I love you, I do not love you in the middle of it I jumped off the balcony, and he did not come to visit me afterwards. And I began to reap my hand with a razor, and he broke the door upon me and bandaged my hand, and afterwards, he continued it, and they were there with the girl, and I drank the minibar on laying on the ground.

"Cool" life can be related to drugs and sex, but also to work in the normal sense:

3: *We stopped in the parking lot, two or three cars, opened the trunk, roared the music, and started the before party there. Then, we went in from there.*

20: *Well, my first high point, what was gratifying, was actually working abroad, I actually realized later because I felt like I was someone, I belonged somewhere, I was important, so I even got enough money and and I could buy myself the right amount of what we say supplies I needed for my life.*

40: When he walked in through the door, I didn't know who was going to pay for whom. I for him or he for me?

4.3.2.2 Low point, negative experience

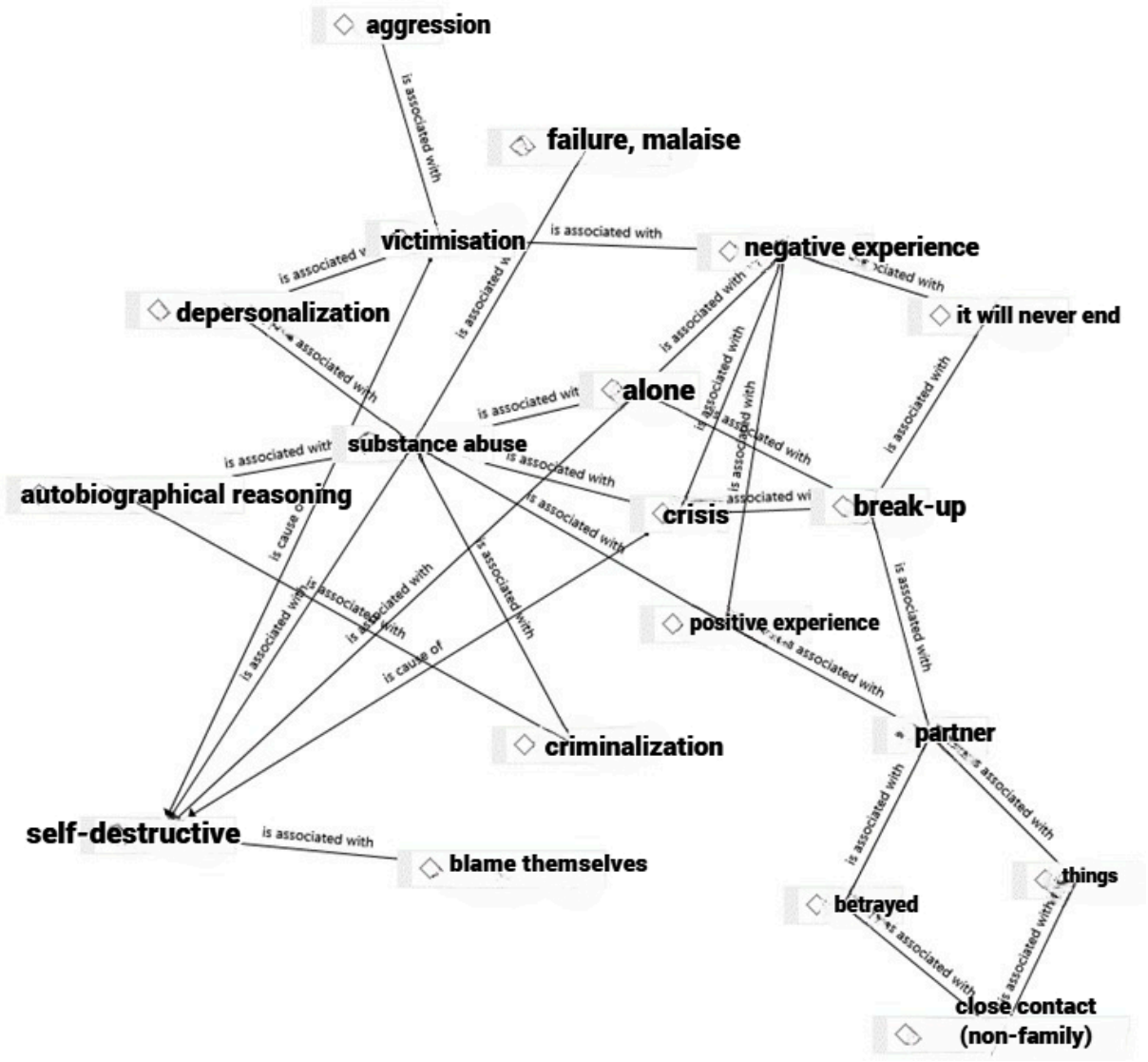

Figure 6. Low-point, negative experiences

It is important to note that low-point episodes are often, but not necessarily, identical to the well-known "hitting rock bottom" stories of recoverees in the literature. Substance use and the associated set of problems are also central here. The low point can be linked to suicide attempts, victimisation, betrayal by important people, self-blame, and severance of (mostly love) relationships. In this corpus, it is less common to recall childhood experiences (looking at the whole picture, this may be due to prevention and repression). The idea of self-healing or "anaesthesia" of drug users appears prominently and maintains this trap:

- Substance abuse

1: *Well, I tried to calm myself down and take my thoughts away with all sorts of drugs.*

4: I just got acquainted with a very drugged guy who smoked all the money, and so I was afraid of him, and I thought I was going to run abroad; how beautiful and good it would be. Time passed, I didn't come home for two years, I didn't give any signs of life, and I did everything. It was awful from the beginning, and I became a drug addict there. (...) Prescription drug addict, illicit drug addict, I got Frontin first, didn't I? Then I heavily started doing cocaine; in Germany, it's hype, not speed, but weed and cocaine. (...) Well, I earned eight hundred, a thousand euros a day, I smoked five or six hundreds of it, just like that, as dust (...) And I don't know, I got depressed there and it was very hard to get out of it, I became depressed, this job was some kind of trauma to me in my life because I was in this punishment for seven years and by acquaintances, by my ex-acquaintance, I had no relationship, nothing, I hated myself I told myself, if I have to do this job, no one should tell me when or, how much drug I take. (...) I had money; I did a lot of drugs because it didn't hurt so much like that; I didn't have a clear moment. If I was stoned and I used Frontin and worked like that, then I had such a face, then, then I could endure it, or on coke, but not when clean (...) After three or four years, I tried to do it cleanly, but it didn't go well, and the guests saw it, and they did not look for me, and I suffered for another three years, by which time I was able to get out of myself alone to go and look for some other work, and from there, I became addicted to drugs.

9: Well, that was the time when I had to move to a village with all of my knowledge, where I knew how much drug and sex trafficking was. (...) So I knew it was a pretty serious environment: drugs, sex trafficking, alcohol consumption, you name it. (...) Well, I got involved in other things there, too, so here I got involved in drug abuse. I got involved, but I always paid attention to however silly it sounds, but I always made sure I didn't overdo it.

11: Well, my lowest point in life was when I got hooked on drugs so hard; it was because I was basically a synthetic drug addict, and I got a girlfriend with whom we were together for a year and a half, and besides her, I left synthetic drugs and I switched to weed. (...) By this woman, I was, I was with her; I became a dealer because I needed money to be able to smoke weed. (...) Well, I sold speed, crystal, cocaine, everything I could, and once the police took me with 40 grams of speed and a milligram scale, everything, Gyorskocsi Street, Aradi Street, everything.

14: So there was one circle with which we did drugs for fun, and there was another one I went to high school with, who, who, too, did their own stupidity, but, while I was slipping down, they built something, they studied in Budapest, they worked here, normally, they don't do dope, they get together once a month and get drunk, that's all. (...) I went up to the city alone high on speed and ecstasy, and then I went to this 0-24 pub, and there were friends I didn't have much contact with anymore, and they didn't want to be with me either, precisely because I led such a disastrous life then.

26: And then he came home after that, and then we started fighting there at such a level, I was really drunk, and there was even prescription drug or speed or ketamine in me, or Rivotril, and then he came home, and we had a fight at such a level that I smashed the little night mirror, the night light on his head, he broke my teeth and broke the closet.

- "Psychotic" state is important: self-alienation, occurring often, but not always, is directly related to substance use in the narrative:

4: For me, this work caused me such a spiritual something that I could not say and express that I, myself, no matter how many times I was taken or had to work, I was always interrupted by tears coming out and when later, when I realised what I was doing, it was too late I couldn't find a place to escape because you can't just get out overnight.

13: Already cynically saying I was not allowed in, I kicked in the photocell door, enraged; I was at that time still in such a very aggressive state on medications; the sedatives didn't work, and by then, I had come out already, able to drink again. This happened, and it was the lowest point...; I grew up in an educated, affluent family without alcohol and got to that point where it happened. That was the lowest point.

24: And my father, I went against my father because I started talking. I didn't know what to do with myself and I hit him. I had hit him once, it never happened again, but it made me very, very worn.

31: Then I was sitting in the apartment, strung out, shot up, once at Christmas, at Christmas, totally alone, just smothering; I didn't know who I was and when my brain cleared up a bit, I just sat and sobbed on how I got there.

39: I didn't care what Rivotril would do to me then, but it was a feeling, a shameful feeling, or I don't know, and I had no reason to feel like that, but I remember it was a rainy day, a dark rainy day and, and simply I felt like as if the devil had possessed me or I don't know.

34: And it must have been some other kind of crystal, I don't know, I got so aggressive from it, and I missed, I so missed frames of the events that I don't know what really happened.

- It is common to prolong suffering in these texts, the so-called "it will never end" attitude, when people are immersed in the negative experience, forcing themselves to be constantly repeating it - presumably because that is what is familiar and interpretable to them:

1: Then after that, our relationship with Anita was on hold for a few months, and then we started meeting again in secret. It accompanied my life at the time. It took a good three or four years. Gone with you and without you, secret encounters, dates.

2: I had lamented on this shit for fourteen months, yeah, I kinda slipped into all kinds of other shit, and then I said it was enough, I met him, I told him, on one hand, to fuck off, on the other hand, to be damned, on the third hand asked him why? But I didn't get any answers, so I told him I didn't give a shit anymore.

10: And my stepfather came home, and she started asking what it was. I told him I had cleaned up. And I didn't really know why I got slapped, but then, so, so, I felt anger, resentment, anger, and soon that I got hit again, I vowed that if I turned 18, I would sort it out with him because he came on me with his fist and his feet the way he ought not to have. I did not want my mother or my relatives to be brought up or punished or to be brought before a court. That's why I pooled money. Constantly. This, this, this I could not accept. So I was really looking forward to him at home with warm food, clean house, neat order and love. Instead, I got something I didn't think I deserved. It was such a low point in my life that I still remember it today as if it happened yesterday or ten minutes ago.

21: And then we reconciled once again, it was even worse then, we quarrelled even more, we constantly hurt each other, we literally killed each other.

In all the above texts, contamination and redemption were limited to 2–5 cases, which can be explained by the fact that drug use narratives are less coherent in the ambivalent phase of treatment, regardless of their positive or negative nature (Szabo, 2011).

4.3.3 Quantitative Content Analysis

The results of the quantitative analysis are in the **2nd table.**

Table 2. Differences between low and high-point texts

Code	M low	M high	t	df	Sig. (2-tailed)	Significance
again	.24	.29	-.321	41	p=.75 (n.s.)	–
also	3.12	3.64	-.533	41	p=.60 (n.s.)	–
and	7.81	6.52	1.124	41	p=.27 (n.s.)	–
bad	**.81**	**.31**	**2.372**	**41**	**p=.02***	**.37**
but	7.26	5.93	1.092	41	p=.28 (n.s.)	–
child	.60	.26	1.417	41	p=.16 (n.s.)	–
end	.67	.55	.406	41	p=.69 (n.s.)	–
all	**.36**	**1.69**	**-3.423**	**41**	**p=.001****	**.53**
family	.67	.79	-.538	41	p=.59 (n.s.)	–
emotion	1.02	1.21	-.494	41	p=.62 (n.s.)	–
first	.26	.31	-.361	41	p=.72 (n.s.)	–
generalisation	**.43**	**1.52**	**-2.246**	**41**	**p=.03***	**.35**
good	**1.48**	**3.00**	**-3.349**	**41**	**p=.002****	**.52**
love	.69	.90	-.953	41	p=.35 (n.s.)	–
modifier	5.50	5.02	.423	41	p=.67 (n.s.)	–
money	.43	.21	1.502	41	p=.14 (n.s.)	–
must	**1.17**	**.57**	**2.043**	**41**	**p=.04***	**.32**
mother	.24	.47	-.787	41	p=.44 (n.s.)	–
negative	**11.48**	**6.74**	**2.516**	**41**	**p=.01***	**.39**
others	2.76	1.90	1.025	41	p=.31 (n.s.)	–
substance	**1.10**	**.43**	**1.940**	**41**	**p=.06**	–
quality	8.38	7.67	.637	41	p=.53 (n.s.)	–
explanation	**23.31**	**16.05**	**2.331**	**41**	**p=.03***	**.36**

reference to self	**7.61**	**5.33**	**1.879**	**41**	**p=.06**	–
self-reflection	5.79	5.05	.644	41	p=.52 (n.s.)	–
work	1.14	.98	.409	41	p=.22 (n.s.)	–

Sig. *p<.05, **p<.01

As for the content (conceptual) categories, there was a significant difference between "good" and "bad"; however, "bad" is more likely to appear in high-point texts with an enormous difference than "good" in low-point texts. Occurrences of stable-global (always/everything) and generalisation contents are significantly more common in high-point texts. Contents comprising "have to/ must/ ought to/ need to", expressing what is necessary or inevitable, are significantly more frequent in low-point texts, like elevated occurrences of explanatory elements. Although there is no significant difference in the number of references to psychoactive substances, a strong trend can be detected, which would presumably be significant in a larger sample and/or other coding procedure (regardless of the frequency of occurrence, by collecting all terms referring to substance use in a search bibliography). There is a strong tendency in the expressions concerning the self; here, the agglutinative nature of the Hungarian language makes this type of content analysis difficult (a variety of suffixes in addition to pronouns).

As previous studies and theories point to the importance of self-reference, negative structures, and, more recently, expressions of necessity, we give the percentage differences compared to the sub-corpus of personal texts in the Hungarian National Corpus (HNC) (2000):

Category	Low point	High point	HNTDB
negative structure	4,39%	3,34%	2,85%
self-reflection	2,91%	2,65%	0,79%
necessity	0,45%	0,28%	0,29%

Table 3. Relative frequencies in the light of the data of the Hungarian National Corpus

4.4 Discussion

The sample is not homogeneous in many respects; the status and social environment of the NPS users are also different. Although not all of them live in poverty, material deprivation is more significant among them – compared to national data. The positive experience in this group was related to material goods and the search for "perfection", somewhat reflecting the consumer world`s discourses of craving for self-sustainability and constant expansion. Considering data on own/parental education and employment, deep poverty is not characteristic of the studied population; we can rather talk about relative income poverty in the case of these families. However, it is essential to note that this sample is not representative and includes only those entering treatment. This means that these individuals, perhaps precisely because of their higher socioeconomic status and more favourable urban contexts, could access the treatment they needed, while in segregates, NPS users living in deep poverty could not. The results suggest that equating poverty with heavy NPS use is not substantiated.

Parental substance use is another important factor. The answers reflect the respondents' judgment and are not based on testing. However, this own judgment plays a significant role in developing substance user identity. Alcohol, although a legal drug, is significant in the transmission of the substance use pattern. Substance use can also be used to explain, label, and simultaneously control initially unintelligible negative conditions (e.g., negative emotional states) due to living in a dysfunctional family (Khantzian, 2011).

This is a synchronic study conducted at the beginning of the therapy, so it informs readers about the initial state of the respondents through analysing their narratives on the contrasting poles, the high and nadir points in their life stories. Content analysis showed not only the contrasts but also similarities in the two texts: both the negative and the positive experiences are linked to substance use, and both texts, albeit with varying frequency, revealed negative experiences such as criminalisation, self-blame, betrayal, deception, suicide, and aggression.

Understandably, at the beginning of therapy, with the respondents usually motivated by some crisis, their experiences saturated with suffering become the centre of their narrative constructions. In quantitative content analysis, the components of the negative code and some other linguistic elements drew distinct differences between the two situations. A significant contrast was manifest between the differences between "bad" and "good" contents, as "good"

occurs less frequently in low-point texts than “bad” does in high-point texts. Negative phenomena are easier and more frequently thematised from the outset (Rozin, 2001).

Yet, when interpreted in conjunction with the results of other significant or strong trends, the discrepancy suggests a specific organisation of the participants' experiences. There was a significant difference in the occurrence of negative structures known as the “negative code” (Kézdy, 1995; Osvath, 2000; Oravecz, 2004), which indicates suicide crisis situations in most contexts. This code also works in line with the results of negative bias; in a crisis, where the focal situation demands urgent responses, but the lack of solutions is depressing (“neither avoid nor solve” becomes more important than anything”), the proportion of negative structures increases. It is this depressing aspect that is shown in another code, the necessity, the “must.” Another component of the negative code, the increase in the proportion of expressions referring to the self, is an almost significant, important trend. Empirical studies have also linked the rise in self-expression to low status or loss of status (Pennebaker, 2007). In all three cases, we find elevated percentages relative to the Hungarian National Corpus (HNC) text corpus, especially in the low-point texts.

The code “explanation,” where people somehow try to interpret their experience to create a (this time negative) coherence, is also more common. However, this coherence is not yet complete and not final. From the qualitative analysis, we could see that weaving of contamination-type stories is uncommon, where negative contents overcome positive aspects, penetrate them definitively, and invalidate them. Consistently, terms referring to repetition and a general extension of experience according to Beck’s cognitive theory of depression, the stable-global (Beck, 2001), are not characteristic of low-point texts. Generalisations and other distancing contents would indicate the active functioning of defence mechanisms: over-generalized memory provides protection against trauma (Perczel, 2001). This kind of defence does not work here. It is important to mention that the occurrence codes related to psychoactive substances are more strongly associated with low-point texts than with high-point ones (avoidance of dysphoria/failure instead of euphoria) (Khantzian, 2011).

The suicide-equivalent, self-destructive features of NPS use are pronounced. Breaking away from the contemporary statistical approach, Schneidman approached the phenomenon of suicide and self-destruction from a phenomenological point of view in 1985. He sees intolerable pain, frustrated psychological needs, hopelessness and helplessness, the desire to end conscious

experience, ambivalence, a state of constriction, and a desire to escape from the situation at the same time as a common ground in all suicides. In their NPS-related research, Csák et al. (2020) speak of "escapist" or "runaway" substance use, highlighting the functional use of these substances. People using NPS flee from reality: They try to get rid of pain, misery, and segregation and seek to avoid hopelessness, insecurity, and boredom. The similarities with the Schneidman definition are striking. The well-known "cry for help" communication interprets all messages as aid requests, which inform about the person's internal condition and misery in social situations due to their imperative power.

A more recent approach to self-destruction is the theory of "cry of pain" (COP). Here, the emphasis is not on the appealing power of the interaction but on an internal, more individual perspective that emphasises the inhibition of communication. This is a regressive state beyond the verbalizable experience of self-alienation and constriction. The COP model (Williams, 2001; Scoliers, 2009) treats a multitude of self-destructive behaviours in a unified framework — like Firestone's (Firestone, 1997) earlier theory of micro-suicide, which sees suicide not as a symptom of a mental illness but conversely, mental illness as a symptom of various forms of self-destruction. However, the COP model is illuminative on this issue. It incorporates the distinction between self-harm and self-destruction with or without suicide. A Hungarian researcher, Sándor Fekete (2008), elaborated on the psychiatric explanatory power of the COP model. The model also includes the results of biological (arrested flight, entrapment), cognitive, psychological, and social effects. Escape in a stressful, trapped, and unbearable situation eventually becomes an escape from one's self (Slade, 2012), and based on the consistent results of research to date, the use of NPS can be an "effective" means of escape, including elements of self-punishment. The four main components of the COP model are the presence of stressors, the experience of being entrapped, coupled with a feeling of hopelessness, the impossibility of escape (lack of coping or social support), and isolation, which can be linked to a loss of status or humiliation. According to Williams and Pollock (2001), the simultaneous presence of the four components activates a biologically mediated helplessness script (Slade, 2012), and the exact mode of self-harm depends on the internal model of learned helplessness (Slade, 2012). This study could identify the equivalent of this "never-ending" quality (Perczel, 2001) from the model of arrested flight in the low-point texts; the other critical component, failure, humiliation, and

loss of status, is also outlined in the quantitative results in addition to the qualitative ones as the relationship between the increase in references to the self and the loss of status.

4.5 Conclusions

This mixed-method content analysis explores NPS users to complement the results from recent research. The socio-economic status of the sample is close to the domestic average, and the respondents do not live in segregates. At the same time, the self-destructive pattern — referred to by the keywords "survival" and "trauma" in previous research — is also markedly present in their case. Entrapment of the COP model (Perczel, 2001; Williams, 2001; Scoliers, 2009; Slade, 2012), the hopelessness following the failure of envisioned solutions, and the experience of "it will never end" motivate drug users to end conscious experiences. These internal features are reflected in the procedural contents that previous research linked to crisis or suicide. Although crisis at the time of entering treatment is not surprising with the ambivalence of decisions and a helpless state, there was a difference in the verbalisation of emotionally contrasting situations. The contents of the "negative code" (negative structures and self-reference), together with signs of entrapment and no escape, as well as necessity, substance use, negative contents ("bad"), and search for explanations were related to the low point texts, while the stability of situations and temporal states and generalisations were less characteristic of these texts. Overall, the model of arrested flight seems appropriate to describe the negative life status of NPS users. Entrapment is manifested in interpersonal relationships, which many authors identified as a cause (Wojtynkiewicz, 2018a;2018b). The validity of this study is indicated by its conclusions being consistent and coherent with the results of previous studies conducted among NPS users on a different sample with other methods.

5. Novel psychoactive substance use and psychological trauma: A multimethodological analysis

5.1. Introduction: Novel Psychoactive Substance Use as a Paradigm Change

The transition from classical substances to NPS continues to be a challenging phenomenon globally (United Nations Office on Drugs and Crime, 2013; Schifano et al., 2015). A handbook on the two most popular NPSs, SCH and SCB, discusses three main aspects of NPS use: classification, users' groups, and new harms elicited by the new substances (Abdulrahim & Bowden-Jones, 2015). These cheap substances rapidly found their way to new user groups as well as to the users of classical, legal, or illegal substances. By 2010, widespread NPS use in Hungary brought about unexpected and severe health hazards, such as overdose fatalities, nosocomial infections and acute psychotic disturbances related to drug intoxication (Schifano et al., 2015). Rácz and associates (2016) documented the rapid transition from opiate use to NPS use as a paradigm change, bringing about recurrent experiences of inadequacy on the part of the medical care systems prepared for the treatment of opiate users mainly. Internet-based global networks played a crucial role in the expeditious spread of NPS. As Kaló and Felvinczi (2017) argue, NPSs appeared simultaneously with the broadband internet and smartphones, which altered the communication forms and channels related to substance use. NPSs spread fast in rural settings in Hungary – traditionally, areas of heavy and high-risk alcohol use but relatively free from illegal drug use. According to the results of a 2019 survey published in the yearly report of the Hungarian National Focal Point (2020), the lifetime prevalence of marijuana use was 6,1%, while ecstasy and synthetic cannabinoids use was 2,5% and 2,1%, respectively. Amphetamines had a share of 1,5%, cocaine 1,5%, and designer stimulants ranked seventh with a share of 1,4%. Csorba and associates (2017) performed a toxicological analysis of residues from injecting paraphernalia in a sample of 4109 objects. They identified more than 200 different substances, including five previously unknown ones. SCHs were present in 2347 cases. EU-funded international research (Kaló & Felvinczi, 2017) among SCH and SCB users focused on their subjective perceptions concerning substance use. In the study, two distinct groups of users emerged. SCB users usually smoke the product, the frequency of use is sporadic, and the context

of use is highly varied. They often take the drug for its assumed health-related or other special attributes. Middle-class persons are motivated by peer pressure or use SCB for recreational purposes. Low-income or no-income users consider SCB to be a healthier alternative to SCH. SCH users are almost exclusively marginalised intravenous users with several health-related problems. Episodes of auto- and hetero-aggression are frequent among them. The varied, unpredictable composition of SCH available in the domestic drug market results in high variability of symptoms, such as paranoia, euphoria, tactile and other hallucinations, a psychotic level of anxiety and extreme muscle cramps. Previous research has suggested that marginalised persons with low socioeconomic status may use SCH or SCB in order to achieve a total dissociative state and get away from the high-level stress and hopelessness that surrounds them (Csák et al., 2020; Van Hout et al., 2018). "Escape from reality" patients may look for an alternative to everyday life struggles and are primarily driven by the pursuit of joy and pleasure through drug abuse. Their use is situational, relatively rare, and mainly characterised by heterogenous social and peer-related motives (Kaló & Felvinczi, 2017). In conclusion, NPS use poses high risks to several groups with very different socioeconomic backgrounds and motivations (Martinotti et al., 2014; European Monitoring Centre for Drugs and Drug Addiction, 2016; Alves et al., 2020; Tamama & Lynch, 2020). Nevertheless, relatively little is known about these groups as they are difficult to reach. Users' psychosocial characteristics are under-researched due to challenging methodological problems. Users cannot be contacted while intoxicated and are usually not motivated to participate in any research. Therefore, patients who receive in-patient treatment and are more accessible to participate in a controlled study are few, and the local therapeutic discourse inevitably influences their narratives. The reliability of self-report data on SUD is only around 40% (McKernan et al., 2015). The existing studies usually focus on socioeconomic factors, the types of substances, or – using a small qualitative sample – users' experiences (Kassai et al., 2017; Kaló et al., 2020).

5.1.1. NPS use, psychological trauma and emotion regulation

Studies have suggested a strong connection between SUD, psychological trauma, and emotion regulation deficits (Van den Brink, 2015). This section focuses on these interrelations to consider their potential significance in NPS use. Emotion regulation is the ability to recognise, identify,

evaluate, control, or modify one's emotional reactions (Kostiuk & Fouts, 2002). Emotion regulation problems, understood as the failure to regulate or tolerate negative emotions, are closely associated with interpersonal trauma and its frequent consequence, posttraumatic stress disorder, PTSD (Dvir et al., 2014; Nagulendran & Jobson, 2020). Kassai and associates (2017), in their phenomenological analysis, identified SCH use as a particular type of psychological trauma. SUD, as an "externalising pattern characterised by impulsivity" (Wolf et al., 2008, p. 231), and PTSD may co-occur (Dvir et al., 2014; Van den Brink, 2015; Roberts, 2021; Hien et al., 2022). „Comorbidity between PTSD and SUD is common: amongst individuals with SUD, the prevalence of lifetime PTSD ranges from 26% to 52%"; further, „Poor capacity for emotion regulation has been found to be associated with PTSD SUD comorbidity" (Roberts et al., 2015, pp. 26–27). Sensation-seeking attitude as a motive for using – frequently misunderstood as a sign of pure hedonism, a "cool life" by laypersons – was found to be related to sexual abuse in childhood by Werb et al. (2015). Persons with SUD may experience emptiness, alternating with an unmanageable flood of emotions, the dissociation of emotion and thought, and problems in recognising their own emotions (Fonagy et al., 2002; Bateman & Fonagy, 2019). The consequences of mentalisation failures include the unmanageability of intense negative emotions, such as anxiety and anger (Bateman & Fonagy, 2019). Khantzian (2011) interpreted substance use as self-medication, an escape from dysphoria rather than the quest for euphoria. He worked out a typology on one's drug of choice, relating the use of depressants, stimulants, and opiates to different psychopathologies. In this view, substance use serves to control helpless states, negative feelings, loss of meaning in life, and low self-evaluation. For persons with SUD, hangovers yield an explanation for their sufferings and for the (assumed or real) negative reactions from their environment (Khantzian, 1985; 1997; 2011; Roberts et al., 2015). Koski-Jännes (2004) focussed on the automatisms related to one's efforts to cope with deficits in emotion regulation: "Much of the cognitive and emotion regulation of addiction takes place without awareness, and even when conscious processing does occur, it often serves the purpose of defending and bolstering the destructive attachment" (p. 61). She claimed that the self-medication model did not include social factors; further, it was based on a simple linear causality, which failed to grasp the phenomenon's complexity. In this study, one of the methods is the use of MMPI-2 RC Scales, so we briefly comment on the previous findings concerning the use of these scales to study problems in emotion regulation. Scales RCd, RC1, RC2, and RC7

assess psychological dysfunctions in affective functioning. RC4 and RC9 are related to the domains of behaviour, and RC3, RC6, and RC8 to those of thought (Forbey & Ben-Porath, 2008). As Finn and Kamphuis (2006, p. 204) concluded, "the RC Scales open up links to a vast domain of relevant personality and emotion research. Specifically, the RC Scales connect the MMPI–2 to a widely accepted model of affect (…)". Sellbom and Ben-Porath (2005) found that RC2 had a strong negative correlation with positive emotionality, while RC7 had a strong correlation with negative emotionality. RCd, an "emotionally coloured dimension" (Tellegen et al., 2003, p. 12; Archer, 2006, p. 180), negatively correlated with positive emotionality and positively correlated with negative emotionality. Moreover, RCd and RC2 were consistently correlated with collateral medical data indicating depression, suicidality, various vegetative symptoms, and feelings of worthlessness and hopelessness. RC7 was also associated with the collateral variables related to depression and suicide. Inpatients with elevated scores on RC7 were more likely to report poor concentration, flashbacks, and feelings of helplessness and hopelessness (Arbisi et al., 2008). „RC7 is considered a measure of negative emotionality rather than being specific to anxiety" (Sellbom et al., 2006, p. 204). Current conceptualisations and measures of depression are close to Demoralization (RCd), comprising symptoms related to both negative and low positive affect (Osberg et al., 2008). The component specific to depression is anhedonia/low positive emotionality (Sellbom et al., 2006). The scales associated with negative emotionality (RCd, RC7) and RC9 were associated with juvenile conduct problems and violence disinhibition confidence, commonly occurring among persons with SUD. Further, RC4 was significantly related to criminal history, juvenile conduct problems, substance use, partner violence, and violence disinhibition confidence (Sellbom et al., 2008).

5.2 Research questions

Previous evidence suggests a relationship between trauma-related substance use and severe difficulties in the processing and managing of emotional content. We analyse the results of MMPI-2 RC and PSY-5 Scales, focussing mainly on the scales directly related to emotion regulation. We aim to explore the occurrence of psychological traumas as potential themes in the emotionally valent low point episodes of NPS users' life interviews. These interrelations have not

yet been explicitly explored among NPS users. In relation to the self-medication hypothesis, we examine the connections between emotion regulation deficiencies and the choice of substance.

5.3 Design and Methods

5.3.1 Sample

Participants were contacted by the first author at a Hungarian hospital ward or at one of three in-patient rehabilitation centres. The sample is purposive, with a total population sample of 77 persons, all at the beginning of their treatment, right after the detoxification phase (about one week). Gas or liquid chromatography confirmed SCH or SCB use on a biological sample or a recent toxicological report (within the preceding six months). Persons who (1) produced a negative drug test for NPSs, (2) had not finished the 5th grade of elementary school (a criterion for administering MMPI-2), (3) were experiencing acute psychotic states or were living with a general learning disability, were excluded from the sample. The first author informed respondents about the study, and they all agreed to participate. The University of Pécs issued ethical approval on the condition that respondents' anonymity is ensured (PTE KK RIKEB, 2019. 05. 02.).

5.3.2 Method

This research phase uses a methodological triangulation:

1. Biological samples or toxicology reports to confirm NPS use
2. A survey method to describe respondents' socioeconomic characteristics: The questionnaire comprised basic questions on respondents' age, gender, and level of education. Questions about parental drug use as an important socialisation factor, the respondents' choice of drugs, and the level of material deprivation were also included.
3. Restructured Clinical Scales and the PSY-5 Scales drawn from the Hungarian translation of the Minnesota Multiphasic Personality Inventory (MMPI-2) to study dysfunctions in emotion regulation: This version is the most recent standardised measure in the domestic context (MMPI-

2-RF is not available; neither is automatic scoring). The exclusion criteria regarding MMPI-2 validity scales were the following: CNS: >=10 (CanNotSay); VRIN: >=79; TRIN: >=79; F: 79 outpatient setting, inpatient setting 79; Fp: >=99.

4. A qualitative thematic analysis on the emotionally valent low point episode of a structured interview scheme for the study of identity (Foley Life Interview) (McAdams & de St. Aubin, 1992; McAdams, 2006a; 2006b; McAdams & Guo, 2015). This interview scheme was translated and has been used in Hungary for almost two decades (Rácz, 2006). For the analysis, we have used Narrative Oriented Inquiry (NOI) as a broad framework and, specifically, the categorical-content perspective "breaking the text down into relatively self-contained areas of content and submitting each to thematic analysis" (Hiles & Čermák, 2013, p. 158). The basic unit was the low point episode of FLI. A deductive analysis was conducted, and the themes were defined according to the DSM-5 definition of psychological trauma: "exposure to actual or threatened death, serious injury or sexual violation", either experienced or witnessed in person or by a close family member (American Psychiatric Association, 2013; Pai et al., 2017). Instances of suicide, self-harm and severe aggression were also coded. As this is a qualitative analysis where the researchers' interpretations constitute the essence of the method, researcher triangulation was used to enhance validity. Qualitative validity criteria were used: credibility, dependability, confirmability, transferability, and reflexivity (Stenfors et al., 2020). ATLAS.ti 8.3 (2020) for qualitative data analysis was utilised to facilitate a systematic analysis. Coding was performed by the author and revised by the co-supervisor.

Data integration

Beyond a descriptive analysis using the above methods for a more comprehensive picture of this under-researched population, following qualitative and quantitative data was planned to be integrated:

- identify correlations between the type of substance and MMPI-2 RC and PSY-5 Scales to see if the use of a particular substance is related to the scales
- connect the results of the thematic analysis to elevated scores on MMPI-2 scales related to emotion regulation (RCd, RC2, RC7, NEGE and LPE) to see if trauma-related contents are present in their texts

5.4 Results

5.4.1 Results of the socioeconomic survey

The sample included 16 women and 61 men, with an age range between 18 and 45 (M = 29.52; SD = 6.95). Data on main socioeconomic status (SES) characteristics are summarised in Table 4.

Table 4. **Patient demographics**

	n	**%**
Total	77	100
Age		
Mean	29.52	
Range	18–45	
Sex		
Male	61	79,22
Female	16	20,78
Marital status		
Single	63	81,8
In relationship	2	2,6
Married	9	11,7
Divorced	3	3,9
Education		
Primary	20	26,0
Vocational	32	41,6
Secondary grammar	16	20,8
College	4	5,2
University	5	6,5
Occupation		
Nonprofessional	60	77,9
Intellectual	17	22,1
Place of living		
Farm	2	2,6
Village	11	14,3
Town	44	57,1
Metropolitan area	20	26,0
Mother's education		
Primary	18	23,4

Vocational	33	42,9
Secondary grammar	9	11,7
College	11	14,3
University	6	7,8
Father's education		
Primary	10	13,0
Vocational	48	62,3
Secondary grammar	4	5,2
College	5	6,5
University	8	10,4
Musical college	2	2,6
Material deprivation		
Yes	45	58,4
No	32	41,6
Parental divorce		
Yes	36	46,8
No	41	53,2

Data on parental substance use are based on participants' reports, and use was identified as a common problem (see Figure 7).

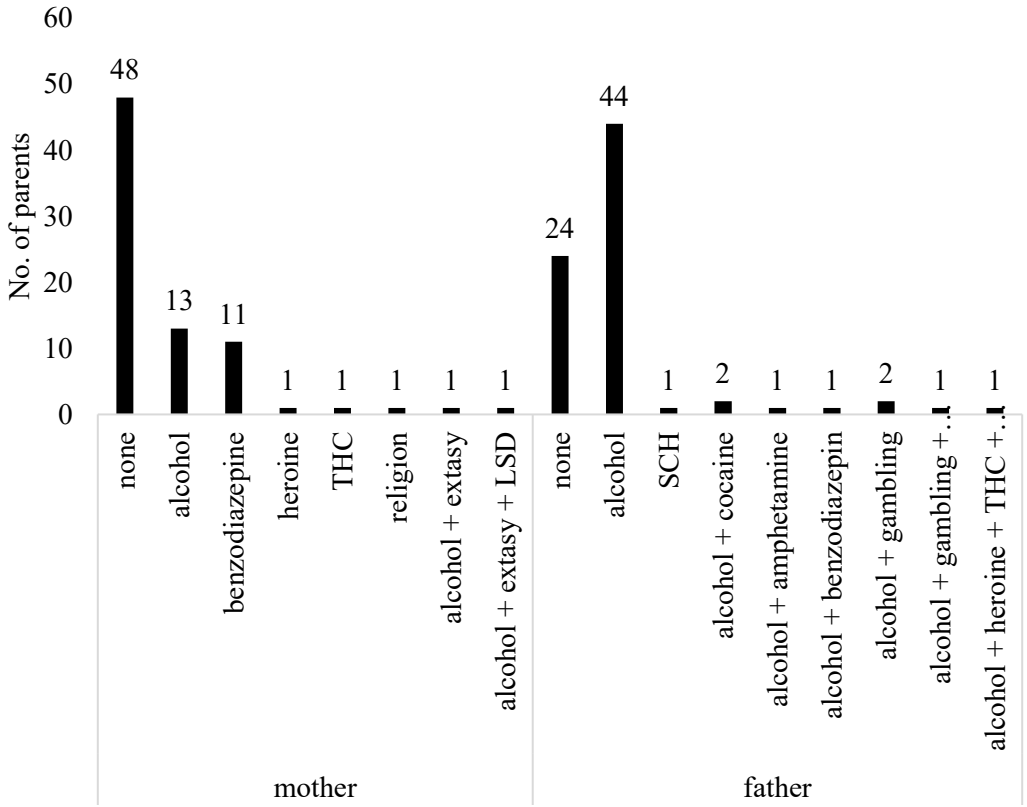

Figure 7. **Parental substance use**

Data on respondents' own substance use, based on biological tests, either at the time of data collection or verified during or prior medical treatment, are presented in Figure 8. Polydrug use was a significant characteristic of the sample. Both classical and new psychoactive substances were represented.

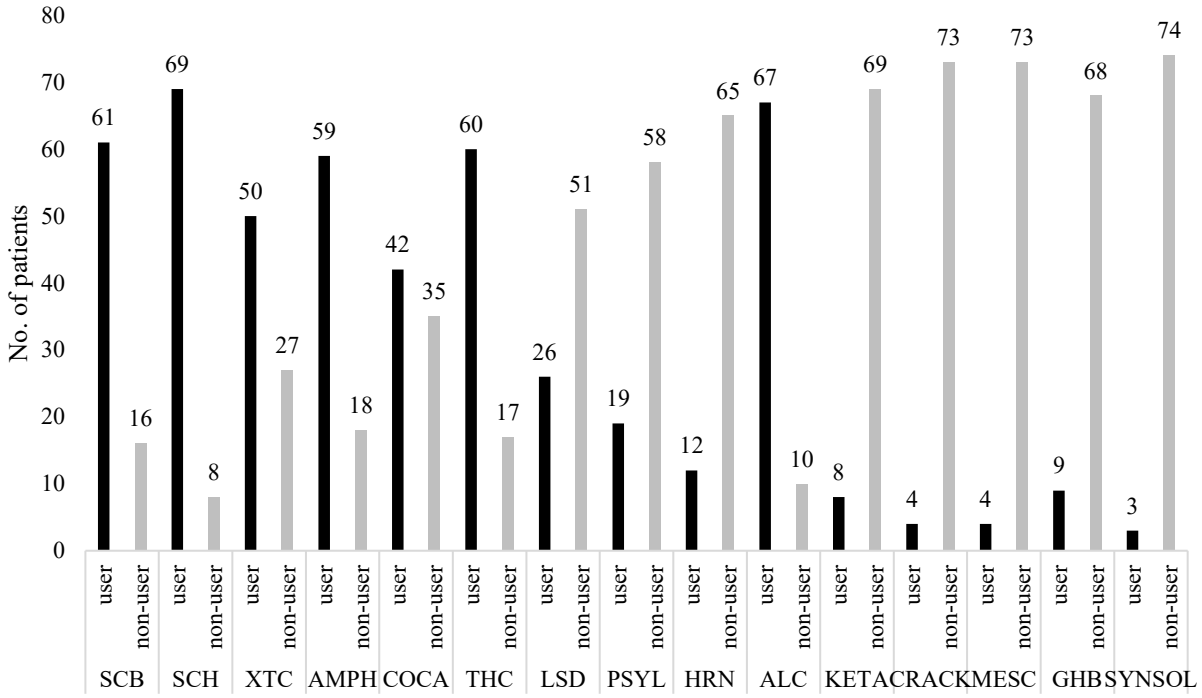

Figure 8. **Substance use**

Note: Substances - (1) synthetic cannabinoids; (2) synthetic cathinones; (3) extasy; (4) amphetamine; (5) cocaine; (6) cannabis; (7) LSD; (8) psilocybin; (9) heroine; (10) alcohol; (11) ketamine; (12) crack cocaine; (13) mescaline;

Table 5 presents the MMPI-2 results on emotion regulation. Approximately half of the respondents had high, clinically significant scores on three scales: Demoralization, Dysfunctional Negative Emotions, and Neuroticism/Negative Emotionality.

Table 5.

MMPI-2 pathological cases connected to Revised Clinical Scales (Rc) and PSY-5 Scales

	n	%	Mean	SD
Total	77	100		
Demoralisation (RCd)				
High	44	57.14	70.20	5.32
Low	0	0	0	0
Normal	33	42.86	51.21	7.45
Somatic Complaints (Rc1)				
High	30	38.96	70.97	6.51
Low	0	0	0	0
Normal	47	61.04	50.72	7.46
Low Positive Emotions (RC2)				
High	17	22.08	70.88	5.85
Low	0	0	0	0
Normal	60	77.92	49.07	8.87

Cynicism (Rc3)				
High	18	23.38	67.61	3.94
Low	0	0	0	0
Normal	59	76.62	50.74	8.42
Antisocial Behavior (Rc4)				
High	65	84.42	78.20	11.69
Low	0	0	0	0
Normal	12	15.58	54.92	6.36
Ideas of Persecution (Rc6)				
High	30	38.96	78.33	12.24
Low	0	0	0	0
Normal	47	61.04	50.34	7.03
Dysfunctional Negative Emotions (RC7)				
High	43	55.84	72.02	6.60
Low	0	0	0	0
Normal	34	44.16	50.36	8.30
Aberrant Experiences (Rc8)				
High	43	55.84	78.88	13.11
Low	0	0	0	0
Normal	34	44.16	51.15	6.58
Hypomanic Activation (Rc9)				
High	27	35.06	70.17	8.60
Low	0	0	0	0
Normal	50	64.94	50.12	8.03
Aggressiveness (AGGR)				
High	25	32.47	70.20	4.83
Low	0	0	0	0
Normal	52	67.53	47.65	7.66
Psychoticism (PSYC)				
High	36	46.75	77.61	12.89
Low	0	0	0	0
Normal	41	53.25	52.46	11.00
Disconstraint (DISC)				
High	35	45.45	70.34	5.79
Low	0	0	0	0
Normal	42	54.54	52.95	7.47
Neuroticism / Negative Emotionality (NEGE)				
High	36	46.75	68.80	4.08
Low	0	0	0	0
Normal	41	53.25	52.60	7.75
Introversion / Low positive emotionality (INTR)				
High	20	25.97	72.16	7.07
Low	32	41.56	42.67	7.40
Normal	25	32.47	55.40	5.03

Descriptives

5.4.2 Data integration: Substance use and MMPI-2 scales related to emotional regulation

Cocaine, THC and LSD use were related to certain aspects of emotion regulation. Cocaine has a negative correlation with Demoralization (*r=-.253; p=.03; p<.05*), and a negative correlation with Dysfunctional negative emotions (*r=-.238; p=.04; p<.05*). THC negatively correlates with Introversion - Low positive emotionality scale (*r=-.245; p=.03; p<.05*), and LSD positively correlates with Demoralization (*r=.230; p=.04; p<.05)* and Dysfunctional negative emotions (*r=.283; p=.01; p<.05)* (see *Table 6 & 7.)*.

Table 6.
Correlations between substance use and Revised Clinical Scales (Rc)

	Demoralization (RCd)	**Somatic Complaints (Rc1)**	**Low Positive Emotions (RC2)**	**Antisocial Behavior (Rc4)**	**Ideas of Persecution (Rc6)**	**Dysfunctional Negative Emotions (RC7)**	**Aberrant Experiences (Rc8)**	**Hypomanic Activation (Rc9)**
	r	**r**	**r**	**r**	**r**	**r**	**r**	**r**
SCB	.17	.19	.12	**.24**	.12	.12	.20	.12
SCH	.02	-.07	-.05	-.02	-.05	.01	-.10	.01
XTC	-.00	-.07	.00	.06	-.00	-.03	-.16	-.10
AMPH	.09	.07	.02	.12	.12	.17	.04	.09
COCA	**-.25**	**-.22**	-.16	-.05	-.20	**-.23**	-.14	-.02
THC	-.10	.10	-.15	.20	.20	-.00	.16	.18
LSD	**.23**	**.26**	.07	**.27**	**.30**	**.28**	**.33**	**.26**
PSYL	-.06	**.24**	-.02	.16	.03	.06	.17	.13
HRN	.05	.05	-.06	**.27**	.10	.13	.13	.11
ALC	.08	.13	.09	.11	-.01	.05	.07	.14
KETA	-.13	-.10	-.00	-.10	-.11	-.08	-.04	.06
CRA	-.01	-.22	-.13	.11	-.11	-.06	-.12	.12

CK								
MESC	.09	**.23**	.20	.08	.20	.20	**.26**	-.00
GHB	-.03	-.09	-.06	.01	-.04	.00	.02	-.00
SYNSOL	.14	-.04	.12	.15	.08	.11	.04	.00

Sig. p<.05

Note: Substances (1) synthetic cannabinoids; (2) synthetic cathinones; (3) extasy; (4) amphetamine; (5) cocaine; (6) cannabis; (7) LSD; (8) psilocybin; (9) heroine; (10) alcohol; (11) ketamine; (12) crack cocaine; (13) mescaline; (14) gamma-hydroxybutyrate - GINA; (15) synthetic solvents

Table 7.

Correlations between substance use and PSY-5 Scales

	Aggressiveness (AGGR)	**Psychoticism (PSYC)**	**Disconstraint (DISC)**	**Negative Emotionality- Neuroticism (NEGE)**	**Introversion-Low Positive Emotionality (INTR)**
	r	**r**	**r**	**r**	**r**
SCB	.17	.15	.17	.09	.06
SCH	-.03	-.05	-.01	.00	-.06
XTC	-.16	.00	.06	-.02	.00
AMPH	.00	.11	.03	.09	-.01
COCA	-.05	-.10	.10	-.18	-.17
THC	.16	.19	.17	-.12	**-.24**
LSD	.07	**.32**	.09	.20	.01
PSYL	.08	.04	.03	-.04	-.11
HRN	.05	.03	.17	.16	-.00
ALC	.08	.03	.10	.05	-.01
KETA	.14	-.08	-.13	-.11	.00
CRACK	.13	-.06	.21	.00	.02
MESC	-.06	**.27**	-.03	.11	.07
GHB	.13	.03	-.02	.01	-.00
SYNSOL	.00	.09	.11	.11	.06

Sig. p<.05

Note: Substances (1) synthetic cannabinoids; (2) synthetic cathinones; (3) extasy; (4) amphetamine; (5) cocaine; (6) cannabis; (7) LSD; (8) psilocybin; (9) heroine; (10) alcohol; (11) ketamine; (12) crack cocaine; (13) mescaline; (14) gamma-hydroxybutyrate - GINA; (15) synthetic solvents

A significant regression equation was found between Cocaine and Demoralization ($F(1,75)=5.122$; $p=.03$; $p<.05$), with an R^2 of .064. This means that Cocaine predicted 6,4% of Demoralization variances. A significant regression equation was found between Cocaine and Dysfunctional Negative Emotions as well ($F(1,75)=4.499$; $p=.04$; $p<.05$), with an R^2 of .057, that is, Cocaine predicted 5,7% of Dysfunctional Negative Emotions variances. Likewise, a significant regression equation was found between THC and Introversion - Low Positive Emotionality ($F(1,75)=4.776$; $p=.03$; $p<.05$), with an R^2 of .060, showing that THC predicted 6% of Introversion - Low Positive Emotionality variances. Furthermore, there was a significant regression equation between LSD and Demoralization ($F(1,75)=4.179$; $p=.04$; $p<.05$), with an R^2 of .053; thus, LSD predicted 5,3% of Demoralization variances. Lastly, we saw a significant regression equation between LSD and Dysfunctional Negative Emotions ($F(1,75)=6.547$; $p=.01$; $p<.05$), with an R^2 of .080: LSD predicted 8% of Dysfunctional Negative Emotions variances.

5.4.3 Results of the thematic analysis

Severe psychological trauma is present in 70 cases. The most grounded (frequent) themes are related to parental dysfunctions (extreme forms of neglect or abuse), criminalisation, death or severe loss, physical or sexual abuse, and severe physical problems, such as a life-threatening condition either related to or relatively independent of substance use. For example, R68 had suffered a workplace accident, and he was suffering from nightmares during the withdrawal period: “as if I was falling and I could experience it again, could hear my bones breaking and I had a sensation that my leg was broken again and I could not move”. R41 witnessed her parents’ fight and the mother’s subsequent suicide attempt. R52 had left the psychiatric ward without permission, convincing another patient to go with him. They were using drugs, and the other patient was dismissed: “He hanged himself… I could have saved him if I had gone with him, but I did not. I walked out on him". In some cases, psychiatric or medical treatment is seen as a

source of trauma by the respondents. Substance use, sex work, suicide, severe aggression with its consequences, criminalisation, homelessness, and mental and physical harm can be understood as revictimisation episodes, a common consequence of previous abuse (Dvir et al., 2015). R4, a sex worker, identified her work as a trauma: "Later, when I could realise what I was doing, it was too late, and I could not escape (…) you cannot just quit (….) this is how I became a user and depressed, and I feel that this work was a sort of trauma in my life (…). I never had a clean moment as it did not hurt that much this way."

5.4.4 Data integration: MMPI-2 scales measuring emotional dysfunctions and trauma-related contents

In the entire sample of 77 speakers, only 7 persons (R3, R7, R18, R32, R33, R 38, R54, and R64) low-point episodes did not contain any trauma-related content. The 29 respondents who scored higher than the cut-off for both Demoralization, Dysfunctional Negative Emotions and Neuroticism/Negative Emotionality all shared trauma-related content (see Table 8).

Table 8.
Frequency of trauma-related contents

Respondents (77)	**Speakers with 3 elevated scales on the scales connected to emotion regulation (29)**
Parental dysfunction Gr=10	3
Criminalisation Gr=10	2
Death/grief/loss Gr=13	6
Existential crisis Gr=4	2
Homeless life Gr=6	2
Physical/sexual abuse Gr=14	5
Psychiatric treatment Gr=7	2

Self-harm Gr=6	2
Severe physical problems Gr=8	3
Sex worker Gr=5	4
Substance use Gr=43	18
Suicide Gr=11	4
Wish to kill/aggression Gr=8	3
Totals=145	56

Note: Gr (groundedness): frequency of the code

5.5 Discussion

This research phase explored clinically relevant information on a group of NPS users in Hungary at the beginning of their treatment. The gender rate of respondents (about 1:3) can be compared to the gender rates of lifetime prevalence for illicit drug use in 2019, which was 19,9% for men and 8% for women (Hungarian National Focal Point, 2019). Women have fewer chances for treatment than men do, as female users are usually exploited and battered sex workers; in addition, a woman with SUD faces a heavier stigma than a man does (Kaló, 2020).

Material deprivation was present in more than half of the patients, but many had an adequate level of education. This could challenge the idea that NPS use is mainly the result of material deprivation (Csák et al., 2020). However, persons in this sample were included in treatment that is less accessible for those living in rural areas and/or are characterised by lower levels of education. Parental divorce rate in the sample roughly corresponds to the Hungarian average. Respondents reported frequent parental substance use, especially alcohol use – a source of childhood traumatisation, neglect, and abuse. Alcohol use is a traditional and heavy problem in Hungary (Elekes, 2014). In this sample, both parents' substance (alcohol) use is above the average, and parents probably serve as role models for substance-related problems.

The respondents are polydrug users, and their preferred substances include new and classical, illicit, and legal psychoactive substances such as SCB, SCH, ecstasy, amphetamine, cocaine, cannabis, and alcohol. This confusing pattern, also found in a previous study with NPS

users by Higgins et al. (2021), has implications for the treatment systems. In this context, medication is usually considered a further, easily accessible substance or a risky attempt at self-medication to terminate drug-induced psychotic states (Valeriani et al., 2015). Mothers' benzodiazepine use in some families is a direct model for such a misuse of prescription medication.

The overall profile of this group on MMPI-2 Restructured Clinical Scales and the PSY-5 Scales has confirmed key findings on the challenging nature of NPS use. RC4 scores indicating antisocial behaviour comprising "aggressiveness, antagonism, argumentativeness, tendency to lie, cheat, difficulty conforming to societal norms, acting out, substance abuse, family conflicts and poor achievement" (https://www.mmpi-info.com/restructured-clinical-rc-scales) were elevated with 65 persons. RC 8, Aberrant Experiences measuring hallucinations, bizarre perceptual experiences, delusional beliefs and impaired reality testing was elevated with 43 respondents. The PSY-5 scale Disconstraint as "insufficient delay of gratification, being unreliable, rebellious, hedonistic, and acting out" (MMPI-2, 2009) and PSY ("poor reality testing, are suspicious, delusional and hostile") scores were elevated in approximately half of the sample, with 35 and 36 respondents, respectively. Interestingly, while the use of classical substances (Cocaine, THC and LSD) was interrelated with specific problems in emotion regulation, supporting Khantzian's claim (2011), NPS types were not related to any of the MMPI-2 scales that are informative on emotion regulation, reflecting the rapidly changing, more unstable and chaotic character of NPS use. When considering all the RC scales we have used, LSD takes the lead with significant positive correlations except RC2. LSD also correlates with PSYCH. Interestingly, we could identify a significant positive correlation between SCB use and RC4, similar in strength to the relation between LSD/Heroin use and RC4. In a study using Interpretative Phenomenological Analysis, Kassai et al. (2017) have identified SCB use as a particular type of trauma – in the light of the thematic analysis, a potential re-victimisation. There is strong evidence in the professional literature that childhood trauma and antisocial behaviour are related, and this may explain the findings (Schorr et al., 2020).

This population's problems in emotion regulation are salient. Elevated scores may indicate a problem that existed prior to or is parallel with substance use. More than half of the respondents had high scores on RCd and RC7. Nearly half of the sample, 36 of the 77 patients, also scored high on NEGE. These scales are strongly associated with PTSD, primarily with

internalising psychopathology, though Wolf and associates (2008, p. 338) claim that „…while more strongly associated with the internalising spectrum, (NEGE) may also play a role in externalising disorders". In the same study, the authors found a negative correlation between SUD and RC2.

The results are consistent with the studies connecting substance use (Van den Brink, 2015; Roberts, 2021; Hein et al., 2022), or more specifically, NPS use (Kassai et al., 2017; Csák et al., 2020) to psychological trauma. The previous results of the first research phase on the emotionally valent episodes of 42 narratives, with frequent mentions of suicide, self-harm, victimisation, rumination, and self-accusations, are also consistent with these findings.

5.6 Conclusions. Implications for therapy and research

This group of participants is rarely accessible for scientific research, though their problems challenge the existing medical and social services for persons with SUD. Currently, relatively little is known about NPS users' social context, life experiences and psychopathology, and this is a barrier to providing more adequate treatment options. NPS use, like the use of classical substances, seems to be characterised by specific problems in emotion regulation and is related to psychological traumatisation (Kassai et al., 2017), also supported by the results of this analysis. Though the results are tentative due to the limitations of the sample size, lack of a control group, and, most importantly, the fact that NPS use is embedded in polydrug use, these users do not seem to self-medicate in a traditional way, choosing a specific NPS according to the problem type. Their chaotic polydrug use may render pharmacotherapy difficult or contraindicated, as users consider prescription medication just another cheap substance to be mixed with the ones they normally use. Psychotherapeutic services, as viable options in these cases, are not widespread in Hungary and, in certain regions, may be available in private practice only. Female users' underrepresentation in this sample supports the claim that women's drug use is a specific problem, and it would demand more targeted interventions (Kaló, 2020). Helping parents with alcohol or substance use disorder recover and thus protect their children from the long-term consequences of the transgenerational transfer of SUD should be made part of the solution.

From a methodological point of view, the strengths of this study are triangulation and controlled sampling, eliminating potentially problematic self-reports on respondents' drug use. As for the limitations, a more homogenous sample could have resulted in a clearer picture of NPS use, but this population is hard to reach and involve in a study, so we had to accept this as a barrier. The broad age range implies diverse paths and stages in the development of substance use disorder. This research phase included one legal substance (alcohol) and did not examine the use of nicotine or the illicit use of prescription drugs. Further, the sample comprised persons who participated in some form of treatment. This is one reason why persons with lower levels of education and/or living in rural areas had fewer chances to be included in the sample. One of the methods, MMPI-2, excluded persons with less than a 5th-grade elementary school education. Further, estimates on parental substance use were based on respondents' reports. The COVID-19 restrictions in the country during the one year of data collection in 2020 and 2021 significantly changed the conditions for access to care and somewhat delimited the sample size.

6. Narrative Means to Recovery Ends. Novel Psychoactive Substance Users in Early Recovery

6.1 Background

NPSs are drugs—either in pure form or in preparation—that are not controlled by international drug control conventions. Individual and community-level risks caused by their use are commensurable with or exceed those elicited by classical substances. By 2023, NPSs have become a global concern affecting 141 countries. The several hundreds of rapidly proliferating substances are categorised by their effect or chemical composition (United Nations Office on Drugs and Crime, 2024). The four main types of these synthetic drugs are stimulants, cannabinoids, hallucinogens, and depressants (Shafi et al., 2020). Two common NPS types are SCH and SCB (Prosser & Nelson, 2012). Early studies on NPSs focused on the puzzling multitude of these substances and the new risks associated with use, such as HIV-1 outbreak among synthetic cathinone users (Hanke et al., 2020), increased risk of Hepatitis C infection (McAuley et al., 2019), incidences of severe and sudden cardiac, neurological and psychiatric symptoms, and occurrences of death (Funada et al., 2019; Prosser & Nelson, 2012; Van Hout et al., 2018). Psychiatric symptoms include paranoia, bizarre and violent behaviour, and acute psychotic episodes (Bennett et al., 2017). Further, NPS use is usually polydrug use, the concomitant use of two or more psychoactive substances multiplying the serious health risks (Higgins et al., 2021; Neicun et al., 2020; Rinaldi et al., 2020). Polydrug use entails unpredictable adverse effects and higher risks of overdose. Dependence occurs when the frequency or quantity of use leads to severe impairments in the bio-psycho-social domains (European Monitoring Centre for Drugs & Drug Addiction, 2021). Polydrug use and dependence are a feature possibly related to patient characteristics and to the addictive potentials, volatility, and unpredictability of NPSs. In addition to the risks associated with the various NPSs, the ethnography of the different user groups, their motives and experiences, and appropriate clinical guidelines were among the researchers' main questions (Abdulrahim & Bowden-Jones, 2015; Gittins et al., 2018; Van Hout et al., 2018; Wieczorek et al., 2022). Marginalised and nightlife users are a traditional user group. Broadband internet, smartphones, and social media have established new user communities and new risks (Kalo & Felvinczi, 2017). Enhancement and

expansion were associated with the contexts of use or NPS type (Wieczorek et al., 2022), whereas social and conformity motives characterised the user groups (Benschop et al., 2020). In several countries, NPS use is widespread among marginalised groups living under the poverty threshold (Felvinczi et al., 2020). In these groups, users' preexisting poor physical and mental conditions, hopelessness, and helplessness add to the above risks. In addition, access to health services for persons with drug-related problems might be deficient in these areas. Marginalised groups use NPS to escape their everyday reality and the pains of unsolvable problems (Csák et al., 2020). In a study, however, NPS use was found to be associated with mental health problems more than with socioeconomic vulnerability (Neicun et al., 2020). Several studies have confirmed the strong relationship between traumatic life events and SUD (Van den Brink, 2015).

The connections between PTSD and substance use have been extensively studied (Basedow et al., 2020; Dass-Brailsford & Myrick, 2010; Najavits, 2015; Schein et al., 2021; Van den Brink, 2015). Few articles are available on the specific relationship between NPS use and psychological trauma (Gittins et al., 2018). Kassai et al. (2017) identified SCB use as a particular type of trauma. Recovery processes from NPS dependence have also remained an under-researched area as only a few subjects are available for the studies (Kassai et al., 2017). These studies are the first step to getting to know more about the recovery processes from NPS use, which represents a new paradigm deeply challenging the treatment systems (Rácz et al., 2016).

6.1.1 Recovery from Addictions

Recovery is a process to improve one's health, wellness, and autonomy and develop one's full potential in life (SAMSHA, 2012). Anthony, highlighting the relational aspects of recovery, described it as "a deeply human experience, facilitated by the deeply human responses of others." (Anthony, 1993, p. 531). Mudry et al. (2019) explored the transformative pathways in natural recovery and the major changes in interpersonal relationships from pathologising modes to healing relational patterns. The recovery concept and practices of self-help groups informed the professional theories and models in addictions (Arbour & Harris, 2023; Madácsy, 2020). Twelve-step recovery communities and therapeutic communities (TCs) rely on the social support provided by the sober community as well as on the rich knowledge of those in sustained recovery as experts by experience. These communities equip the service users with SUD with rich

narrative resources to facilitate therapeutic change (Harrison et al., 2020; Mudry et al., 2019). Recovering persons' own interpretations of recovery include adopting new lifestyles, enhanced well-being, self-development, accepting what life can give, abstinence, the ability to identify problems, and adequate help-seeking behaviour (Laudet, 2007). Recently, studies on the potential connections between recovery from addictions and post-traumatic growth have appeared, emphasising the role of spirituality and community support (Haroosh & Freedman, 2017; Ogilvie & Carson, 2022; Stokes et al., 2018).

Though abstinence is not sobriety, programs that require abstinence have been proven more effective. In their survey study, Kaskutas et al. (2014) described four recovery domains: abstinence, essentials of recovery, enriched recovery, and a spiritual orientation. Essential recovery comprises honesty to oneself and an ability to manage negative emotions while maintaining abstinence and enjoying life without substance use. Enriched recovery involves growth and development, giving a balanced response to life's ups and downs, and taking responsibility for the things one can change (Kaskutas et al., 2014). Jacob et al. (2017) found that carers' and consumers' perspectives on recovery differed: carers focused more on the outcomes, mainly understood as freedom from symptoms; for the consumers, recovery was a complex process comprising personal growth and transformation while finding new meaning and purpose in life. Available social support, reciprocity in one's relationships, follow-ups, and taking personal responsibility for one's health were identified as key elements during the personal journey from an addict identity to a sober identity marked by increased well-being. In sum, recovery from addictions is understood as a substantial identity transformation, a second birth or redemption leading to a personally, socially, and spiritually meaningful life (James, 1902/1982). The journey with its crises, guiding the person toward a sober identity with vital improvements that permeate all areas of life, is a demanding developmental task. It is a holistic, nonlinear process involving not only deep transformations but the restructuring of daily life as well (Betty Ford Institute Consensus Panel, 2007; Costello et al., 2020). The process requires growing commitments and an ability to learn from one's mistakes. Stages and recovery processes are usually determined according to the transtheoretical model by Prochaska et al. (1992). Precontemplation is characterised by denial, defensiveness, and a focus on the positive impacts of the drug. Recovery seems an irrational, meaningless, and unmanageable endeavour. The next phase, contemplation, is characterised by ambivalence. The person is willing to consider drug-

free ways of life. Preparation involves steps to quit and/or organise some treatment. Minor changes in personal life are possible, including temporary abstinence. The action stage is about commitment to change. In this phase, persons learn how to ask for help when needed and can identify and manage relapse. Maintenance is characterised by self-care and a sober lifestyle. The health learning model, describing the specific recovery processes in the context of a TC, comprises three main elements:

1. reacting to the program with a focus on the whats (actions, structures, etc.), but not understanding the hows and the whys yet,
2. working the program and building conscious recovery competence manifested in self-monitoring and an awareness of risks
3. responding to the program and achieving a stage of reflective competence with deepening explorations and insights into the personal meaning of recovery (Kelemen & Erdos, 2010).

Based on these models, a constructive therapeutic change involves a growing commitment to recovery, developing healthier habits, an ability to identify the risk of relapse, asking for help when needed, and developing reflective skills. For the majority, reaching a stage marked by some stability takes about two years. Therefore, we identified the respondents in this study as patients in early recovery, proceeding from their preparations to actions and reflections.

6.1.2 Narrative practice

The title of this research phase refers to a seminal work by two narrative therapists (White & Epston, 1990). Changes in narrative identity take place in the dual landscape of events and actions, establishing new coherence and directionality by reconstructing and expressing personal meanings. Narratives connect personal experiences to cultural meanings and social structures and establish the narrator's position for potential actions (Hiles & Čermák, 2013). Narrative frames open the door to new possibilities for deconstructing and reconstructing disorganised, dissociated, or oppressive-dominant narratives—the silenced stories in the domain of the not-yet-said (Neimeyer, 2006; Rober, 2002). Narrative therapies highlight the importance of telling and retelling (re-authoring, restructuring) the problem-saturated life story, thereby creating new positions and prospects for the future (Tarragona, 2008). Trauma, if unexpressed and unanalysed,

often becomes insidious, leading to a variety of health problems. Studies have confirmed that speaking and writing about one's traumatic experiences lead to enhanced well-being (Chung & Pennebaker, 2007; Pasupathi et al., 2015; Pennebaker & Smyth, 2016). Storytelling has always been central to twelve-step practices (Arminen, 1998; Kiss et al., 2022; Madácsy, 2020). Rennick-Egglestone et al. (2019) identified several positive outcomes of using personal narratives to support the recovery process. The recipients of the stories could experience connectedness, validation, hope, empowerment, appreciation, reference shift, and stigma reduction. Negative impacts comprised feelings of inadequacy, disconnection, pessimism, and burden. Perceived authenticity facilitated positive changes, while a crisis state was conducive to negative impacts (Rennick-Egglestone et al., 2019).

Hanninen (2004) distinguished between three main narrative modes in her model on narrative circulation. The told narrative is a manifest verbal representation of events. The inner narrative is the domain of the not-yet-said that can be externalised and validated by relying on one's cultural resources and can be transformed into a told narrative during therapy (Rober, 2002). The lived narrative is the "real-life drama" with its situational constraints (Hanninen, 2004, p. 69). In the model, the inner narrative is connected to both the told and the lived modes, and the personal stock of stories is defined by the cultural stock of stories and the person's own experiences. Hanninen and Koski-Jannes (1999), in a qualitative study of 51 recovery narratives, have described five story types. As tools for meaning-making, the different types offer personalised and culturally matching storylines for identity change.

- **The AA story**: Excessive drinking, loss of control, and hubris—as the symptoms of a lifelong disease—lead to isolation and impairments in all areas of life. In the AA narratives, this is hitting rock bottom, the most profound crisis in the addict's life. Repeated attempts at recovery fail until the person has learned humility and has joined Alcoholics Anonymous, a potent community resource to master decent ways of life. In this conception, the person is a victim of a disease, and they must learn how to live with it. The only cure is one's personal commitment to a sober community.
- **The personal growth story** sees addiction as the result of early oppressive relationships and neglect. Growing emancipation, autonomy, and agency are the keys to recovery. The person, a previous victim, should find their own true self instead of conforming to others'

wishes. They are like a “butterfly breaking out of a cocoon” (Hanninen & Koski-Jannes, 1999, p. 1842).

- **The co-dependence story** is characterised by silenced stories, a transgenerational “curse.” Addiction is the result of secrecy and the repression of one's own negative feelings, and recovery is that of honesty and breaking the curse of the transmission by the victim of a victim.
- **The love story**: Addiction is compensation for the lack of love. Recovery occurs when love is given.
- **The mastery story**: Initially, addiction is seen as a source of autonomy and later as a threat to autonomy, self-respect, and responsibility. This insight, as the triumph of reason, leads to recovery and constructing a strong and good self.

These storylines help people comprehend addiction and recovery, release them from guilt, and give them hope. Each framework is related to (Császár et al., 2021) a particular gender and type of addiction, though the respondents often integrated the elements of other stories into their narratives. The AA story as a framework was used predominantly by men with alcohol dependence, whereas women preferred the personal growth story. The co-dependence story was characteristic of polydrug users. Love story as a framework was used mainly by persons with bulimia, and the mastery story was characteristic of smokers (Hanninen & Koski-Jannes, 1999).

6.2 Current study

Kassai et al. (2017) have claimed that NPS users’ recovery processes may differ from those of the users of classical substances. Unpredictable and rapid alternations between NPS users’ positive and negative experiences result in a more fragmented user identity. Therefore, SCB users cannot successfully organise their experiences into collective structures of meaning, and the narrative resources for SCB users to construct a new, non-addict identity during recovery are limited. However, Kassai et al. (2017) could explore a small sample of patients at the beginning of their treatment. In the TCs providing long-term residential care, the interventions are directed at the social self and facilitate the improvement of mentalising skills (Fonagy et al., 2002), the management of emotions, and the overall reconstruction of identity. Respondents are familiar

with and actively use twelve-step resources that highlight relational ethics in interpersonal relationships and the role of spirituality in the healing process. Therefore, it is predictable that progress in recovery is indicated by a more elaborate and balanced view, mirroring the overall development of reflective skills. A spiritual orientation, characteristic of post-traumatic growth, may appear. However, no specific results concerning NPS users' use of recovery narratives are available. As this is a qualitative exploratory study, the openness of the analysis is maintained, focusing on the emerging issues—the whats and hows.

6.3 Methods

6.3.1 Participants

This sample is a sub-sample of a longitudinal study conducted among 77 patients. Respondents were recruited at the beginning of their treatment. NPS use was confirmed by either biological tests or toxicology reports. A year later, 10 persons could meet the inclusion criteria of this research (1 year abstinence, and at least 3 months spent in treatment) (M age = 28.50; SD= 9.03; Min.= 18.00; Max.= 45.00), 1 female and 9 males (M months= 9.1; SD= 1.91; Min.= 5.00; Max.= 10). All of them were polydrug users diagnosed with substance dependence and treated in a TC. Table 9 is a summary of patient data. Considering Malterud et al. (2016) principles on information power, this sample size is adequate for the research questions. The narrow research aim, a specific sample, a hybrid analysis combining deductive and inductive directions, and a strong dialogue (a therapist conducted the interviews) result in high information power. The study combines case-based and cross-case analyses (Malterud et al., 2016). Ethical approval was issued by the University of Pecs (PTE KK RIKEB, 2nd of May, 2019). The procedures used in this study adhere to the tenets of the Declaration of Helsinki. Informed consent was obtained from all the patients before their inclusion in the study.

Table 9.
Respondents' demography

Pseudonym	Gender	Age	Drugs used	Therapeutic community	Months spent in treatment
Aiden	M	45	SCH, XTC, Amphetamines, Cocaine, THC, Alcohol	TC1	10
Patrick	M	43	SCB, SCH, THC,	TC1	10

			Alcohol		
Rory	M	20	SCB, SCH, XTC, Amphetamines, Cocaine, THC, Alcohol	TC1	10
Charles	M	29	SCH, XTC, Amphetamines, Cocaine, Alcohol	TC2	5
Devin	M	24	SCB, SCH, XTC, Amphetamines, Cocaine, THC, Heroine, Alcohol	TC3	10
Chloe	F	26	SCB, SCH, XTC, Amphetamines, Cocaine, THC, Heroine, Crack Cocaine	TC1	10
Alex	M	23	SCB, SCH, XTC, Amphetamines, Cocaine, THC, Psilocybin, Alcohol	TC1	10
Pete	M	31	SCB, SCH, XTC, Amphetamines, Cocaine, THC, Psilocybin, Heroine, Alcohol	TC2	6
Zach	M	26	SCB, SCH, Amphetamines, Cocaine, THC, LSD, Alcohol, GHB	TC1	10
Archie	M	18	SCH, XTC, Amphetamines, Cocaine, THC, LSD, Psilocybin, Ketamine, GHB	TC1	10

Note:

[1]SCH=Synthetic cathinones, SCB=Synthetic cannabinoids, XTC=Methylenedioxymethamphetamine (Ecstasy), THC=Tetrahydrocannabinol (Marijuana), GHB=Gamma-Hydroxybutyric Acid

[2]The three different therapeutic communities are anonymised. Naming could potentially identify the patients as the number of these facilities and the number of patients in treatment are low (usually below 20). TC 1 is a church-based community, and the other two TCs are secular ones

6.3.2 Measures

The Foley Life Interview (FLI) is a scheme to facilitate in-depth explorations of the life narrative (McAdams, 1993, 2007). FLI designates key scenes (nuclear episodes) as peak or nadir experiences, turning points, childhood/ adult memories, major loss, and a spiritual/religious experience. In a study conducted in the US on emotionally valent episodes among persons with SUD, the occurrence of redemption sequences as positive meaning-making in one's nadir point texts, together with positive meaning-making in high point texts, were indicative of enhanced well-being (Cox & McAdams, 2014).

The episodes used in this study were translated by the authors and were the responses to the following questions (the first sentences are quoted verbatim from the original):

- **High point**. Please describe a scene, episode, or moment in your life that stands out as an especially positive experience. This might be the high point scene of your entire life, or else an especially happy, joyous, exciting, or wonderful moment in the story (…)
- **Low point**. The second scene is the opposite of the first. Thinking back over your entire life, please identify a scene that stands out as a low point, if not the low point in your life story (…)
- **Turning point**. In looking back over your life, it may be possible to identify certain key moments that stand out as turning points—episodes that marked an important change in you or your life story (…) (McAdams, 2007, p. 2); for further details, please see McAdams (2007)

6.3.3 Procedures

In this research phase, FLI was conducted when respondents entered treatment after detoxification. Basic sociodemographic data were also collected. The interview was repeated a year later. FLI was conducted in the respondents' own language, Hungarian. Following the phenomenological tradition by staying close to the data with a strong focus on the respondents' unique experiences and meaning-making enables the researcher to identify the potentially relevant themes and thematic connections when studying an unexplored phenomenon. For the

analysis, we used Narrative Oriented Inquiry, which, with its pluralistic approach, is a flexible qualitative framework enabling case-based, idiographic approaches and cross-case comparisons (Hiles & Čermák, 2013; Kiss et al., 2022). This analysis, a combination of theoretically established and explorative directions, utilises the fabula/sjuzet differentiation as an analytical tool. Fabula describes the events and themes (what exactly is told), and sjuzet, the way the stories are told (Hiles & Čermák, 2013). After reading the narratives, we decided to focus on the emotionally valent nuclear episodes (high point, nadir point), an approach by Cox and McAdams (2014), and on the turning point, a recurrent topic in the studies on recovery. The analysis involved parallel readings, re-readings of the episodes, and repeated discussions between the authors. As a concluding step, we used ATLAS.ti 8.3 (2020), a tool for qualitative data analysis, to make our work more robust and transparent and the results easily comparable.

6.4 Results

This section summarises the major changes in the respondents' perspectives. We also provide brief quotations mirroring the respondents' lived experiences and then interpret and discuss these. Tables 10-12 summarise the main results, comprising the key contents and the changes in the three nuclear episodes between the first and second interviews.

6.4.1 Changes in high-point episodes

Table 10 shows that initially, six speakers identified high points as identical with or closely related to substance use. Chloe and Patrick (seeing drinking as "necessary" in the first episode) mentioned the birth of their own child as a peak experience accompanied by substance use. Interestingly, both Rory's and Zach's initial high-point texts follow the narrative organisation of a recovery narrative (a personal growth story, Hanninen & Koski-Jannes, 1999), but these newly discovered, more colourful, and attractive selves are related to the use and not recovery. Positive experiences of "normie" life are also related, such as good education and having a family. However, these matter-of-fact descriptions are in contrast with the high emotional valence of Devin's and Zach's summaries on substance use. Religious spirituality is a core theme for Charles. In the second excerpt, entering the TC is often seen as a high point, and the key concepts of recovery appear. Substance use is no longer identified as a high-point experience

("was not real"), and the idea of controlled use (as in Alex's first text) is not raised either. Reflections on happy and painful moments, a broadening social network with sober fellows, and emotionally meaningful relationships are common themes in the episodes. Aidan and Alex speak about the beginnings of a new life and experiencing recovery-related spirituality. Others refer to the end of denial and self-deception—a recognition that the "more colourful self" was a false one (Patrick, Charles, Chloe, and Zach). Rory's narrative is rich in the prototypical elements of a hero's story, in which the protagonist successfully fights the difficulties, and his achievements are validated in the new environment. This finding is similar to the results of a narrative study involving experts by experience by Kiss et al. (2022). Speakers are more reflective and self-reflective, also establishing links between past and present experiences and future anticipations. In the second high point episode, several speakers gave a more balanced and realistic evaluation, mentioning some negative aspects of a generally positive experience. Taking responsibility for others is another new theme (Patrick and Pete). When speaking about reconstructing his relationship with his elder children, Patrick noted the relational distance and interpreted it as a natural consequence of his former use. Devin mentioned his fears, and Archie reflected on his traumatising relationship with his father. However, these negative experiences did not compromise the overall positive value and did not transform the high point story into a sequence of contamination (Cox & McAdams, 2014).

Table 10.

Major changes in the fabula/sjuzet in high point excerpts in the 1st and 2nd interviews

Patient	1st interview	2nd interview
Aiden	being clean, works, mother helps/ "*it* (high point) *is now"; "at the top"*	completing treatment, changes/chances in life, wide social network/ *"this gives me goosebumps"; "another chance in life"*
Patrick	first son's birth/mentioning the exact date and his attempt to reduce drinking/ *"a child will be given in my hands, and I cannot wabble"; "surely I drank a little as I was so excited"; "I drank more than necessary."*	a visit to his kids/self-reflection: *"the elder son was a bit distancing himself from me, but it was my fault and I have to work hard to prove…"*
Rory	substance use (SU) / *"bad direction";*	own accomplishments: leaving the

	"from my grey self into a much more colourful self"	TC and entering the halfway house/ *"my fellows were waiting for me (...) my happiest moment so far."; "I was even crying"; "I stepped out of the house as, so to say, a winner."*
Charles	A pilgrimage to El Camino /absolution, catharsis *"after the first whirlpool"*	returning to TC/self-reflective, committed: *"has changed a thousand times since last year"; "my genuine way"; "such a good place"*
Devin	SU/ *"the first shot gave me such, such a good feeling that, that, that, that I cannot describe it"; "the most, most, the best, the most liberating, the most joyful, the most enhanced, the warmest, the most, the best."*	entering rehabilitation/self-reflection: "*then, I did not think that it was the best thing, but I had fears"; "this is where change began, the whole thing, that is, my life."*
Chloe	romantic love, son's birth/ *"it was wonderful when I could hold him in my hands"; "I was completely out."*	son's birth/self-reflective: *"I was using. I could not really experience that happy moment."; "I missed it because I numbed it with drugs."*
Alex	a satisfactory life, meeting own needs, working, own home, girlfriend; controlled use/ *"I felt like a king. I did not need the substance."*	a satisfactory life by meeting own needs, happy moments of life; being related/more emotional and spiritual: *"I have life, I have feelings, I have a meaning in life."*
Pete	own family/speaking about the future *"I do not want to see in my daughter's eyes that Daddy is drinking again."*	becoming a father again/responsible parenting: *"not like before"; "I can become a responsible father now"; "see the world differently"*
Zach	SU/reflecting on the transformation of previous self: *"it gave me what I had always wanted to become"; "high-spirited, open, talkative, determined, self-assured" "easy-going with women"*	SU, cool life/ reflecting on the illusion: *"this was just a dream, this was not real"; "I felt as if I were God. Lots of money. Always drugs. Always a drink in my hand."*
Archie	admitted to a good school/ *"What else should I tell you?"*	being with the mother, a momentary relief from father's physical and psychological abuse/ more emotional and reflective: *"I could see my mother and I hugged her, and this was one of my happiest moments"; "I*

	was entirely lost when I was with my father and my life was miserable."

6.4.2 Changes in nadir point episodes

In the first nadir point episodes (Table 11), speakers usually reported problems associated with substance use or a traumatic event before the onset of use. Some respondents told a different second story; for example, Aiden mentioned a traffic accident first, but his second story was about his own role as a perpetrator in a family conflict leading to violence, with his children witnessing the event. For Rory, rejection by his former friends made him come face to face with the fact that he was no longer acceptable to his former classmates as a heavy user. The same speaker's grief experience in the second episode—the loss of his father and the guilt he felt about it—is at a much deeper emotional level. Alex's initial story, a chaotic report on a party experience, is also in sharp contrast with the consequences of the extreme parental neglect he experienced as a teenager. These speakers could share a deeply personal story of the losses they had suffered and the shame they had felt. The three stories seem to be the ones that the respondents were not able to relate to a year before. Others, such as Patrick, Charles, Devin, Chloe, Zack, Pete, or Archie, told the same or a very similar story, but this time they could share more details, identifying and describing their own painful emotions. They took responsibility for what they had done— or had missed to do. They could reflect on their own aggression and the harm they had caused to others and on the emotional numbness related to addiction. They could speak about their previously suppressed grief experiences and suicidal ideations accompanying their substance use.

Table 11.

Major changes in the fabula/sjuzet in low point texts in the 1st and 2nd interviews

Patient	**1st interview**	**2nd interview**
Aiden	SU-related accident, a broken car and hospital treatment/ *"this is the end" "I will never understand", "cannot delete"*	own aggression, beating his wife while his kids were around/self-reflection: *"an unarticulated beast"*
Patrick	aggression, police intervention/both an	aggression, police

	aggressor and a victim; severe injuries; prison/mentioning the contrast with his upbringing, now *"a beast"*	intervention/remorseful, reflective, and more responsible: *"I did not even know where I was"; "that policewoman was a family mother of two kids"; "scary"; "nothing worse could have happened"; "proud to get out of this"*
Rory	loss of friends, blocked by them on social media*/ "while I was lapsing they were building their lives"; "they were distancing themselves from me and the lowest point was the why"*	father's death, grief, suicidal, emotions as guilt, shame and sadness/ a result of drug use is missed opportunities to be with his father for the last time: *"I was not even here to say goodbye to him."*
Charles	raped/ *"this is what I deserve, I am ashamed of coming to this, I am contemptible"; "associations of hell"; "with a complete stranger"*	bad sexual experience (same story)/ *"unfeeling"; "Sodoma"; "the worst thing was that it did not give me anything"*
Devin	sex worker/ *"the worst, the biggest, that, that I was careless enough to sell my own body that I should appreciate the most."*	substance-related way of life/mentioning more consequences: *"five of us in one room, she is pregnant, I'm using bioweed, from morning to evening, sleeping, not working, not doing anything."*
Chloe	neglecting mother/ *"my little boy was taken away from me for the second time now"; "I have not visited him for two weeks."; "that fucked bioweed"; "I hate the* (nation) *for making this stuff."*	the childcare service takes her son; moves to a dealer, SU, victim of sexual abuse, /self-reflective: *"I did not even know which planet I was on."*
Alex	bad company, others abusing his girlfriend at a party/ *"17th, last week"; "must have been a different type of crystal as it made me very aggressive";" I will either get mad or become a murderer, or dead, or a prisoner"; "you cannot believe a user"; "I do not believe myself."*	experiencing extreme parental neglect as a teenager; homeless, starvation, isolation/ reflecting on the loss of major social identity elements (education, family connections): *"failed at school and failed in life."*
Pete	major loss, grandfather's death/ *"I miss him so much, we have experienced so much together, and he*	major losses, his grandfather's and friend's death/ *"I forgot to tell you that I was his carer (...) I could stop*

	has suffered a lot"; "I missed him. And I bought something to drink."	*using for six months, I think."*
Zach	family-level child protection intervention because of his use (a threat to take his little sister); parents want a divorce; lives alone and as a homeless while an adolescent/ *"They made me live in the street and my mother said that she would not sacrifice two children for one"; "I was revengeful (...) wanted to execute my family" "the substance took control over me."*	a homeless, other people are ashamed of him/self-reflective, mentions many different losses; understands family reactions: *"I was spending Christmas alone with a bottle of wine and some designer drugs. And I was thinking about suicide"; "Self-pity makes me tolerate all these and use."; "no other way out of using but suicide" "always blaming others" "I had to use because I was blaming myself."*
Archie	mother's death, he was abroad/mentions the event but does not speak about emotions.	mother's death, missing leave-taking/very emotional, focussing on the loss: *"she had deceased just a couple of hours before we could arrive home"; "the only person who stood by me, always" (...) I did not have the chance to hug her"; "she asked my brother where I was. She was looking for me."; "It was very painful, and I was only 14."*

6.4.3 Changes in turning point episodes

In the turning point episodes (Table 12), speakers either mentioned various events related to substance use or their first attempts at recovery, which might imply that they were at different stages in the recovery cycle when entering treatment. Initial help-seeking or previous treatment attempts often changed the user's perspective and interfered with substance use. Confrontation with the potential consequences also appears in the excerpts, as, for example, in Pete's recollections on a friend's NPS-related death or the ankle monitor Archie had to use. Patrick's hopes for controlled use, a way back to recreational drinking, represents a common idea of dependent persons—one that they usually give up in the ongoing recovery process. A year later, the turning point was entering the TC and/or progressing from an initially ambivalent phase toward a growing commitment to the therapeutic program. These second stories are often about

asking for help. A deep change, a choice between life and death ("second chance," "clean or die," "this is when all 'me' begins," etc.) is present in almost all the cases. One respondent, Pete, defined change as a developing ability to experience and value everyday realities. Taking responsibility for their own lives is also a common theme for most respondents. Mentioning the exact dates (Aidan, Rory, and Pete) is telling about the emotional significance of the event. It is worth noting that Alex instinctively used the 24-hour focus (a practice of twelve-step groups) to stay alive and cope with his suicidal thoughts.

Table 12.

Major changes in the fabula/sjuzet in turning points in the 1st and 2nd interviews

Patient		**2nd interview**
Aiden	signs of mother's, and others' trust; work; mother bought him a car, but he also achieved a lot/ *"my life has changed entirely."*	entering the TC/mentions the exact date: *"this is where I got my second chance."*
Patrick	asking for help, first therapy, able to live an ordinary life, life abroad; recreational drinking/lonely life abroad as *"isolation period"*	clean or die, suicidal, first treatment was not successful, asking for help/ *"in the middle of a desert among the beasts"; "why should I go on like this?"*
Rory	grief, father's death, change of workplace/impersonal style	asks mother for help/mentions exact date/ *"this day began to bring me the change".*
Charles	parents' divorce/ *"endless pilgrimage between the parents"; "a week here, a week there"; "this was the time when I got mad."*	catharsis at a psychodrama session; leaving destructive relationships; onset of recovery/self-reflection: *"I was always finding faults with others."*
Devin	entering TC/self-reflection, liberation, *"like the first shot"*	entering TC/self-reflection, same as high point: *"from this time on, everything has changed."*
Chloe	others, including her father, got to know that she was a sex worker/blaming the father	entering the TC/ *"thinking differently"*
Alex	onset of drug use/ *"I was not even interested in the stuff before"; "I was*	suicidal; then meeting his girlfriend/ rich in recollections and reflections:

	sensitive to this."	*"I started to write a suicide note"; "I listed my goals, why I should stay alive that day"; "I and my father could not even talk to each other unless we had some beer on the table."*
Pete	physical deterioration, substance-related death of a friend, leaving behind his daughter/ *"my body is in ruins"; "he used a stuff (...) I think bioweed (...) this quantity of poison, he just went home and died"; "she* (the little girl) *is running to the grave with a bunch of flowers."*	completing treatment/mentioning the exact date *"I can be happy because the sun is shining"; "I can be a father to my daughter, and they trust me enough to leave her alone with me"; "a new life"*
Zach	first treatment/change of perspective: *"using was not good anymore"*	relapse, a self-destructive way of life, mother helps and trusts, own attempts fail, hitting rock bottom, asks for help/ *"she was hoping that it was over"; "the moment she left I bought alcohol and took the prescription drugs"; "they were shouting at me if they should call the ambulance"; "I don't want this anymore."*
Archie	ankle monitor/ *"without this, I'd be hanging around with my chums."*	from home arrest to TC/ *"my deeds have consequences"; "this is where all 'me' begins" (...) what type of person I am."*

6.4.4 Summarizing group-level changes in the three episodes

When quantifying the results, we could see that most follow-up excerpts (21 of the 30 by the 10 respondents) were about a different story in either the high, low, or turning point texts. In some cases, the storyline was essentially the same, but the narrative mode was quite different (nine of all the episodes by seven respondents). This included, among others, a marked increase in reflections, understood here as connecting one's own or others' emotions and behaviour to life events and experiences. In the first interviews, non-reflected sequences of actions and events

were related, usually in a chaotic manner. Blaming others for one's fate, unresolved traumas, such as death and grief, and identifying oneself as a victim of substance use and of other people were characteristic of the texts. First attempts at entering treatment were also related. Contrastingly, the second excerpts were about deep changes in life (in 12 excerpts by eight respondents). Commitment to therapy also appeared in six episodes by five interviewees. In the 30 excerpts by the 10 respondents before therapy, we could identify four occurrences of reflections on the participant's own behaviour by three respondents. In the follow-up interviews, 18 occurrences by nine speakers were coded. Initially, reflections on the respondent's own emotions were presented in five excerpts by four respondents. After one year, this was the second most frequent content, with 15 occurrences in nine of the cases. These reflections included a more elaborate view of past relational losses, grief, drug use, and suicide attempts. Reflecting on others' situations and parallel efforts to reconstruct one's relationships were entirely missing from the first interviews but appeared in the second narratives, with five occurrences/four persons of the first one (reflecting on others) and eight occurrences/six persons of the second one (reconstructing relationships). Figure 9 is a summary of the results. The arrow indicates the direction of the changes during the first year.

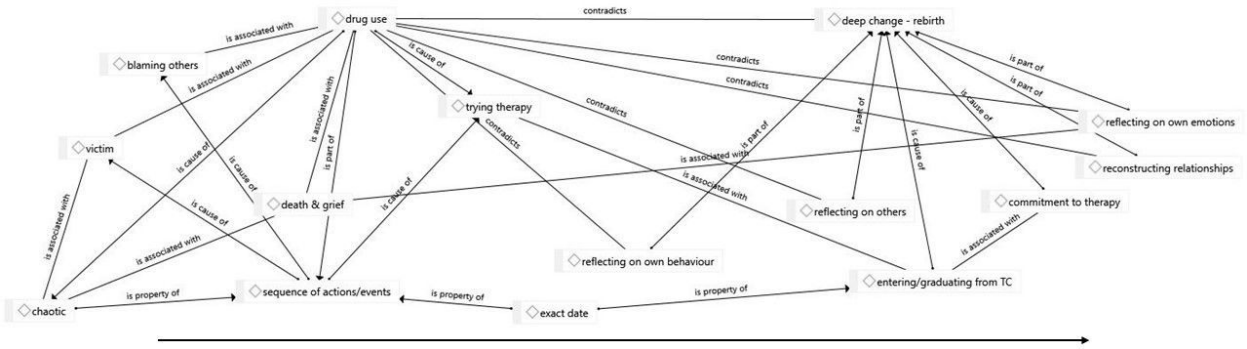

Figure 9: Changes in the themes and narrative mode

6.5 Discussion

This research phase used NOI (Hiles & Čermák, 2013) to explore changes in NPS-user polydrug-dependent persons' narratives during early recovery as they were working through the recovery program and progressed from their preparations to actions and reflections. In light of previous results on the etiological role of psychological trauma in SUD (Van den Brink, 2015), also supported by our research, NPS use corresponds to re-victimization. Respondents' experiences could meet the rigorous definition of psychological trauma by DSM-5 (Pai et al., 2017). This population suffered severe traumas, such as the loss of a parent at an early age, neglect and abuse, criminalisation, sex work, rape, homelessness, social isolation, aggression, and severe mental and physical conditions associated with drug use. These traumatic experiences existed either as inner narratives in the domain of the not-yet-said when the respondents entered treatment or their first stories were chaotic, self-centred, and polarised. Balanced reflections were missing. These features indicate the high emotional significance and low levels of integration of the traumatic experience, which explains speakers' inability to structure and narrate their life stories adequately. Previous studies found that the appearance of growth meanings was related to enhanced well-being and more adaptive emotion regulation strategies (Cox & McAdams, 2014; Pasupathi et al., 2015). In this research phase, respondents were able to restructure the disorganised and dissociated narratives that had existed only as inner narratives. Some speakers mentioned exact dates in their texts, conforming themselves to 12-step storytelling traditions. This is how they designated the boundary between the addict self as a "damaged self" or "spoiled identity" as in Kassai et al. (2017, p. 1048), or a "beast" as a respondent's self-identification in the current study, and the sober, recovering, new-born self, more ready to cope with life's challenges. The recovery journey is unique and cannot be described as a simple linear movement between the different stages. As relapse is frequent in persons with SUD, respondents' nuclear episodes may reflect varied levels of commitment to treatment. At the beginning of the treatment, substance use was strongly attached to high-point experiences in life, even if ambivalence was present. However, the turning point stories, predominantly negative events in the first excerpts, were exchanged for positive experiences and commitment to treatment. Speakers mentioned few relationships in the first episodes, and the social connections they reported were either fellow users or close family members. Most low-point stories were about substance use-related personal

losses or betrayals. A year later, a healing social network was formed, and sober fellows, friends, and colleagues populated the recovering persons' lifeworld. This is a finding that Costello et al. (2020) could also identify in their study on early recovery. In their second nuclear episode, the respondents related substance use to their other difficulties in life. Changes in the narrative mode included more emotional and self-reflective content. Several studies have concluded that thematic and stylistic changes in one's narratives are parallel to transformations in mental states and identity (Cox & McAdams, 2014; Pasupathi et al., 2015; Pennebaker et al., 2003; Stelzer et al., 2019; Stephenson et al., 1997). In a study on a non-clinical sample by Pennebaker and Smyth (2016), expressing and reflecting on trauma-related contents and on the accompanying emotions have resulted in marked and sustained positive changes in respondents' physical and mental health—even if expressing was initially painful for the participants. Further, naturally switching between perspectives when relating a traumatic experience has led to marked improvements in physical and mental health (Pennebaker & Smyth, 2016; Seih et al., 2011). Reflections on others' emotions and behaviours and efforts to reconstruct interpersonal relationships were key contents in the second nuclear episode. Respondents were willing to consider other people's perspectives, conforming themselves to shared social realities. These changes can best be described as developments in mentalisation, an ability to assess, interpret, and adequately respond to others' and our own mental states and connect these to our experiences (Fonagy et al., 2002). As a result, guilt and shame were exchanged for responsibility, and respondents could accept their imperfections. Kassai et al. (2017) identified salient differences between NPS users' meaning-making processes and experiences and those of the users of classical substances at the beginning of their treatment.

The results of this longitudinal study suggest that NPS users with polydrug dependence can learn to utilise the traditional narrative resources of sober communities, most importantly, the AA story (Hanninen & Koski-Jannes, 1999). Though the AA story seemed dominant in this study, elements of the personal growth story, love story, co-dependence story, or mastery story also appeared. In the active phase of their addiction, these patients used a variety of substances; now, as persons in recovery, they combined the narrative elements of the different recovery stories. With NPS users, the drugs, the patterns of use, and the initial experiences differ. However, the underlying problems of dependence and subsequent constructive meaning-making processes are similar to those of the users of classical substances. Their recovery processes can

be interpreted as post-traumatic growth involving the re-evaluation of major life events and people, the appreciation of everyday pleasures in life, and understanding oneself more (Ogilvie & Carson, 2022).

6.6 Limitations, implications and future directions

The strengths of this research are its novelty, a highly specific sample of persons who are difficult to reach, the respondents' confirmed NPS use and abstinence to eliminate self-report bias (McKernan et al., 2015), the interview scheme facilitating in-depth explorations, and a longitudinal approach. Patterns of use—NPS use embedded in polydrug use—is consistent with a recent finding by Higgins et al. (2021). This may be a limitation, but perhaps a fact of life that researchers must cope with. Respondents in this sample used different types of NPSs, classical substances, prescription drugs, and alcohol in a chaotic manner, as patients with severe forms of SUD often do. Further, it was difficult to judge respondents' exact stage of recovery, as it is a cyclic process, and NPS use, with its volatility and unpredictable consequences, probably added to the confusion. The age range was relatively broad. With all these constraints, the results of this research may add to our understanding of recovery from NPS-related polydrug dependence.

Our results suggest that the long-term treatment needs of patients with NPS dependence—a form of polydrug dependence—are similar to those of the users of classical substances. Recovering persons in this research could utilise the narrative resources that enabled them to learn and adopt a mentalising stance, a combination of empathy and mindfulness (Fonagy et al., 2002).

Further research, preferably involving larger and international samples enabling cross-country comparisons, is necessary to investigate the recovery processes of this specific population. Controlled trials could be convincing, but in such cases, researchers would face many practical difficulties due to the chaotic nature of NPS use and the confused patterns of recovery with frequent episodes of relapse. Further, those not in recovery are usually not motivated to participate in a research project. Case studies to evaluate long-term advances in recovery from NPS use could also be utilised as a complementary in-depth research method.

7. Main Conclusions

This dissertation has explored some psychological, psychopathological and social characteristics of NPS users, employing strict exclusion criteria and biological testing to eliminate the distortions of self-reporting. The two main types of substances were SCB and SCH, the most popular NPS groups in Hungary, but polydrug use was common in the sample, indicating that NPS users who reached the level of addiction do not have a drug of choice anymore. The majority of research subjects used multiple drugs, with preferences ranging from both new and traditional psychoactive substances, both legal and illicit.

Their socio-economic status was close to the domestic average. More than half of the subjects experienced material deprivation, but many had an adequate level of education. Parental substance use, in this particular sample, both parents' alcohol use exceeded the average. It is a source of traumatisation but also indicates a transgenerational transfer of coping patterns.

This study focussed on the role of trauma and the management of emotions. Respondents' experiences could meet the rigorous definition of psychological trauma by DSM-5 (Pai et al., 2017). This group has experienced severe traumas, including the early loss of a parent, neglect, abuse, involvement in criminal activity, prostitution, sexual assault, homelessness, social isolation, aggression, and mental and physical health issues related to substance abuse. These factors demonstrate the profound emotional impact and disintegration resulting from traumatic experiences, which can make it difficult for individuals to articulate and contextualise their personal narratives. A self-destructive pattern is markedly present in the sample. Our results have supported that NPS use, like the use of classical substances, seems to be characterised by specific problems in emotion regulation and is related to psychological traumatisation. Users do not seem to self-medicate their emotional dysfunctions in a traditional way, choosing a specific NPS according to the problem type.

Individuals who could maintain their recovery were able to reorganise their fragmented and disconnected personal narratives. Negative experiences were replaced with positive ones, and a commitment to treatment was manifested. Recovering addicts' social networks have also changed with the predominance of healing relationships in the second interviews. The narrative mode underwent changes that involved more emotional and self-reflective content. Further, the longitudinal study suggests that individuals with polydrug dependence who use NPS can learn to

utilise the traditional narrative resources of sober communities, with the AA story being the most significant resource (Hanninen & Koski-Jannes, 1999).

While NPS users have chaotic patterns of use and varied initial experiences, they share the common underlying problems of dependence and the subsequent constructive meaning-making processes seen in classical substance users. Due to the volatility and unpredictable consequences of NPS use, it is perhaps more challenging to determine a respondent's stage of recovery accurately. Recovery can be viewed as post-traumatic growth, involving the re-evaluation of major life events and one's social network, the appreciation of everyday joys, and the development of self-reflection.

8. Future research and therapeutic implications

This research's mixed methodology emphasises that language, like various human behaviours, reflects one's personality, unique life circumstances, and the accompanying social conditions. Integrating the research methods, however, was challenging as the amount of data well exceeded the frameworks of any qualitative analysis. FLI is a rich resource of information to be explored in future studies in many different directions, e.g., analysing childhood episodes in the light of a recent theoretical concept, Complex PTSD. Comparing the group of respondents with the least/most progress is another feasible possibility; however, the cyclic nature of recovery renders such grouping rather difficult. Additional research is required, ideally with larger and international samples to allow for cross-country comparisons. Case-based in-depth analyses focussing on the interrelations between all the data could deepen our understanding of the theme, and this data set would facilitate such studies.

Persons with lower levels of education and/or living in rural areas had fewer chances to be included in the sample. A future study could focus on the differences between this sample and a group of more marginalised users. The broad age range implies diverse paths and stages in the development of SUD and recovery, but reaching a more homogenous sample or more persons is much beyond the scope of a PhD dissertation.

The study did not include questions on behavioural addictions or the illicit use of prescription drugs, and only one legal substance (alcohol) was included, which again opens new research directions.

The relationship between SUD and the difficulty in managing emotions related to trauma, along with the suggestion that NPS use contributes to users' re-victimisation, was confirmed in the qualitative content analysis results in the second phase of this research. Further research comprising a larger sample could focus on the evolving pattern that involves elevations in three scales of MMPI-2, namely RCd, RC7, and NEGE.

Pharmacotherapy is difficult, as polydrug users consider prescription medication another cheap substance to be mixed with the ones they usually use or a dangerous method for self-medication to alleviate drug-induced psychotic states (Valeriani et al., 2015). Psychotherapy could target the management of emotions and the development of reflective functions as in mentalization-based treatment, an evidence-based practice in the treatment of SUD and the

accompanying conditions such as borderline personality disorder (Bateman & Fonagy, 2019). Advancement in mentalisation is the ability to understand, interpret, and effectively respond to the mental states of both ourselves and others and connect these states to our personal experiences (Fonagy et al., 2002). Roberts et al. (2022) found trauma-focused cognitive behavioural therapy (TF-CBT) beneficial when addressing SUD and PTSD concomitantly. Kang et al. (2019) found that SUD interventions, especially affect-regulation treatments, significantly reduce negative emotions and emotional distress.

Special services for women with SUD struggling with excessive stigmatisation should be introduced, as Kaló (2020) has suggested. To prevent transgenerational transfer of the problems, treating parental alcohol-related disorders and access to services for children and adolescents should be improved.

9. References

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10. Publication list

Articles related to the thesis

- Császár, F., Marta B. Erdos., Javor, R., & Kelemen, G. (2024). Narrative Means to Recovery Ends. Novel Psychoactive Substance Users in Early Recovery. *Journal of Loss and Trauma*, 1–24. **IF: 4,7**
- Csaszar, F., Marta B. Erdos., Ellis, R., Kelemen, G., & Javor, R. (2024). Novel Psychoactive Substance Use and Psychological Trauma: A Multimethodological Analysis. *Substance Use & Misuse*, 1–9. **IF: 2,1**
- Császár, F., Rebeka, J., Kelemen, G., B.Erdős Márta. (2021). Új pszichoaktívszer-használók érzelmileg telített élettörténeti epizódjainak tartalomelemző vizsgálata. *Psychiatria Hungarica*: A Magyar Pszichiatriai Tarsasag tudomanyos folyoirata. 36. 167-179. **IF: 0,32**

Oral presentations related to the thesis

- B.Erdős Márta, Jávor Rebeka, Császár Ferenc. „Itt kezdődik mindenem". Nukleáris epizódok változásai a felépülés korai szakaszában lévő új pszichoaktív szer (ÚPSz) használóknál (2023) Magyar Pszichológiai Társaság (MPT) XXX. Országos Tudományos Nagygyűlése. Pécs, HU.
- Császár Ferenc, Jávor Rebeka, B.Erdős Márta. Paradigmaváltók? Új pszichoaktív szerhasználók demográfiai háttere és élettörténeti traumái (2023) Magyar Pszichológiai Társaság (MPT) XXX. Országos Tudományos Nagygyűlése. Pécs, HU.
- Császár Ferenc, B. Erdős Márta, Jávor Rebeka. "Early recovery from novel psychoactive use dependence" (2023). QRMH9: Qualitative Research in Mental Health Conference in Budapest, Budapest 2023.08.30-2023.09.02, HU.
- Császár Ferenc. Obesity: A perspective of dependency (2019). Kanizsai Dorottya Kórház Tudományos Ülése (2019.04.11); Nagykanizsa, HU.
- Császár Ferenc. NPS: myths and facts (2019). V. Határon Túli Konferencia Dr. Tomka Miklós Emlékére, Szenvedélybetegségek, (2019.04.12-04.14), Dobranak, SI.

Articles unrelated to the thesis

- Balint, I.B., Csordas, J., Csaszar, F. Is endoscopic approach superior to laparoscopic surgery for gastric plication in terms of complications and efficacy? A systematic review including meta-analysis. *Minerva Surg* 2023;78:283-92. **IF: 1,4**
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- Farics, A., Csaszar, F., Csordas, J., Manfai, G., Bálint, I.B. Trend Analysis for the Treatment of Incompetent GSV. *Surg Insights [Internet]*. 2022 Apr. 23 **IF: 0,7**
- Balint, I.B., Csaszar, F., Somodi, K. et al. Is duodeno-jejunal bypass liner superior to pylorus preserving bariatric surgery in terms of complications and efficacy?. *Langenbecks Arch Surg* 406, 1363–1377 (2021). **IF: 2,895**

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12. Annexes

12.1 Sociodemographic Questionnaire

- **sex**: male/female
- **age**:
- **self reported abused drug(s)**:
- **marital** status: single/married/divorced/widowed
- level of **education**: primary school/secondary grammar school/secondary vocational school/college/university/post-grad university
- **occupation**: blue collar worker/white collar worker/intellectual
- occupation specifically:
- **place of living**: farm/village/town/metropolitan area
- parents' **drug abuse**: yes/no
- early **loss** of parents: yes/no
- parents' **divorce**: yes/no
- **foster care**: yes/no
- **parents' trade or profession**: Mother: Father:
- **income** related questions:
    - any problems in the last 12 months to pay their rent, mortgage or utility bills? **yes**/no
    - any problems in the last 12 months to keep their home adequately warm? **yes**/no
    - any problems in the last 12 months to face unexpected expenses? **yes**/no
    - any problems in the last 12 months to eat meat or proteins regularly? **yes**/no
    - have you been on holiday in the last 12 months? yes/**no**
    - do you own a television set? yes/**no**
    - do you own a washing machine? yes/**no**
    - do you own a car? yes/**no**
    - do you own a telephone? yes/**no**

- the first four questions count positive if answer is positive, last 5 questions count positive if answer is negative. In case more than three positive answers occur, the candidate is put into the ”low-income” subgroup

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Új pszichoaktívszer-használók érzelmileg telített élettörténeti epizódjainak tartalomelemző vizsgálata

Császár Ferenc[1,2], Jávor Rebeka[3], Kelemen Gábor[3], B. Erdős Márta[3]

[1] PTE ÁOK, Klinikai Idegtudományi Doktori Iskola
[2] Szigetvári Kórház Pszichiátriai Rehabilitációs Osztály
[3] PTE BTK, Társadalmi Kapcsolatok Intézete, Szociális és Közösségi Tanulmányok Tanszéke

Összefoglalás: *Bevezetés: Az új pszichoaktív szerek (ÚPSZ) használata hazánkban az utóbbi évtizedben komoly nehézségeket okoz az addiktológiai ellátórendszer számára. Az első néhány évben a kutatások a korábban ismeretlen szerek típusaira, a használat kiterjedtségére összpontosítottak, majd a szerhasználók társadalmi-kulturális háttere, személyisége, élményvilága is vizsgálatok tárgyává vált. Saját kutatásunkkal ehhez az utóbbi hagyományhoz csatlakozunk.*

Módszerek: Kutatásunkban egy szociodemográfiai jellemzőkre irányuló kérdőíves vizsgálatra, valamint strukturált interjúk érzelmileg telített epizódjainak integrált módszertan szerinti, kvalitatív és kvantitatív tartalomelemzésére alapozva vontunk le következtetéseket. 42 újonnan kezelésbe vont, a szerhasználatra előzetesen tesztelt ÚPSZ-használó adatait elemeztük. A kérdőívből származó adatokat leíró statisztikai módszerrel, a kvantitatív tartalomelemzés adatait összetartozó mintás t-próbával vizsgáltuk. Viszonyítási alapként megadtuk a Magyar Nemzeti Szövegtár személyes szövegeket tartalmazó alkorpuszának százalékos adatait. A kvalitatív elemzés során a szerhasználók csúcspont és mélypont szövegeinek jelentéshálóját alakítottuk ki.

Eredmények: Bár az általunk vizsgált személyek nem a mélyszegénységben, súlyos anyagi deprivációban élő csoportok tagjai, tartalomelemzésünk körükben is alátámasztotta a szerhasználat szélsőségesen öndestruktív jellegét. Az érzelmileg telített mélypont-szövegek jellemző tartalmai a csapdába esettség, a kudarc, a viktimizáció, a „sose lesz vége" élményvilágát jelenítik meg. A funkció-szavak – különösen a mélypont-szövegekben – az öndestrukcióra utaló negatív kódra jellemző gyakoriságokat mutatják, a szükségszerűség nyelvi elemeinek egyidejű erősödésével, az elhárításra utaló távolító, általánosító elemek csökkenése mellett.

Következtetés: Eredményeink a gátolt menekülés és a fájdalomkiáltás (cry of pain) elmélete szerint értelmezhetők. Megerősítik és árnyalják hasonló kutatások korábbi eredményeit, új szempontokat adhatnak az ÚPSZ-használók kezeléséhez, egyúttal előtérbe helyezik a tartalomelemző vizsgálatok relevanciáját klinikai területen.

Kulcsszavak: *új pszichoaktív szer; életút-interjú érzelmileg telített epizódjai; öndestrukció; negatív kód; gátolt menekülés; cry of pain; integrált módszerrel végzett tartalomelemzés*

Summary: *Introduction: Novel psychoactive substance use (NPS) has proven a challenge for the domestic addiction treatment system. In the first few years, studies focused on types of substances and prevalence. Recently social and cultural background, personality/identity issues and experiences of NPS users have been thematised in scientific studies. Our study is connected to the latter tradition.*

Methods: Our study comprised a questionnaire on sociodemographic factors, and a mixed method content analysis of highly valenced episodes of life interviews, combining qualitative and quantitative approaches. We analysed the data obtained from 42 NPS users entering treatment. NPS use was confirmed by preceding drug tests. We used descriptive statistical methods to analyse questionnaire data, and employed paired-sample T-test to analyse the data from quantitative content analysis. The text corpus (personal texts) of the Hungarian National Text Resources was selected as baseline to compare percentages. In our qualitative analysis, we outlined a conceptual network on high point and low point episodes of the life story.

Results: Extreme poverty and deprivation was not characteristic of the current sample as a whole. Our content analysis supported previous results on the highly self-destructive nature of novel psychoactive substance use. Major results of the content analysis of highly valenced low point texts were experiences of entrapment, failure, victimisation and never-ending troubles. The use of function words, especially in low point texts, bore marked resemblance with „negative code" frequencies, also indicating a self-destructive attitude. Parallel, elements related to inevitability have increased significantly, while words referring to defence (generalizations and distancing) decreased.

Conclusion: We interpret the results in terms of the arrested flight/cry of pain model. The results support and add to the conclusions of previous studies on the highly self-destructive nature of NPS-use and may introduce new aspects into treatment. The study is persuasive on the relevance of content analysis in clinical areas.
Keywords: *novel psychoactive substances; highly valenced episodes of the life story interview; self-destruction; negative code; arrested flight; cry of pain; mixed methods content analysis*

Bevezető

Kutatásunkban új pszichoaktívszer-használók narratíváinak egyes, érzelmileg telített epizódjait elemezzük. Az új pszichoaktív szerek (ÚPSZ) terjedése és a szerhasználók kezelése az elmúlt tíz évben számos nehézséget vetett fel Magyarországon. Szerhasználók új csoportjai jelentek meg: így például ugrásszerűen nőtt meg a szerhasználat a drogproblémáktól korábban kevésbé érintett elzárt településeken mélyszegénységben élők között. A vidéki mellett a városi szegregátumokban, gyermekotthonokban, javítóintézetekben, és a hajléktalanok körében, egyéb súlyos szociális problémákkal szövődve jelentkezik (1–4).

Az új használói csoportok megjelenése mellett korábban klasszikus legális és illegális szereket használó személyek tértek át ezekre az olcsóbb, könnyen beszerezhető és a kínálatcsökkentés szempontjából is problematikusabbnak bizonyuló szerekre. Az ÚPSZ használata során az egyes szerveket károsító hatásokon túl felléphetnek akut pszichotikus tünetek, fennáll a túladagolás veszélye, gyakori az auto- és a heteroagresszió, és nőtt a halálozás kockázata (3, 5).

A terjedés gyorsaságára jellemző, hogy 2014-re a Nemzeti Drog Fókuszpont (6) adatai szerint a kezelést igénylő szerhasználati zavarok esetében első helyen ugyan változatlanul a kannabisz állt (úgy is, mint könnyen azonosítható drog), emellett azonban a kezelésbe vont személyek összességének 26%-át a szintetikus kannabinoidok (SCB), 21%-át pedig a designer stimulánsok használói adták. 2015-re a szintetikus kannabinoidok az életprevalencia adatok alapján a kannabisz és az ecstasy után a harmadik legnépszerűbb szernek bizonyultak; az új stimulánsok pedig az ötödik helyen szerepeltek (7). Egy 2017-ben publikált kutatás (8) fecskendőkben található maradványok vizsgálatával már több mint 200 eltérő szert mutatott ki 17 hónap alatt; az esetek 57%-ában szintetikus katinont. A legfrissebb adatok alapján a kezelésbe vontak körében összesen 16,1 százalék volt ÚPSZ használó. A populáció átlagéletkora 29 év, 89,5%-uk férfi, 10,5% nő. Kezelésbe vonásuk változatlanul nehéz, annak ellenére, hogy az ÚPSZ-t elsődleges szerként választók csaknem fele (47,9%) intenzív használó, és szerhasználatuk magas kockázattal jár (3).

Kaló és Felvinczi (9) kutatása két, egymástól a szerhasználatot tekintve jól elkülöníthető csoportot azonosított. Míg a szintetikus katinonhasználók („kristály”, „zene” stb.) elsősorban a peremhelyzetű csoportok tagjai voltak, addig a szintetikus kannabinoidokat (főképpen: „biofű”, SCB) több társadalmi rétegből és eltérő indíttatásból, így például társas hatásra, az SCH-ról (szintetikus katinonok) való leszokási kísérletként, vagy az egészségre gyakorolt feltételezett pozitív hatásai miatt használják (3). Ezeknek a szereknek az esetében is megjelenhet a „pszichonauta”, a határokat áthágó-kitágító attitűd, életstílus (10).

Egy nemrégiben lefolytatott, hat európai országra kiterjedő átfogó vizsgálatban az ÚPSZ-használókat a szerhasználat jellemző színterei szerint csoportosították, megkülönböztetve a peremhelyzetű, a szórakozóhelyi (night-life) használókat, valamint az online szerveződő csoportokat (4, 11, 12). A magyar és az ír mintában felülreprezentáltak voltak a marginális csoportok tagjai, akiket intenzívebb és kockázatosabb szerhasználati minták jellemeznek (12), és akiknek esetében a használat gyakrabban és hosszabb távon vezet fizikai és mentális károsodásokhoz (4). Az ÚPSZ-használat mögött, hasonlóan a klasszikus szerek esetében tapasztaltakhoz, többféle motiváció húzódik meg: a ne-

gatív állapotokkal való megküzdés, a kíváncsiság, a társas hatások, a csoport-konformitás, vagy az élménykeresés (enhancement). A marginális csoportok esetében azonban az instrumentális használat dominál (12). *Benschop és mtsai* (11) a megelőző modellekre és empirikus kutatási eredményekre támaszkodva egy ötfaktoros motivációs modell bevezetését javasolják. A modell az ÚPSZ-használat lehetséges motivációjaként az élménykeresést, a társas hatásokat, a konformitást, megküzdést, és a tudat kitágításával való kísérletezést (expansion) nevesíti.

Az ÚPSZ-használókra vonatkozó kutatásokat több tényező nehezíti. Egy metaelemzés szerint az önbevalláson alapuló, szerhasználatra vonatkozó adatok általános megbízhatósága 42% (13, 14); a tesztelés nem megoldott: egyes szerek esetében rendkívül költséges volna, vagy nem elérhető. Emellett az ÚPSZ-használók – mint az illegális szereket használók általában – nehezen vonhatók be egy hagyományos, több tényező kontrollálására törekvő kutatásba. Ez többnyire a rehabilitációs vagy egyéb kezelőintézményekben történhet meg, ahol a felépülés folyamatában a szerhasználat időszakára történő visszaemlékezésre, rekonstrukciójára nyílik mód, és a szerhasználói narratíva új keretezést kap. Már nem a szerhasználó, hanem a felépülőben lévő szerhasználó gondolkodását ismerhetjük meg, aki a rehabilitációs intézmény „kulturális történettárából" (15) választja ki a számára immár lényeginek tűnő elemeket az élettörténet elbeszéléséhez.

Az ÚPSZ-használat egyes korábbi elméletek tükrében

A szerhasználattal kapcsolatos egyes korábbi magyarázatok az ÚPSZ esetében kisebb-nagyobb mértékben tűnnek alkalmazhatónak. Így például *Khantzian* (self-medication theory, SMH: 16–18) szerint a szerhasználat nem más, mint *maladaptív öngyógyítási* kísérlet, amelynek révén a használó értelmezhetővé teszi azokat a negatív tapasztalatokat – az ürességérzést, a negatív érzelmekkel való elárasztottságot, a disszociatív állapotokat, és az ezekre adott környezeti reakciókat – amelyek saját élethelyzetéből és személyiségfejlődésének elakadásaiból származnak. A szerhasználó így próbál megküzdeni azzal a visszatérő tapasztalattal, hogy nem képes felismerni és kontrollálni érzéseit, sem pedig viselkedését; reális önértékelést, valamint jó kapcsolatot kialakítani a számára fontos személyekkel. Több korábbi elmélet hangsúlyozza az érzelmi élet zavarainak jelentőségét a szerhasználat kialakulásában. *Dodes* (19) a tehetetlenség és a harag szerepét, *Director* (20) az omnipotencia átélésének vágyát, *Walant* (21) a saját éntől való elidegenedést, a korai szeparációs traumák, a bizonytalan énhatárok szerepét emelte ki. *Walant* szerint a szerhasználat funkciója a kialakuló tehetetlenség helyzeteinek átformálása, omnipotens kontrollja (21–25). Ezeknek az elméleteknek a tükrében a szerhasználat nem az eufória keresését, hanem a diszfóriától való szabadulást célozza, ebben az értelemben alátámasztva *Csák és mtsai* (1) megállapítását az ÚPSZ-használatról, amit a szerzők *túlélési* stratégiának tekintenek.

> Az érzelmek (mint pl. a szomorúság, a félelem, a szorongás, a düh, a szégyen) erőteljesen irányítják életünk számos aspektusát. Meghatározzák, miképpen szabályozzuk saját viselkedésünket, alapot adnak önbecsülésünk, identitásunk alakításához, valamint a jóllét állapotának átéléséhez. Az érzelem az emberi kapcsolatok, a kötődés valutája, a viselkedésünk irányítója, meghatározó az önmagunkról való gondoskodás képességére nézve, amelynek révén a kockázat és a veszély helyzeteiben is boldogulunk (18).

Az SMH alapján a személy éppen az általa eltervezett és *irányított kontrollvesztő,* kockázatkereső magatartás, a szerhasználat révén érzi bejósolhatóbbnak, megmagyarázhatónak, azaz kontrollálhatóbbnak saját tapasztalatait, és szabályozni tudja érzelmeit: *kontrollált kontrollvesztésre* törekszik (26). Az ÚPSZ-ek használata azonban két ponton is megkérdőjelezi az SMH egyes aspektusait. A klasszikus szerekéhez képest itt a hatás sokkal kiszámíthatatlanabb (beleértve azt is, hogy a fogyasztó gyakran azt sem

tudhatja biztosan, milyen szert vásárolt). Így az eredmény sokkal inkább egyfajta trauma-ismétlés lesz az irányíthatatlan, érthetetlen, megoldhatatlan, élethelyzeti csapdák reprodukálásával, ahol a káosz lép az ürességérzés, a vele járó reménytelenség helybe. Ez a megállapítás összhangban van *Kassai és mtsai* (27, 28) fenomenológiai kutatásának megállapításával, akik a szintetikus kannabinoid használatát egyfajta *traumaként* értelmezik.

A másik problematikus pont a szerek Khantzian-i klasszifikációjával függ össze. Szerinte egyes pszichiátriai problémákhoz meghatározott típusú szer tartozik (24, 25): így például az opiátok segítenek megbirkózni a nárcisztikus dühvel és nyugtalansággal, míg a stimulánsok a belső üresség, a depresszió, vagy az ADHD esetében lesznek a választott szerek. A depresszánsok a rigid elhárítást teszik rugalmasabba, és a társas helyzetekben tapasztalt szorongásokat kezelhetőbbé (14, 18). Ám az ÚPSZ-ek esetében egy ilyesfajta felosztás aligha működhet, mert a (gyakran azonosíthatatlan) szerek hatásai általában kevertek, kaotikusak, bejósolhatatlanok.

A kapcsolati zavarok, az érzelemszabályozás nehézségeit napjainkban leggyakrabban a *mentalizációs elmélet* keretei között tárgyalják (29–31). A korai kötődési zavarokra vezethetők vissza, és a saját, valamint mások mentális tartalmainak, érzelmeinek értelmezhetetlenségéhez vezetnek, olyan problémákkal, mint a pszichés ekvivalencia, azaz a saját perspektíva kizárólagosságának feltételezése, a teleologikus, csak a viselkedésre alapozó, vagy a „pretend" (disszociatív) mód (29). Az MBT (mentalizációs alapú terápia) jelentősége – a szerhasználati zavarokhoz illeszkedő fókusz mellett – a *terápiahűség* növelése, vagyis a szakorvos által felírt gyógyszerekkel kapcsolatos non-adherencia és polidrog használat csökkenése (3).

Koski-Jannes (32) egy korábbi, a szerhasználatról alkotott komplex modelljében arra figyelmeztet, hogy a lineáris kauzalitásra építő modellek – így az SMH és más pszichodinamikus elméletek is – túlzottan leegyszerűsíthetik a komplex emberi valóságot. Így a legtöbb modellben kevés figyelem fordul a társas, társadalmi és kulturális tényezők felé.

A vizsgálat főbb kérdései és módszere

Az érzelmi szempontból jelentős epizódok vizsgálatával számos kutatás foglalkozott (33, 34), és ez a célkitűzés állt a *Pennebaker és mtsai* által kifejlesztett LIWC számítógépes tartalomelemző program hátterében is (35). Mit tekintenek az új pszichoaktív szerhasználók életük csúcspontjának, illetve mélypontjának? Milyen érzelmi viszonyulás jellemzi az új pszichoaktívszer-használókat ezekben a helyzetekben? Miképpen kötődik e két kitüntetett pont az ÚPSZ-használathoz? Tudjuk-e tovább árnyalni, más módszerekkel is alátámasztani a traumára/traumaismétlésre vonatkozó korábbi kutatások eredményeit?

A hazai szakirodalom tükrében fontosnak tartjuk továbbá tisztázni, hogy melyek a vizsgálatba vont csoport legfontosabb szociodemográfiai és szocioökonómai jellemzői. Mennyiben jellemző körükben az anyagi depriváció? Milyen a szerhasználatra vonatkozó szülői minta?

Minta

A kutatást kezelésbe lépő ÚPSZ-használók körében folytattuk. A beválasztási kritériumok között új kórházi felvétel esetében biológiai mintából történő SCH vagy SCB kimutatást (gáz vagy folyadék kromatográfiás elemzés a PTE ÁOK toxikológiai laboratóriumában) követően kerülhetett be a felvétel során nyert adatcsomag, amelynek – többek között – egyik eleme egy szociodemográfiai kérdőív, egy másik pedig az életút-interjú. Ismételt kórházi felvétel/rehabilitációs intézménybe történő felvétel esetében 6 hónapnál nem régebbi SCB és/vagy SCH használatot igazoló toxikológiai jelentés, illetve a droghasználattal kapcsolatos diagnózis egyidejű megléte jelentette a feltételt. Kizártuk a vizsgálatból azokat a személyeket, akik:

- már több mint egy hetet töltöttek a rehabilitációs intézményben;
- kevesebb, mint 5 osztályos általános iskolai végzettséggel rendelkeztek;

- alkohol és/vagy drog okozta akut pszichózis, vagy bármely fokú mentális retardáció állt fenn esetükben.

A vizsgálat elvégzéséhez és az anonimizált adatok kutatási céllal történő felhasználásához valamennyien beleegyezésüket adták. A kutatáshoz az etikai engedélyt 7846 számon a PTE KK-RIKEB adta ki.

A kérdőívben a szokásos szociodemográfiai jellemzőkön túl (nem, iskolai végzettség szintje, foglalkozás) a szülők szerhasználatára, végzettségére, valamint a materiális deprivációra vonatkozó kérdések (36) is szerepeltek.

Életút-interjúk. Az érzelmileg telített epizódok tartalomelemző vizsgálata

A Foley Centre strukturált életút-interjúját több hasonló vizsgálatban alkalmazták (33, 37). Az interjú kitér az identitás alakulását befolyásoló életeseményekre, fordulópontokra, ezek értékelésére, valamint a személyes értékek, ideológiák alakulására. A jelen vizsgálatban a csúcspont és a mélypont, mint érzelmi szempontból jelentős epizód elemzését tűztük ki célul. Az interjúk felvételét az első szerző végezte, az anonimizálást követően az interjúk szövegének szó szerinti leírása történt. Az elemzés első fázisában hagyományos tematikus elemzést végeztünk, amelynek során a kódok kialakítása főképpen a *megalapozott elmélet* (38) hagyományainak felelt meg. Először a szöveg többszöri átolvasásával viszonylag nagy számú kóddal írtuk le a szövegek jellemző tartalmait, majd a kódokat az egymáshoz való kapcsolódásuk, és előfordulásuk gyakorisága alapján összevontuk, az egyedinek bizonyuló kódokat pedig kihagytuk az elemzésből. A kódolás iteratív folyamatában többszöri egyeztető megbeszéléseken finomítottuk az értelmezést. A kvalitatív tartalomelemzést az ATLAS.ti 8.00 (39) szoftver segítségével végeztük el, ez lehetővé tette az adatok rendszerezett vizsgálatát, a kapcsolódási pontok azonosítását, és az eredmények átláthatóvá tételét. Az interjúalanyokat minden közölt idézetben számmal jelöltük, az esetlegesen előforduló neveket kezdőbetű jelzi. Ez az exploratív, értelmező, a jelentésekre fókuszáló fázis kiegészült egy hagyományosabb kvantitatív tartalomelemzéssel, ahol egyes szavak gyakoriságát vizsgáltuk, és a kapott eredményeket, valamint ezek kapcsolatát a vizsgálat egyéb adataival, statisztikai módszerekkel is elemeztük. A magas gyakoriság miatt ezek az összefüggések jobban kirajzolódnak, mint a kvalitatív elemzés esetében, ahol egy-egy kód, pl. a „megváltás-történet” (redemption-story) egy hosszabb szövegrészhez köthető, és bár nagyon jelentős, nem éppen gyakori. Ezen túl a gyakoriság-alapú kódolás teljesen új szempontokat hozhat az elemzésbe.

A leggyakrabban előforduló szavak között számos olyan funkció-szó szerepel, amelyet a pragmatika oldaláról „procedurális” tartalomnak ismerünk, mert a megértés során egy eljárást követünk (pl. egyszerű tagadás esetében képzeletben megpróbáljuk megszüntetni az előhívott tartalmakat, az „én”-re való hivatkozás esetében pedig megkeressük a társas helyzetben az aktuális beszélőt stb.) (40). A funkció-szavak nagyon gyakoriak a beszédben, ugyanakkor használatuk alig tudatos, eltervezett, a beszédben a szubliminális percepciós vizsgálatoknál is alkalmazott 100–300 milliszekundumnyi időt igényel, olvasásnál ennyit sem, a felidézésük gyenge. A funkció-szavak közvetlenül a szociális készségeket irányító agyi területhez kötődnek, a Broca-féle területre lokalizáltak: a beszédben rögzített „eljárások” megértése egyúttal a társas-kulturális helyzetek értelmezését követeli meg (35). Bár a stílus a személyiség tartós jellemzője, megnyilatkozásainkat a pszichológiai állapotok, és maguk a témák, helyzetek is befolyásolják (35, 41–47).

Az ATLAS.ti nem tartalmaz előre beépített szótárakat, mint pl. a LIWC (35, 48) vagy a magyar NarrCat (49), de bizonyos korlátokkal – néha kisebb előnyökkel is – felhasználható egy hasonló gyakorisági vizsgálat céljaira. A szövegspecifikus szótár összeállítása során alkalmazkodhatunk az adott csoport nyelvi sajátosságaihoz. A szógyakoriság esetében a gyakorisági lista minden olyan szavát kódokba rendeztük, amely 0,10% feletti előfordulást mutatott, emellett vagy a kvalitatív vizsgálatban bizonyult

1. táblázat
A kódolt szavak aránya

Szöveg (hermeneutikai egység)	Kódolt szavak száma	Összes szó száma (példány)	Kódolt/összes %	Típus	Típus/példány %
mélypont	3 961	10 966	36	2 890	26
csúcspont	3 249	8 456	38	2 380	28

jelentősnek (pl. „rossz"), vagy megelőző vizsgálatok mutatták ki jelentőségét (negatív kód, ágencia stb.) (43, 44, 50–52). A fentiek alapján kialakított kódok pontos tartalma a 1. számú mellékletben található. E kódok alkalmazásával a szövegek kb. egyharmadát tudtuk a számítógép segítségével kódolni.

A szociodemográfiai adatok elemzését (leíró statisztika) és a kvantatitív tartalomelemzés eredményeinek statisztikai vizsgálatát (összetartozó mintás t-próba) SPSS Statistics V26 segítségével végeztük.

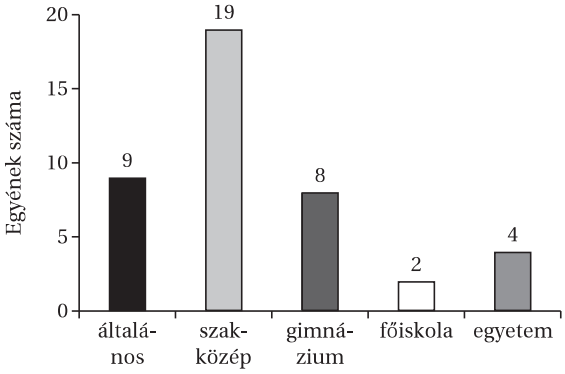
Eredmények

Szociodemográfiai adatok

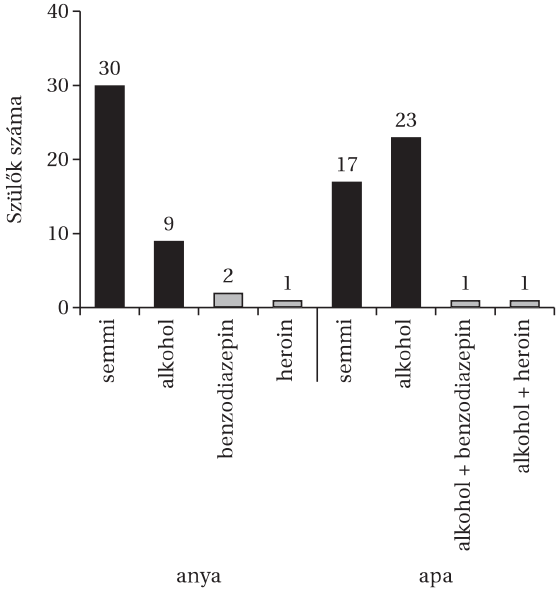
A vizsgálatban 9 nő és 33 férfi vett részt, életkoruk 18–45 év *(M=29,76; SD=7,85)*. Legtöbbjük egyedülálló *(N=36)*, négy házas, ketten elváltak. Többségük középiskolát végzett

33 személy (78,6%) fizikai, 9 (21,4%) szellemi foglalkozású. A válaszadók többsége városban (23 fő) vagy a budapesti agglomerációban (11 fő) él, faluból (7) vagy farmról/tanyáról (1) a páciensek nem egészen egyötöde származik.

1. ábra
A válaszadók megoszlása legmagasabb iskolai végzettség alapján



2. ábra
A szülők szerhasználata



A vizsgált személyek közlése alapján az anyák többsége nem volt szerhasználó (71,4%), az apák esetében más kép rajzolódik ki. Csak 17 válaszadó apja *nem* volt szerhasználó (40,5%).

A szülők legmagasabb iskolai végzettsége a szocioökonómiai státusz egy mutatója. Mind az anyák, mind az apák többsége szakközépiskolát végzett.

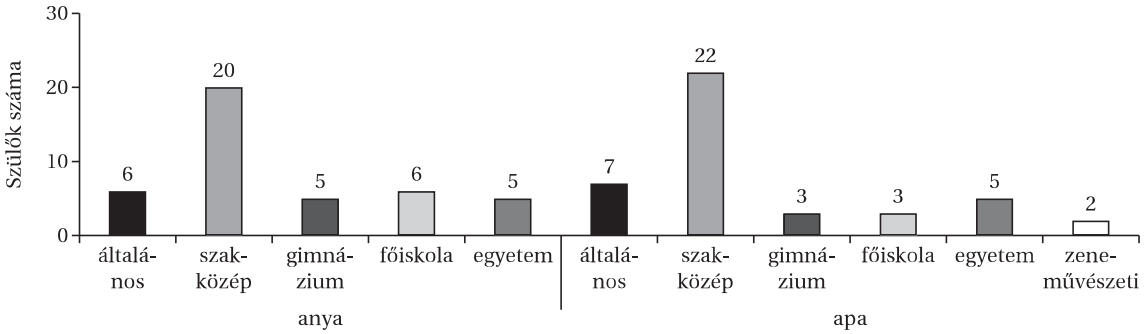
Az anyagi deprivációra vonatkozó kérdésekre adott válaszok alapján 19 személy szegénységben nőtt fel (45,2%). Összehasonlításképpen a 2018-as KSH-jelentés szerint a szegénységben élők az ország lakosságának 18,9%-át adták (53).

A szerhasználatra vonatkozó adatokat az 4. ábra mutatja.

A két leggyakoribb – az alkalmazott beválasztási kritériumokkal és az országos adatokkal összhangban – a szintetikus kannabinoidok (SCB) és a szintetikus katinonok (SCH) csoportja. A legális szer, az alkohol használata is meglehetősen általános, népszerű továbbá az ecstasy

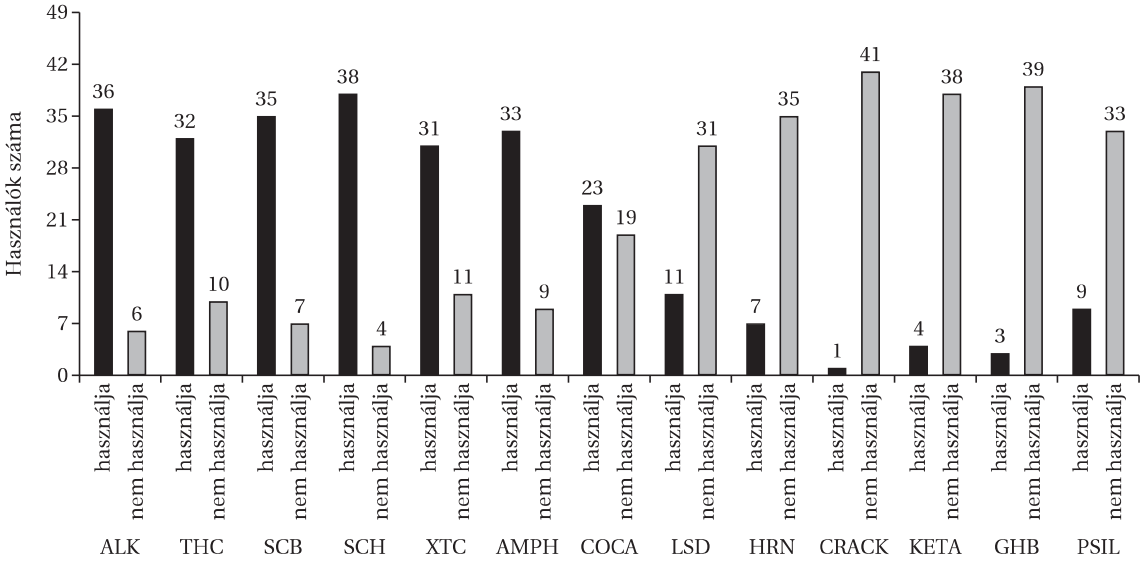
3. ábra

A szülők legmagasabb iskolai végzettsége



4. ábra

A különböző szerek használata a teljes mintában



Jelmagyarázat: (1) alkohol; (2) kannabisz; (3) szintetikus kannabinoidok; (4) szintetikus katinonok; (5) ecstasy; (6) amfetamin; (7) kokain; (8) LSD; (9) heroin; (10) crack kokain; (11) ketamin; (12) GHB; (13) pszilocibin

(XTC) és az amfetamin. Az adatokból jól látható, hogy jelentősek az átfedések, azaz a 42 fős csoportot polidrog-használat jellemzi – ahogyan ez az ÚPSZ-használók körében lefolytatott más kutatásokból is ismert (4, 12).

Kvalitatív tartalomelemzés

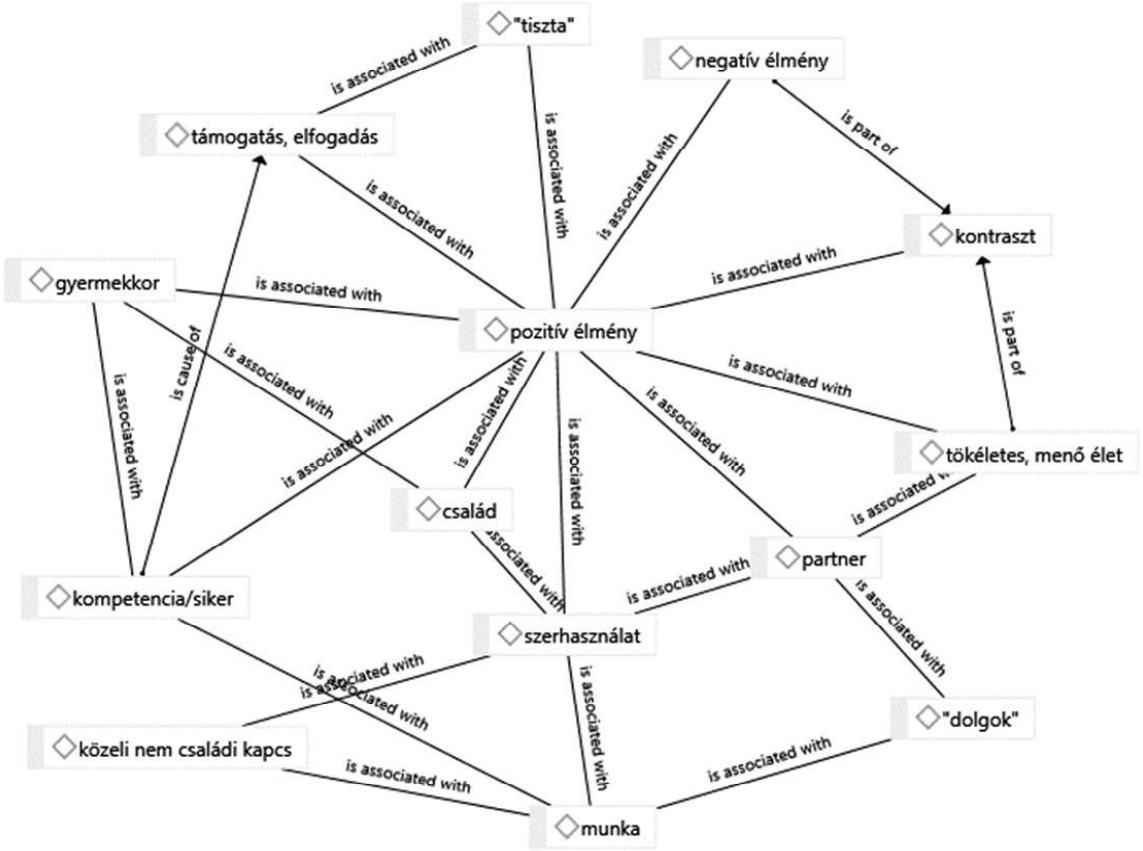
A csúcspont, a pozitív élmények

Az 5. ábrán a csúcspont-szövegeket legjobban leíró kódokat és az ezek közötti kapcsolatokat láthatjuk.

A csúcspont a szerhasználat kezdeti élményei mellett a partnerkapcsolathoz, a „menő" élet hedonista értékeihez (gyakran külföldi tapasztalatokon keresztül), valamint a sikerességhez kötődik ezekben a szövegekben. Nyolc interjúalany pozitív gyermekkori vagy serdülőkori élményeket említ: ezek sport- vagy iskolai sikerekhez, vagy kamasz-szerelemhez kapcsolódnak. A későbbiekben a vágyott, időszakosan megtapasztalt élmények a mindennapokban elérhető eszközökkel általában nem szerezhetők meg. Az emberi kapcsolatokra az instrumentális hozzáállás a jellemző, erre az egyik interjúalany a következőképpen reflektál: (22): *„hiába szeretem édesanyámat, valamit kérek tőle. Hiába szeretem apát, valamit kérek."*

Szintén nyolc esetben az interjúalanyok spontán váltással negatív tapasztalatokról, él-

5. ábra
A csúcspont-szövegeket legjobban leíró kódok és a közöttük lévő kapcsolatok



ményekről kezdenek beszélni, mint amilyen a viktimizáció, a másoknak való kényszerű megfelelés, önmaguk hibáztatása, agresszió, kriminalizáció, öngyilkosság és jelentős személyek árulása. Ezek azonban önmagukban még nem a romlás történetei (33), mert az elbeszéltek nem mindig érvénytelenítik a megelőző pozitív élményt.

A kutatói kérdések megválaszolásához érdemes néhány kulcsfontosságú kód tartalmát közelebbről is megvizsgálni.

Szerhasználat

(11): *Így utólag visszagondolva, nekem az így egy nagyon jó pont volt ugye, tehát, hogy örültem neki, hogy volt a józanságom, utána egy lánnyal megtaláltam az anyagos társam, és elkezdtem visszacsúszni.*

(21): *Hát igazából ez egészen addig jó volt a dolog, míg nem kezdtünk el, hát ő is nem kezdett el kábítószerezni és nagyon megváltoztunk, szóval ott addig nagyon jó volt, onnantól kezdve már veszekedések mentek folyamatosan ugye, hát az rossz volt.*

(19): *Az első lövésem, ami a Hajógyári szigeten történt, ott egy C. nevű ismerősöm volt, aki legelőször beadta ezt a szert, akkor már az a D. nevezetű lány, aki a párom volt így a történetből, az exem, ő is ott volt, és hogy az olyan, olyan jó érzést adott, hogy, hogy, hogy, hogy azt nem tudom így leírni.*

A szövegben érdemes megfigyelni a nyelvi-kapcsolati távolítást is: „nevű"; „nevezetű, aki a párom volt így a történetből, az exem"; a szer hatása pedig a megfogalmazhatón túl van.

(33): *Én csúcspontnak azt tudnám mondani, Szlovákiában dolgoztam, hazajöttem, akkor gyűjtöttem a pénzt, füveztem közben, de kordába, kordába tudtam tartani.*

Az alábbi részletekben – bár az idézetek a csúcspontra vonatkozó szövegekből valók – megjelennek a válság ismert nyelvi jellemzői: a tagadás, a kusza időviszonyok, a koherencia hiánya, az énre vonatkozó közlések (42, 47, 48, 54).

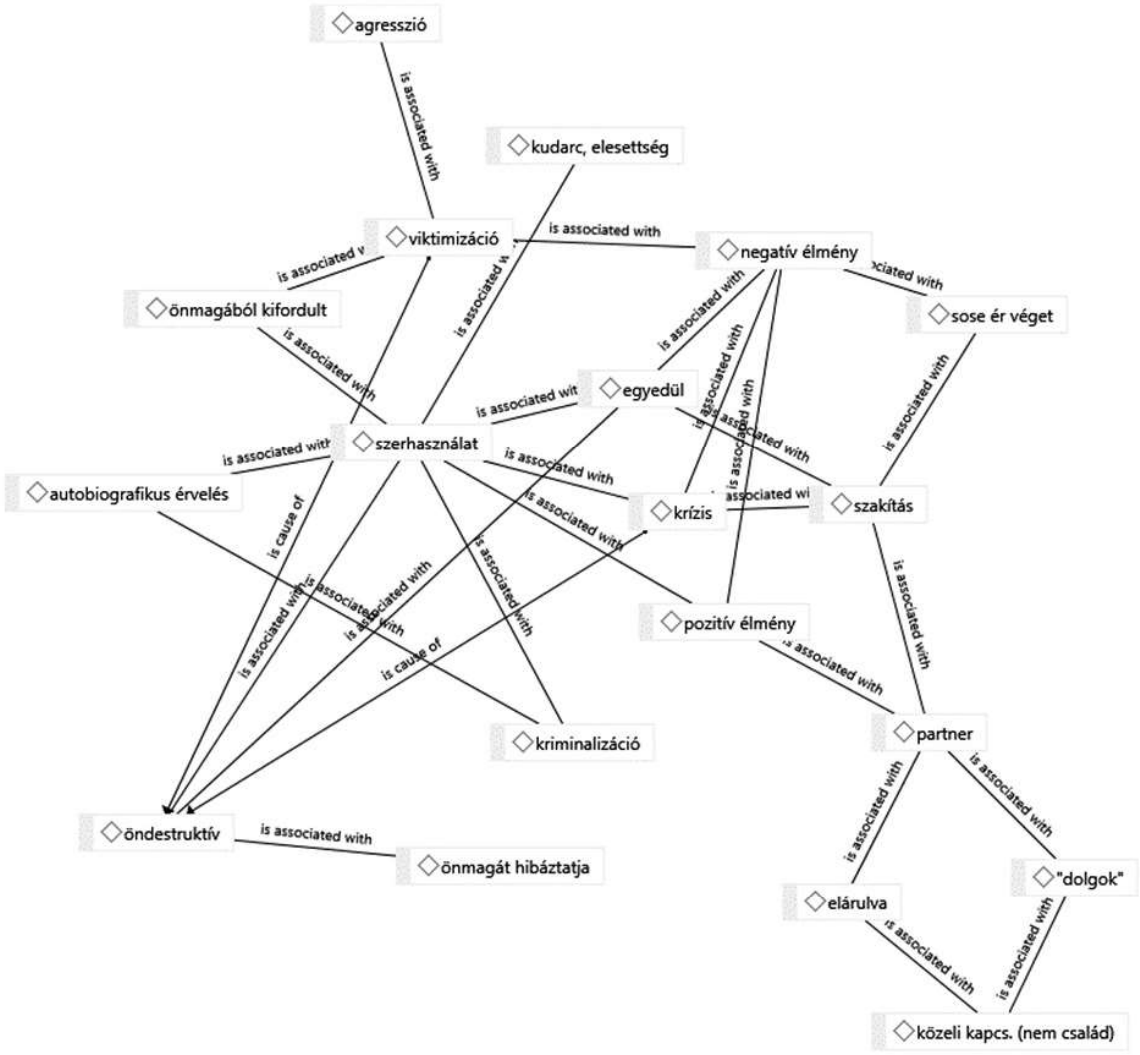
(35): *Hogy, hogy szeretnék ebből kijutni és normális családban lakni, hogy ne kelljen az I.-nek, hogy ne kelljen nekem, hogy bűntudatom legyen, és ne lássam a lányom szemében, hogy megijed, mert apa megint sörözik.*

(40): *Nálam volt egy, egy, egy, egy, egy clientem, aki, aki hozott, hozott egy kilót, hogy mert nekem szülinapom is volt, meg hogy együtt legyünk, meg hogy, meg hogy elmeséljem, hogy mi van velem, meg ilyenek, és én, iszogatás közben így fölhívtam, és i love you, i dont love you közepette leugrottam az erkélyről és nem jött el meglátogatni utána engem. És elkezdtem borotvával szabdalni a kezemet, és rám törte az ajtót és bekötötte a kezemet és utána tovább csinálta, tovább ott voltak a lánnyal, én pedig kiittam a minibárt a földön.*

A „menő” élet kötődhet a droghoz, a szexhez, de a normál értelemben vett munkához is:

(3): *Megálltunk a parkolóba, két-három autó, kinyitottuk a csomagtartót, bömbölt a zene és ott kezdtünk el alapozni, és akkor onnan bementünk.*

6. ábra
Mélypont, negatív élmények



(20): *Hát az első csúcspontom, az, ami örömteli, az igazából a külföldi munka volt, valójában később is rájöttem, mert éreztem, hogy vagyok valaki, tartozom valahová, fontos vagyok, ezért még pénzt is kapok eleget és, és meg tudom venni magamnak a kellő, kellő kellékeket az élethez, amire mondjuk, szükségem van.*

(40): *Amikor besétált az ajtón, nem tudtam, hogy ki kinek fog fizetni, én neki vagy ő nekem?*

A mélypont, a negatív élmények

A mélypont-epizódokról fontos megjegyezni, hogy ezek gyakran, de nem feltétlenül azonosak a felépülő szakirodalmakból jól ismert „mélypont"-történetekkel. A szerhasználat és az ezzel szövődő problémahalmaz itt is az egyik központi tartalom. A mélypont az öngyilkossági kísérlethez, a viktimizációhoz, a fontos személyek árulásához, az önvádláshoz, és a (főként szerelmi) kapcsolatok megszakadásához köthető. Ebben a szövegkorpuszban ritkább a gyermekkori élmények felidézése (tekintve a teljes képet, ennek hátterében elhárítás, elfojtás állhat). Markánsan megjelenik a szerhasználó csapdát fenntartó öngyógyítás, „érzéstelenítés" gondolata.

Szerhasználat

(1): *Hát próbáltam magamat mindenféle szerrel akkor nyugtatni, meg elvenni a gondolatokat.*

(4): *Egyszerűen egy nagyon drogos srácot fogtam ki, aki elszívta az összes pénzt és hát féltem tőle, és ugye én úgy gondoltam, hogy elmenekülök külföldre, milyen szép és jó lesz az. És telt múlt az idő, én egy-két évig nem jöttem haza, nem jelentkeztem, mindent csinálgattam, szörnyű volt már az elejétől fogva, és ott lettem kábítószerfüggő. (...) Gyógyszerfüggő, kábítószerfüggő, Frontint kaptam először ugye, aztán nagyon elkezdtem kokainozni, Németországban az a divat, nem speed-ezni, fű, kokain. (...) Na kerestem napi nyolcszáz, ezer eurót, abból öt-hatszázat elszívtam, csak így, porba (...) És nem tudom, nekem, ott lettem depressziós és nagyon nehéz volt kiszállni belőle, ott lettem drogfüggő, depressziós, és egyszerűen én úgy érzem, hogy ez a, ez a munka nekem valamilyen trauma volt az életembe, mert én hét éven keresztül ebbe a büntetésbe voltam és ismerősök által, hogy a volt ismerősöm, nem volt kapcsolatom, semmim se, én gyűlöltem magamat, én azt mondtam, ha nekem ezt a munkát kell csinálni, akkor nekem ne mondja meg senki, hogy mikor, mennyi drogot fogyasztok. (...) Volt pénzem, iszonyat sokat kábítószereztem, nem volt egy tiszta pillanatom se, és mert ugye akkor nem fájt annyira. (...) Ha be voltam füvezve és be voltam Frontinozva és úgy dolgoztam, akkor ilyen fejem volt, akkor, akkor úgy el tudtam viselni, meg bekokainozva, de tisztán (...) Utána három négy év múlva próbáltam tisztán csinálni, de nem ment, és látták a vendégek és nem is kerestek, és még három évet szenvedtem, mire egyedül, magamtól ki tudtam szállni, hogy elmegyek munkát keresni és végzek, és nekem ott, onnét, ott lettem drogfüggő.*

(8): *Az első mélypontom az akkor volt, amikor már két éve ezt a biofüvet szívtam és a szüleim kidobtak az utcára, hogy majd attól talán megjön az eszem és én ott teljesen összetörtem, mert az utcán igazából nem, nem tudtam élni.*

(9): *Hát ez akkor volt, amikor az összes tudásommal le kellett költöznöm egy olyan faluba, ahol tudtam, hogy milyen mennyiségű drog és nőfuttatások vannak. (...) Tehát tudtam, hogy elég súlyos környezet, drog, nőfuttatás, alkoholfogyasztás, sorolhatnám még, hogy mi volt. (...) Hát itt belekeveredtem én is egyéb dolgokba, tehát itt én is keveredtem be drogfogyasztásba, belekeveredtem, viszont arra figyeltem mindig, hogy, hogy akármennyire is hangzik bután, de mindig figyeltem arra, hogy, hogy ne legyek túlfogyasztó.*

(11): *Hát nekem a legnagyobb mélypontom az életemben, mikor így nagyon-nagyon rácsúsztam a kábítószerekre, ez azért akkor volt, hogy lehet, hogy én alapból nagyon szintetikus kábítószerfüggő voltam, és nekem lett egy barátnőm, akivel másfél évig voltunk együtt, és mellette én letettem a szintetikus kábítószert és áttértem a rendes fűre. (...) Lejjebb, a nő mellett megvoltam, megvoltam, mellette dílerkedtem, kellett nekem ugye a pénz, hogy így tudjak füvet szívni. (...) Hát én árultam speed-et, kristályt, kokaint, mindent, amit tudtam igazából, s egyszer elvittek a rend-*

őrök 40 gramm speed-del, meg mérleggel, mindennel, ide is, Gyorskocsi, Aradi utca, minden.

(14): *Ugye volt az, akivel jól elcuccozgattunk, nyomtunk, az volt az egyik köröm és volt egy másik, akivel gimnáziumba jártam, akik, akik, ők is megcsinálták a maguk hülyeségét, de, de mindeközben, amíg én lecsúsztam, ők azért felépítettek valamit, szóval, hogy Budapesten tanulnak, hogy itt dolgoznak, normálisan, nem nyomják az anyagot, az, hogy havi egyszer összeülnek ők is és berúgnak, ennyi. (…) egyedül mentem fel úgy a városba, hogy beecstasyztam és bespeedeztem és akkor elmentem ebbe a 0–24 kocsmába és ott voltak azok a barátok, akikkel már nem nagyon tartottam a kapcsolatot, és ők sem akarták velem, pont ezért, mert ilyen zűrös életet élek.*

(26): *És akkor utána hazajött, és akkor ott olyan szinten elkezdtünk verekedni, akkor én nagyon be voltam rúgva meg szerintem még akkor gyógyszer is meg spuri vagy ilonka, vagy valami volt bennem meg Rivotril, és akkor hazajött és olyan szinten összeverekedtünk, hogy kis éjjeli tükröt, fején az éjjeli lámpát széttörtem, ő kitörte a fogamat, betörte a szekrényt.*

Fontos az „önmagából kifordult” állapot, az énidegenség, ami nagyon gyakran, de nem minden esetben kötődött teljesen közvetlenül a szerhasználathoz az elbeszélésben.

(4): *Énnekem ez a munka által olyan lelki valami ért engem, hogy, hogy nem tudom azt elmondani és kifejezni, hogy én, én, akárhányszor elvittek vagy dolgoznom kellett, nekem mindig közbe a könnyem jött ki, és amikor később, amikor felfogtam, hogy mit csinálok, már késő volt, nem tudtam hova menekülni, mert nem lehet egyik napról a másikra kiszállni.*

(13): *Már, cinikusan mondom, nem engedtek be, berúgtam a fotocellás ajtót, bedühödve, az egész akkor még nagyon ilyen gyógyszeres agresszív állapotban voltam, nem használtak a nyugtatók és addigra kijöttem és már inni is tudtam újra. Ez történt, ez volt a mélypontja az egésznek. Egy iskolázott, jómódú családban nőttem föl, alkohol nélkül és odáig jutottam, hogy ez történt. Az volt a mélypont.*

(24): *És apám, apámnak nekimentem, mert elkezdtem beszélni, nem tudtam magammal mit csinálni és megütöttem. Megütöttem egyszer, soha többet nem fordult elő, de az engem nagyon, nagyon megviselt.*

(31): *Akkor ültem a lakásban beállva, beszúrva, egyszer karácsonykor, karácsonykor, tök egyedül, csak izélve, világomat nem tudtam és mikor így tisztul az agyam valamennyire, csak ültem és zokogtam, hogy jutottam ide?*

(39): *Az nem érdekelt akkor még, hogy a Rivotril majd mit fog velem csinálni, de az egy olyan érzés, egy olyan szégyenérzés volt, vagy én nem is tudom, pedig nem volt okom rá, de emlékszem, hogy egy esős nap volt, egy sötét esős nap volt és, és egyszerűen, mint hogyha az ördög szállt volna meg, vagy nem tudom.*

(34): *És ez valami másféle kristály lehetett, én nem tudom, olyan szinten agresszív lettem tőle, és kimaradt, kimaradtak a képek, hogy nem tudom, hogy mi történt.*

Ezekben a szövegekben gyakori a szenvedés elnyújtása, a „soha nem lesz vége” hozzáállás, amikor a személy mintegy megmerítkezik a negatív tapasztalatban, önmagát ítéli annak folyamatos ismétlődésére – feltehetőleg azért, mert ez az, ami a számára ismerős és értelmezhető.

(1): *Akkor utána ezután a pár hónappal szünetelt a kapcsolatunk az Anitával, aztán megint elkezdtünk titokban találkozgatni. Ez végig kísérte az akkori fiatalkori életemet. Jó három-négy évig ez elhúzódott. Ment a se veled se nélküled, titkos találkák, randevúk.*

(2): *Tizennégy hónapot még rágtam magamat ezen a faszságokon, ja, akkor csúsztam bele minden másba, faszságokba is, s akkor mondtam, hogy jó akkor ebből így elég lesz, találkoztam vele, megmondtam neki egy: hogy bassza meg, kettő: rohadjon meg, három: miért? De választ nem kaptam, akkor mondtam, leszarom.*

(10): *S hazajött a mostohám és azzal fogadott, hogy mi ez? Mondtam neki, hogy kitakarítottam. És igazából nem tudtam, hogy miért kaptam ki, de akkor úgy, úgy, úgy éreztem, hogy dühöt, haragot, indulatot és nemsokára, hogy kaptam ki, akkor fogadtam meg, hogy ha betöltöm a 18 évet, akkor én ezt lerendezem vele, mert ököllel, síp-*

csonttal úgy jött nekem, ahogy azt nem lehetett volna. Nem akartam, hogy anyát büntessék, illetve törvényszék elé helyezzék azért, vagy hozzátartozóimat azért, hogy neveltek. Ezért gyűjtögettem. Folyamatosan. 18 éves koromban robbantam. Ebből rendőrségi ügy is lett. Ez, ez, ezt én nem tudtam elfogadni. Tehát igazából úgy vártam haza, meleg étellel, tiszta házzal, renddel, illetve szeretettel. Ehelyett én olyat kaptam, amit szerintem nem érdemeltem meg. Ez egy olyan mélypont volt nekem életemben, hogy mai napig úgy emlékszek vissza rá, hogy mintha tegnap történt volna, vagy tíz perccel ezelőtt.

(21): *S akkor még egyszer kibékültünk, ott már még rosszabb volt, még többet veszekedtünk, állandóan egymást bántottuk, öltük egymást igazából.*

Mindkét szövegben alacsony volt, 2–5 esetre korlátozódott a romlás (contamination) és a megváltás (redemption) típusú történetszövés, amit azzal magyarázhatunk, hogy a szerhasználói narratívák a kezelésbe lépés ambivalens szakaszában kevésbé koherensek, akár pozitív, akár negatív koherenciáról beszélünk (55).

Kvantitatív tartalomelemzés

A kvantitatív elemzés eredményeit az 2. táblázatban foglaltuk össze.

A tartalmi, konceptuális kategóriák esetében szignifikáns különbség mutatkozott a „jó" és a „rossz" között; azonban *nagyságrendnyi* különbséggel, tehát a „rossz" nagyságrenddel nagyobb valószínűséggel jelenik meg a csúcspont-

2. táblázat
Különbségek a mélypont és a csúcspont szövegekben

Kód	Mnadír	Mzenit	t	df	Sig. (2-tailed)	Hatásméret
megint	,24	,29	-,321	41	p=,75 (n.s,)	–
is	3,12	3,64	-,533	41	p=,60 (n.s,)	–
és	7,81	6,52	1,124	41	p=,27 (n.s,)	–
rossz	**,81**	**,31**	**2,372**	**41**	**p=,02***	**,37**
de	7,26	5,93	1,092	41	p=,28 (n.s,)	–
gyermek	,60	,26	1,417	41	p=,16 (n.s,)	–
vége	,67	,55	,406	41	p=,69 (n.s,)	–
minden	**,36**	**1,69**	**-3,423**	**41**	**p=,001****	**,53**
család	,67	,79	-,538	41	p=,59 (n.s,)	–
érzés	1,02	1,21	-,494	41	p=,62 (n.s,)	–
első	,26	,31	-,361	41	p=,72 (n.s,)	–
általánosítás	**,43**	**1,52**	**-2,246**	**41**	**p=,03***	**,35**
jó	**1,48**	**3,00**	**-3,349**	**41**	**p=,002****	**,52**
szeretet/szerelem	,69	,90	-,953	41	p=,35 (n.s,)	–
módosító	5,50	5,02	,423	41	p=,67 (n.s,)	–
pénz	,43	,21	1,502	41	p=,14 (n.s,)	–
„kell"	**1,17**	**,57**	**2,043**	**41**	**p=,04***	**,32**
anyám	,24	,47	-,787	41	p=,44 (n.s,)	–
negatív	**11,48**	**6,74**	**2,516**	**41**	**p=,01***	**,39**
mások	2,76	1,90	1,025	41	p=,31 (n.s,)	–
szer	**1,10**	**,43**	**1,940**	**41**	**p=,06**	**–**
minőség	8,38	7,67	,637	41	p=,53 (n.s,)	–
magyarázat	**23,31**	**16,05**	**2,331**	**41**	**p=,03***	**,36**
szelf-referencia	**7,61**	**5,33**	**1,879**	**41**	**p=,06**	**–**
önreflexió	5,79	5,05	,644	41	p=,52 (n.s,)	–
munka	1,14	,98	,409	41	p=,22 (n.s,)	–

Sig. *p<,05, **p<,01

3. táblázat
Relatív gyakoriságok a Magyar Nemzeti Szövegtár adatai alapján

Kategória	Mélypont	Csúcspont	MNSZ
negatív szerkezetek	4,39%	3,34%	2,85%
énre vonatkozó	2,91%	2,65%	0,79%
szükségszerűség	0,45%	0,28%	0,29%

szövegekben, mint a „jó" a mélypont-szövegekben. A stabil-globálisra utaló (mindig/minden), és egyes általánosító-távolító tartalmak szignifikánsan gyakrabban fordulnak elő a csúcspont-szövegekben. Jelentős a „kell", az elkerülhetetlent, a szükségszerűt kifejező tartalom – ez is a mélypont-szövegekre jellemző, úgy, ahogyan a magyarázó elemek felbukkanása. A pszichoaktív szerekre történő utalások mennyiségében nincs szignifikáns különbség ugyan, de erős tendenciát fedezhetünk fel, ami nagyobb mintán, és/vagy más kódolási eljárással (függetlenül az előfordulás gyakoriságától, minden szerhasználatra utaló kifejezés szótárba gyűjtésével) feltehetőleg szignifikáns eredményt adna. Hasonló erős tendencia mutatkozik az énre vonatkozó kifejezések esetében, itt a magyar nyelv sajátosságai kifejezetten megnehezítik ezt a fajta tartalomelemző vizsgálatot (nehezen elkülöníthető személyjelek, személyragok stb. előfordulása.)

Mivel korábbi vizsgálatok, elméletek az énre vonatkozó közlések, a negatív szerkezetek, valamint – újabban – a szükségszerűségre utaló kifejezések fontosságára utalnak, ezért megadjuk a százalékos eltérést a Magyar Nemzeti Szövegtár (56) személyes szövegeket tartalmazó alkorpuszához képest – természetesen csak az általunk kódolt tartalmakat kerestük meg a MNSZ adatbázisában is.

Megbeszélés

A vizsgált minta sok tekintetben nem homogén, az ÚPSZ-használók státusza, társadalmi környezete is eltérő. Bár nem mindegyikük él szegénységben, az országos adatokhoz képest körükben jelentősebb az anyagi depriváció. A pozitív élmény e csoport esetében kötődött az anyagi javakhoz, egyúttal a „tökéletes" kereséséhez, mintegy visszatükrözve a domináns kultúra, a fogyasztói világ sóvárgásra alapozott önfenntartási és bővítési törekvéseinek diskurzusait. A saját/szülői végzettségre és foglalkoztatottságra vonatkozó adatokat is figyelembe véve, a mélyszegénység nem jellemző a vizsgált populációra, inkább relatív jövedelmi szegénységről beszélhetünk ezeknek a családoknak az esetében. Fontos megjegyezni, hogy mintánk nem reprezentatív, a kezelésbe lépőket tartalmazza, ami azt is jelenti, hogy ezek a személyek, talán éppen a magasabb szocioökonómiai státusz, a kedvezőbb lakóhelyi adottságok (városi lét) miatt hozzá tudtak férni a számukra szükséges kezeléshez, míg a szegregátumokban, mélyszegénységben élő ÚPSZ-használók kevésbé. Eredményeink arra utalnak, hogy semmiképpen nem lehet egyenlőségjelet tenni a szegénység és az ÚPSZ-használat közé.

Fontos tényező a szülői szerhasználat. A válaszok a megkérdezettek saját megítélését tükrözik, és nem tesztelésen alapulnak, azonban kétségtelen, hogy a szerhasználói identitás alakulásában éppen ennek a saját megítélésnek van nagy szerepe. Az alkohol, bár legális szer, jelentős a szerhasználói minta továbbadásában. A szerhasználat arra is szolgálhat, hogy eredetileg értelmezhetetlen negatív állapotokat (pl. diszfunkcionális családi működésből fakadó rossz érzéseket) a személy önmagának megmagyarázzon, mintegy felcímkézzen, és egyúttal kontrollálni próbáljon (22).

Tartalomelemzésünk egy fontos sajátossága, hogy nem eltérő helyzetben lévő interjúalanyok szövegeit, hanem egyidőben, azonos személyektől rögzített, az érzelmi élet két kontrasztos pólusát jelentő szövegeket elemeztünk és hasonlítottunk össze. A tartalomelemzés nem csupán kontrasztokat, de hasonlóságokat is mutatott a két szövegben: mind a negatív, mind a pozitív élmény kötődik a szerhasználathoz, és mindkét

szövegben – bár változó gyakorisággal – megjelentek a negatív tapasztalatok, az olyanok, mint a kriminalizáció, az önvádlás, az elárultatás, a becsapottság, az öngyilkosság, az agresszió. Ez érthető, hiszen a terápia kezdetén – amelyet általában valamilyen válsághelyzet eredményez – ez a szenvedéssel telített élményvilág kerül előtérbe. A kvantitatív elemzésben a negatív kód összetevői, és néhány más nyelvi elem határozott különbségeket rajzolt ki a kétféle helyzet között. A szignifikancia nagyságrendnyi eltérést adott a „rossz" és a „jó" tartalmak különbségei között, azaz a „jó" ritkábban fordul elő a mélypont-szövegekben, mint a „rossz" a csúcspont-szövegekben. A negatív jelenségeket eleve könnyebben és gyakrabban tematizáljuk (57). Mégis, az eltérés, amennyiben együtt értelmezzük a többi szignifikáns vagy erős trendként megmutatkozó eredménnyel, a szerhasználó csoport élményeinek szerveződésére utal. Szignifikáns különbség adódott ugyanis a válsághelyzeteket, a legtöbb kontextusban szuicid veszélyt jelző „negatív kód" (43–45) néven ismert tagadó szerkezetek előfordulásában. Ez a kód is a negatív torzításra vonatkozó eredményekkel összhangban működik, válsághelyzetben, amikor a helyzet nem látszik megoldhatónak ugyan, de a megoldások hiánya nyomasztó („sem elkerülni, sem megoldani..." „mindennél fontosabbá válik"), a negatív szerkezetek aránya megnövekszik. Éppen ezt a nyomasztó aspektust mutatja egy másik kód, a szükségszerűség, a „kell". A negatív kód másik összetevője, az énre utaló kifejezések arányának megnövekedése csaknem szignifikáns, fontos trend. Az énre vonatkozó kifejezések megemelkedését empirikus vizsgálatok összefüggésbe hozzák az alacsony státusszal, a státuszvesztéssel is (35). Mindhárom esetben megemelkedett százalékokat találunk az MNSZ szövegkorpuszához képest, különösen a mélypont-szövegekben.

A „magyarázat" kód, ahol a személy valamiképpen értelmezni igyekszik az elszenvedett tapasztalatot, megteremteni egy (ezúttal negatív) koherenciát, szintén gyakrabban fordul elő. Ez a koherencia azonban még nem teljes, nem végleges. A kvalitatív elemzésből láthattuk, hogy a romlás (contamination) típusú történetszövés, ahol a negatív tartalmak kiterjednek a pozitív aspektusokra, azokat végérvényesen áthatják, érvénytelenítik, nem gyakoriak. Ezzel egybehangzóan az ismétlődésre és a tapasztalat általánosító kiterjesztésére, a Beck-i stabil-globálisra (58) utaló kifejezések *nem jellemzőek* a mélypont-szövegekre. Az általánosító, távolító tartalmak az elhárító mechanizmusok aktív működését jeleznék: a túláltalánosított emlékezet a traumával szembeni védekezés (59). Ez a fajta védekezés itt nem működik. Fontos megemlíteni, hogy a pszichoaktív szerek említése ugyanakkor erősebben köthető a mélypont-szövegekhez, mint a csúcspontról szóló beszámolókhoz (eufória helyett a diszfória [sikertelen] kerülése) (22).

Az ÚPSZ-használat szuicid-ekvivalens, öndestruktív sajátosságai a szövegelemzés alapján igen szembetűnők. *Schneidman* (60) a korabeli statisztikai megközelítéstől elszakadva 1977-ben fenomenológiai irányból közelített az öngyilkosság és az öndestrukció jelenségvilágához. Minden öngyilkosságban közös mozzanatnak tekinti az elviselhetetlen fájdalmat, a frusztrált pszichológiai szükségleteket, a reménytelenséget és tehetetlenséget, a tudatos átélés megszüntetésének vágyát, az ambivalenciát, a beszűkült tudatállapotot, a helyzetből való menekülés vágyát, és ugyanakkor a megoldáskeresést. *Csák és mtsai* ÚPSZ-kutatásukban „escapist", menekülő szerhasználatról beszélnek, kiemelve e szerek funkcionális használatát. Az ÚPSZ-t használó személyek a realitástól menekülnek: a fájdalomtól, a nyomortól, a szegregációtól szabadulnának, a reménytelenség, a bizonytalanság és az unalom elkerülésére törekszenek (1).

A hasonlóságok a schneidmani definícióval szembetűnőek. A közismert „cry for help" kommunikáció segélykérésként értelmezi mindazokat az üzeneteket, amelyek a társas helyzetekben felszólító erejüknél fogva a személy belső állapotáról, elesettségéről informálnak. Egy újabb megközelítés a „cry of pain" elmélete: itt nem az interakció felszólító erejére kerül a hangsúly, hanem egy belső, individuálisabb, a kommunikáció gátoltságát hangsúlyozó nézőpont jelenik meg. Ez a beszűkültség már az önmagából ki-

fordultság, az énidegenség még verbalizálható élményén túlmutató regresszív állapot.

A cry of pain (COP) (61, 62) modell egységes keretben kezeli az öndestruktív viselkedésformák sokaságát – ennyiben hasonlít *Firestone* (63) korábbi mikroszuicídium-elméletéhez, aki az öngyilkosságot nem a mentális betegségek egy tünetének tekinti, hanem megfordítva, a mentális betegségeket az öndestrukció változó formáinak. A COP-modell azonban sokkal árnyaltabban világítja meg ezt a kérdéskört. Így például beépíti a különbségtételt a tudatos öngyilkossági szándékkal történő és az öngyilkossági szándék nélküli önsértés, öndestrukció esetében. A hazai kutatók közül elsők közt *Fekete Sándor* ismerte fel a cry of pain koncepció szuicidológiai és pszichiátriai magyarázó erejét (64). A modell biológiai (gátolt menekülés, csapdába esettség), kognitív pszichológiai és társas hatások eredőit is magában foglalja. A menekülés egy stresszteli, csapdás és elviselhetetlen helyzetben végül a saját szelftől való meneküléssé válik (65), és e menekülésnek az eddigi kutatások egybehangzó eredményei alapján „hatékony", az önbüntetés elemeit is hordozó eszköze lehet az ÚPSZ-használat. A COP-modell négy fő komponense:

- stresszorok jelenléte;
- csapdába esettség élménye, ami a reménytelenség érzésével párosul;
- a menekülés lehetetlensége (pl. a megküzdés vagy a társas támogatás hiánya);
- az izoláció, amely kötődhet státuszvesztéshez, megalázottsághoz.

A COP-modell megalkotói, *Williams és Pollock* (61) szerint a négy komponens egyidejű jelenlétével egy biológiailag mediált tehetetlenségscript aktiválódik (65), az önsértés pontos módja pedig a tanult tehetetlenség belső modelljétől függ (65). A gátolt menekülés modelljében a „sosem lesz vége" (59) pontos megfelelőjét találtuk meg a mélypont-szövegekben; a másik fontos összetevő, a kudarc, a megaláztatás, a státuszvesztés helyzetei a kvalitatív elemzés eredményein túl a kvantitatív vizsgálatnál kapott eredményekből is kirajzolódnak, mégpedig az énre való utalások növekedése és a státuszvesztés közötti kapcsolat alapján.

Következtetések és további kutatási irányok

Kevert módszertannal végzett tartalomelemző vizsgálatunk néhány ponton árnyalta azt a képet, ami az új pszichoaktívszer-használókról az eddigi kutatások során kialakult. A vizsgált minta szocioökonómiai státuszát tekintve közelebb van a hazai átlaghoz, a páciensek jellemzően nem szegregátumokban éltek vagy élnek. Ugyanakkor az öndestruktív mintázat – amire a korábbi kutatások „túlélés" és „trauma" kulcsszavai utalnak – esetükben is markánsan jelen van. A gátolt menekülés (cry of pain) modell (59, 61, 62, 65) csapdahelyzete, a megoldási mintázatok kudarca nyomán kialakuló reménytelenség, a „soha nem lesz vége" tapasztalata és érzése ennél a szerhasználói csoportnál a tudatos átélés megszüntetésére motiválja az érintetteket. Ezek a belső jellemzők jól tükröződnek azokban a procedurális tartalmakban, amelyeket korábbi vizsgálatok a krízishelyzettel, vagy a szuicídiummal hoztak összefüggésbe.

Bár a kezelésbe lépéskor nem meglepő a válsághelyzet, a döntéseket övező ambivalencia, sőt, a gyámoltalan, tehetetlen állapot sem, különbség adódott az azonos személyiségű, azonos állapotban lévő személyeknél az érzelmileg kontrasztos *szituáció* verbalizálásában. A „negatív kód" tartalmai (tagadás, énre vonatkozó kifejezések) együtt a csapdahelyzetet megjelenítő elkerülhetetlenséggel, szükségszerűséggel, a szerhasználattal, a negatív tartalmakkal („rossz") és a magyarázatok keresésével a mélyponthoz kötődtek; míg a stabilitás (általánosítás helyzetekre és időbeni állapotokra) és az általánosítás kevésbé volt jellemző ezekre a szövegekre.

Összességében, a gátolt menekülés modellje alkalmasnak tűnik az ÚPSZ-használók negatív élethelyzetének leírására. Tartalmi szempontból a megoldhatatlannak bizonyuló csapdahelyzetek a számos elméletalkotónál okként megjelölt kapcsolati helyzetek (24, 25).

Eredményeink érvényességére utal, hogy saját következtetéseink – eltérő mintán, más módszerekkel végzett kutatás nyomán – egybehangzók és koherensek korábbi ÚPSZ-használók köré-

ben végzett vizsgálatok eredményeivel. Fontosnak tartjuk a vizsgálat kiszélesítését, ahogyan a lehetőségek engedik, egyre több vizsgált személy bevonását. Ebben a vizsgálatban meghatározott kutatói kérdésekre keresve a választ, a teljes interjúk érzelmileg telített epizódjait elemeztük; a szövegek további epizódjai még feldolgozásra várnak. Módszertani szempontból egy erős hagyományhoz kapcsolódtunk, amelynek legfontosabb üzenete, hogy a nyelvben – ahogyan sok más emberi viselkedésformában – tükröződik a személyiség; és nem csupán a személyiség, de az adott élethelyzet, a vele járó állapotok is.

Az ÚPSZ-használat viszonylag új és zavarba ejtő, súlyos egyéni és társadalmi kockázatokkal terhelt jelenség, amelynek minél pontosabb megértése hozzájárulhat a hatékony terápiás eljárások kidolgozásához. A nyelvi elemzések segítségével e pontosabb megértésre nyílik lehetőségünk.

1. sz. melléklet

A kvantatitatív elemzés keresési kifejezései

megint
is
és
rossz*
de|inkább|hanem|hát|viszont|csak|vagy
gyerek*|gyermek*
vége|utolsó*|utolj*|végé*
minden*|mindig
család*|haza*
érez*|érzem|érzés*
első
dolog*|dolgok*|valami*|ember*|
jó|jól|legjobb*|
szeret*|szerel*
igazá*|tényleg*|egyszerűen|biztos*|tök|teljesen|egész|egészen|nagyon|elég*
pénz*
kell|kellett
anyám*
se|sem|nem|nincs|ne| seho*|semmi*|soha*
ő|rá|ők|neki|vele|őket|velük|nekik
gyógyszer*|kábítószer*|drog*
mint|így|annyira|úgy|pont|ennyire|milyen*|ilyen*|olyan*
hogy|akkor|mert|tehát|mikor|utána|aztán|azért|amikor
én|magam*|szerintem|rám|nekem|bennem|engem|
emlékszem|hittem|tudtam|tudom|vagyok|voltam|életem*
dolgoz*|vállalk*|munka|munká*

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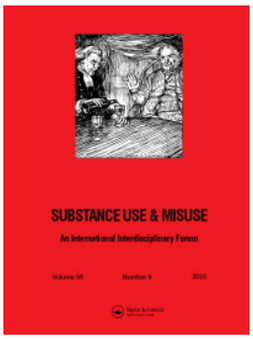
B. ERDŐS MÁRTA e-mail: erdos.marta@pte.hu



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Ferenc Csaszar, Marta B. Erdos, Roger Ellis, Gabor Kelemen & Rebeka Javor

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ORIGINAL ARTICLE

Novel Psychoactive Substance Use and Psychological Trauma: A Multimethodological Analysis

Ferenc Csaszar[a], Marta B. Erdos[b,c], Roger Ellis[d], Gabor Kelemen[e] and Rebeka Javor[c]

[a]Doctoral School of Clinical Neurosciences, Medical School, University of Pécs & Addiction Rehabilitation Department of Szigetvár Hospital, Szigetvár, Hungary; [b]Department of Community and Social Studies, Faculty of Humanities and Social Sciences, University of Pécs, Pécs, Hungary; [c]Social Innovation Evaluation Research Centre (SIERC), Faculty of Humanities and Social Sciences, University of Pécs, Pécs, Hungary; [d]Social and Health Evaluation Unit - Identity Exploration Ltd., United Kingdom & University of Chester, Chester, UK; [e]CGL Bromley Drug & Alcohol Service, Bromley, UK

ABSTRACT

Background: Authors discuss the connections between novel psychoactive substance (NPS) use and psychological trauma. The transition from classical substances to NPS, a paradigm change, poses a challenge for the treatment systems. *Objective:* Research evidence suggests difficulties in emotion regulation and trauma-related NPS-use. Authors explore some demographic and psychopathological characteristics related to such findings and examine the connections between emotion regulation deficiency and the choice of substance.

Method: This study uses a methodological triangulation of a biologically identified sample to confirm NPS use, a survey method to describe users' socioeconomic characteristics, and Minnesota Multiphasic Personality Inventory (MMPI-2) subscales to study dysfunctions in emotion regulation.

Results: Participants (77 patients) were mainly polydrug users. The transgenerational transfer of substance use was a salient feature, but material deprivation was not characteristic of the entire sample. NPS use was not connected to certain psychopathological characteristics the way classical substance use was. More than half of the respondents had elevated scores on MMPI-2 Demoralization (RCd) and Dysfunctional Negative Emotions (RC7) scales. Nearly half of them also scored high on Neuroticism/Negative Emotionality (NEGE).

Conclusions: Results suggest that NPS use in the context of polydrug use is connected to psychological trauma and emotion regulation deficiency, but the MMPI-2 scales to assess emotional dysfunctions are not connected to a particular type of NPS.

KEYWORDS

Novel psychoactive substance use; emotion regulation; psychological trauma; self-medication; transgenerational transfer; MMPI-2

1. Introduction: Novel psychoactive substance use as a paradigm change

The transition from classical substances to novel psychoactive substances (NPS) continues to be a challenging phenomenon globally (Schifano et al., 2015; United Nations Office on Drugs and Crime, 2013). A handbook on the two most popular NPSs, synthetic cathinones (SCH) and synthetic cannabinoids (SCB) discusses three main aspects of NPS use: classification, users' groups, and new harms elicited by the new substances (Abdulrahim & Bowden-Jones, 2015). These cheap substances rapidly found their way to new user groups as well as to the users of classical, legal, or illegal substances. By 2010, widespread NPS use in Hungary brought about unexpected and serious health hazards, such as overdose fatalities, nosocomial infections and acute psychotic disturbances related to drug intoxication (Schifano et al., 2015). Rácz et al. (2016) documented the rapid transition from opiate use to NPS use as a *paradigm change*, bringing about recurrent experiences of inadequacy on part of the medical care systems, prepared for the treatment of opiate users mainly.

Internet-based global networks played a key role in the expeditious spread of NPS. As Kaló & Felvinczi (2017) argue, NPSs appeared simultaneously with the broadband internet and smartphones, which altered the communication forms and channels related to substance use. NPSs spread fast in rural settings in Hungary—traditionally, areas of heavy and high-risk alcohol use but relatively free from illegal drug use. According to the results of a 2019 survey, published in the yearly report of the Hungarian National Focal Point (2020), lifetime prevalence of marijuana use was 6,1%, while ecstasy and synthetic cannabinoids use was 2,5% and 2,1%, respectively. Amphetamines had a share of 1,5%, cocaine 1,5%, and designer stimulants ranked the seventh with a share of 1,4%. Csorba et al. (2017) performed a toxicological analysis of residues from injecting paraphernalia in a sample of 4109 objects. They identified more than 200 different substances, including five previously unknown ones. Synthetic cathinones (SCH) were present in 2347 cases.

An EU funded international research (Kaló & Felvinczi, 2017) among SCH and SCB users focused on their subjective

CONTACT Marta B. Erdos erdos.marta@pte.hu Department of Community and Social Studies, Faculty of Humanities and Social Sciences, University of Pécs, Rókus Street 2. 7624, Pécs, Hungary.

perceptions concerning substance use. In the study, two distinct groups of users emerged. SCB users usually smoke the product, the frequency of use is sporadic, and the context of use is highly varied. They often take the drug for its assumed health-related or other special attributes. Middle-class persons are motivated by peer-pressure or use SCB for recreational purposes. Low-income or no-income users take SCB as a healthier alternative to SCH. SCH users are almost exclusively marginalized intravenous users with several health-related problems. Episodes of auto- and hetero-aggression are frequent among them.

The varied, unpredictable composition of SCH available in the domestic drug market results in a high variability of symptoms, such as paranoia, euphoria, tactile and other hallucinations, a psychotic level of anxiety and extreme muscle cramps. Previous research has offered the suggestion that marginalized persons with low socioeconomic status may use SCH or SCB in order to achieve a total dissociative state and get away from the high-level stress and hopelessness that surrounds them (Csák et al., 2020; Van Hout et al., 2018). "Escape from reality" patients may look for an alternative to everyday life struggles and are primarily driven by the pursuit of joy and pleasure through drug abuse. Their use is situational, relatively rare, and is characterized mainly by heterogenous social and peer-related motives (Kaló & Felvinczi, 2017).

In conclusion, NPS use poses high risks on several groups with very different socioeconomic background and motivations (Alves et al., 2020; European Monitoring Centre for Drugs and Drug Addiction, 2016; Martinotti et al., 2014; Tamama & Lynch, 2020). Yet, relatively little is known about these groups as they are not easy to reach. Users' psychosocial characteristics are an under-researched area, due to some challenging methodological problems. Users cannot be contacted while intoxicated; and are usually not motivated to participate in any research. Patients who receive in-patient treatment and therefore are more accessible to participate in a controlled study are few; and their narratives are inevitably influenced by the local therapeutic discourse. The reliability of self-report data on SUD is only around 40 per cent (McKernan et al., 2015). The existing studies usually focus on socioeconomic factors, the types of substances, or—using a small qualitative sample—on users' experiences (Kaló et al., 2020; Kassai et al., 2017).

1.1. NPS use, psychological trauma and emotion regulation

Studies have suggested a strong connection between SUD, psychological trauma, and emotion regulation deficits (Van den Brink, 2015). In this section, authors focus on these interrelations to consider their potential significance in NPS use. Emotion regulation is an ability to recognize, identify, evaluate, control, or modify one's emotional reactions (Kostiuk & Fouts, 2002). Emotion regulation problems, understood as the failure to regulate or tolerate negative emotions, are closely associated with interpersonal trauma, and its frequent consequence, posttraumatic stress disorder, PTSD (Dvir et al., 2014; Nagulendran & Jobson, 2020). Kassai and associates (2017) in their phenomenological analysis identified SCB use as a particular type of psychological trauma. SUD, as an "externalizing pattern characterized by impulsivity" (Wolf et al., 2008, p. 231) and PTSD may co-occur (Dvir et al., 2014; Hien et al., 2022; Roberts, 2021; Van den Brink, 2015). „Comorbidity between PTSD and SUD is common: amongst individuals with SUD, the prevalence of lifetime PTSD ranges from 26% to 52%", further, „Poor capacity for emotion regulation has been found to be associated with PTSD SUD comorbidity" (Roberts et al., 2015, pp. 26–27). Sensation-seeking attitude as a motive for using—frequently misunderstood as sign of pure hedonism, a "cool life" by laypersons—was found to be related to sexual abuse in childhood by Werb et al. (2015). Persons with SUD may experience emptiness, alternating with an unmanageable flood of emotions, the dissociation of emotion and thought, and problems in recognizing own emotions (Bateman & Fonagy, 2019; Fonagy et al., 2002). The consequences of mentalization failures include the unmanageability of intense negative emotions, such as anxiety and anger (Bateman & Fonagy, 2019).

Khantzian (2011) interpreted substance use as self-medication, an escape from dysphoria rather than the quest for euphoria. He worked out a typology on one's drug of choice, relating the use of depressants, stimulants, and opiates to different psychopathologies. In this view, substance use serves to control helpless states, negative feelings, loss of meaning in life and low self-evaluation. For persons with SUD, hangovers yield an explanation for their sufferings, and for the (assumed or real) negative reactions from their environment (Khantzian, 1985, 1997, 2011; Roberts et al., 2015). Koski-Jännes (2004) focussed on the automatisms related to one's efforts to cope with deficits in emotion regulation: "much of the cognitive and emotion regulation of addiction takes place without awareness, and even when conscious processing does occur, it often serves the purpose of defending and bolstering the destructive attachment" (p. 61). She claimed that the model of self-medication did not include social factors; further, it was based on a simple linear causality, which failed to grasp the complexity of the phenomenon.

In this study, one of the methods is the use of MMPI-2 RC Scales so we briefly comment on the previous findings concerning the use of these scales to study problems in emotion regulation. Scales RCd, RC1, RC2 and RC7 are used to assess psychological dysfunctions in affective functioning. RC4 and RC9 are related to the domains of behavior, and RC3, RC6, RC8, to those of thought (Forbey & Ben-Porath, 2008). As Finn and Kamphuis (2006, p. 204) concluded, "the RC Scales open up links to a vast domain of relevant personality and emotion research. Specifically, the RC Scales connect the MMPI–2 to a widely accepted model of affect (…)". Sellbom & Ben-Porath (2005) found that RC2 had a strong negative correlation with positive emotionality, while RC7 had a strong correlation with negative emotionality. RCd, an "emotionally coloured dimension" (Archer, 2006, p. 180; Tellegen et al., 2003, p. 12) negatively correlated with positive emotionality and positively correlated with negative emotionality. Moreover, RCd and RC2 were consistently correlated with collateral medical data indicating depression, suicidality, various vegetative symptoms, and feelings of worthlessness and hopelessness. RC7 was also associated with the collateral

variables related to depression and suicide. Inpatients with elevated scores on RC7 were more likely to report poor concentration, flashbacks, and feelings of helplessness and hopelessness (Arbisi et al., 2008). „RC7 is considered a measure of negative emotionality rather than being specific to anxiety" (Sellbom et al., 2006, p. 204). Current conceptualizations and measures of depression are close to Demoralization (RCd), comprising symptoms related to both negative and low positive affect (Osberg et al., 2008). The component specific to depression is anhedonia/low positive emotionality (Sellbom et al., 2006). The scales associated with negative emotionality (RCd, RC7) and RC9 were associated with juvenile conduct problems and violence disinhibition confidence, commonly occurring among persons with SUD. Further, RC4 was significantly related to criminal history, juvenile conduct problems, substance use, partner violence, and violence disinhibition confidence (Sellbom et al., 2008).

2. Research questions

Previous evidence suggests a relationship between trauma-related substance use, and serious difficulties in the processing and managing of emotional contents. We analyze the results of MMPI-2 RC and PSY-5 Scales, focussing mainly on the scales that are directly related to emotion regulation. In relation to self-medication hypothesis, we examine the connections between emotion regulation deficiencies and the choice of substance.

3. Design and methods

3.1. Sample

Participants were contacted by the first author at a Hungarian hospital ward and three in-patient rehabilitation centers. The sample is a purposive, total population sample of 77 persons, all of them at the beginning of their treatment, right after the detoxification phase (about one week). SCH or SCB use was confirmed by gas or liquid chromatography on a biological sample, or a recent toxicological report (within the preceding 6 months). Persons who (1) produced a negative drug test for NPSs, (2) had not finished the 5th grade of elementary school (a criterion for administering MMPI-2) (3) were experiencing acute psychotic states or were living with a general learning disability were excluded from the sample. Respondents were informed by the first author about the study and all of them agreed to participate. Ethical approval was issued by the University of Pécs, on the condition that respondents' anonymity is ensured (PTE KK RIKEB, 2019. 05. 02.).

3.2. Method

This study uses a methodological triangulation:

1. Biological samples to confirm NPS use
2. A survey method to describe respondents' socioeconomic characteristics: The survey questionnaire comprised basic questions on respondents' age, gender, and level of

Table 1. MMPI-2 scales connected to emotion regulation.

Scale	Symptoms related to elevated scores include:
Neuroticism /negative emotionality (NEGE)	worry, nervousness, anxiety, tension, stress, anger, poor emotional control, guilt, fears, borderline-type attachment patterns, seeking and rejecting help, suicidal and self-mutilating behavior
Low positive emotionality / Extroversion (LPE)	social disengagement, lack of positive emotions, anhedonia, anergy, dissatisfaction, low self-esteem, giving up quickly in the face of difficulties, impoverished emotional life, depressive withdrawal, and schizoid under-involvement
Demoralization (RCd)	Information on the subject's current level of emotional (dys)functioning: general demoralization, complaints of anxiety and depression, insecurity, pessimism, low self-esteem, tension, and expectations of failure.
Low positive emotions (RC2)	increased risk for depression, insecurity, pessimism, passive social withdrawal, anhedonia, self-reported boredom, isolation, or low energy/low expectations for achievement.
Dysfunctional negative emotions (RC7)	anxiety or anxiety-related disorders, rumination, excessive worry, sensitivity toward criticism, brooding, preoccupation with self-perceived failure, guilt, insecurity, and intrusive, unwanted ideations

Source: Greene (2000), Graham (2000), Nichols (2001), Tellegen et al. (2003).

Table 2. Patient demographics.

	n	%
Total	77	100
Age		
Mean	29.52	
Range	18–45	
Sex		
Male	61	79,22
Female	16	20,78
Marital status		
Single	63	81,8
In relationship	2	2,6
Married	9	11,7
Divorced	3	3,9
Education		
Primary	20	26,0
Vocational	32	41,6
Secondary grammar	16	20,8
College	4	5,2
University	5	6,5
Occupation		
Nonprofessional	60	77,9
Intellectual	17	22,1
Place of living		
Farm	2	2,6
Village	11	14,3
Town	44	57,1
Metropolitan area	20	26,0
Mother's education		
Primary	18	23,4
Vocational	33	42,9
Secondary grammar	9	11,7
College	11	14,3
University	6	7,8
Father's education		
Primary	10	13,0
Vocational	48	62,3
Secondary grammar	4	5,2
College	5	6,5
University	8	10,4
Musical college	2	2,6
Material deprivation		
Yes	45	58,4
No	32	41,6
Parental divorce		
Yes	36	46,8
No	41	53,2
Descriptives		

education. Authors also asked about parental drug use as an important socialization factor, the respondents' choice of drugs, and the level of material deprivation. The first author administered the questionnaire.

3. Restructured Clinical Scales and the PSY-5 Scales drawn from the Hungarian translation of the Minnesota Multiphasic Personality Inventory (MMPI-2) (Butcher et al., 2001) to study dysfunctions in emotion regulation: This version is the most recent standardized measure in the domestic context (MMPI-2-RF is not available; neither is automatic scoring) (see Table 1). Our exclusion criteria regarding MMPI-2 validity scales were the following: CNS: >=10 (CanNotSay); VRIN: >=79; TRIN: >=79; F: <39 and >79 outpatient setting, inpatient setting <54 and >79; Fp: >=99.

The MMPI-2 was administered by the first author.

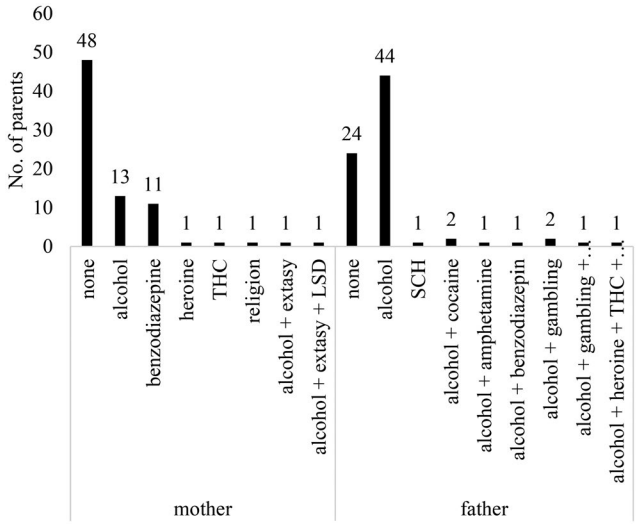

Figure 1. Parental substance use.

3.2.1. Data integration

Beyond a descriptive analysis using the above methods for a more comprehensive picture on this under-researched population, we plan to identify correlations between the type of substance and MMPI-2 RC and PSY-5 Scales to see if the use of a particular substance is related to the scales.

4. Results

4.1. Results of the socioeconomic survey

The sample included 16 women and 61 men, with an age range between 18 and 45 ($M = 29.52$; SD = 6.95). Data on main socioeconomic status (SES) characteristics are summarized in Table 2.

Data on parental substance use are based on participants' reports and use was identified as a common problem (see Figure 1).

Data on respondents' own substance use, based on biological tests, either at the time of data collection or verified during prior medical treatment, are presented in Figure 2. Polydrug use was a major characteristic of the sample. Both the classical and the new psychoactive substances were represented.

The results of MMPI-2 on emotion regulation are presented in Table 3. High, clinically significant scores for three of the scales were characteristic of approximately half of the respondents: Demoralization, Dysfunctional Negative Emotions, and Neuroticism/Negative Emotionality.

4.2. Data integration: Substance use and MMPI-2 scales related to emotion regulation

Cocaine, THC and LSD use were related to certain aspects of emotion regulation. Cocaine use had a negative correlation with Demoralization (r=-0.253; $p = 0.03$; $p < 0.05$), and

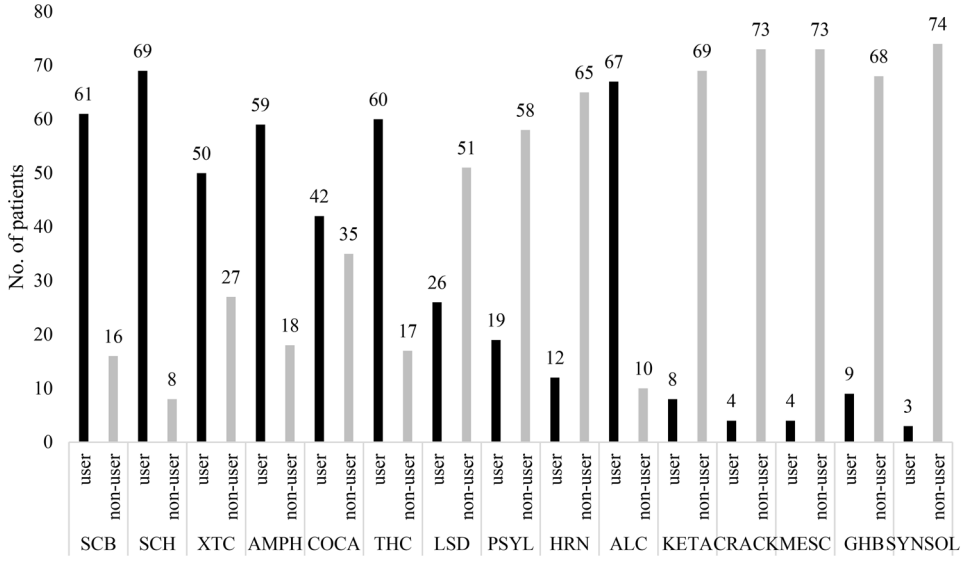

Figure 2. Substance use.
Note: Substances - (1) synthetic cannabinoids; (2) synthetic cathinones; (3) extasy; (4) amphetamine; (5) cocaine; (6) cannabis; (7) LSD; (8) psilocybin; (9) heroine; (10) alcohol; (11) ketamine; (12) crack cocaine; (13) mescaline.

Table 3. MMPI-2 pathological cases connected to Restructured Clinical Scales (RC) and PSY-5 Scales.

	n	%	Mean	SD
Total	77	100		
Demoralization (RCd)				
High	44	57.14	70.20	5.32
Low	0	0	0	0
Normal	33	42.86	51.21	7.45
Somatic Complaints (RC1)				
High	30	38.96	70.97	6.51
Low	0	0	0	0
Normal	47	61.04	50.72	7.46
Low Positive Emotions (RC2)				
High	17	22.08	70.88	5.85
Low	0	0	0	0
Normal	60	77.92	49.07	8.87
Cynicism (RC3)				
High	18	23.38	67.61	3.94
Low	0	0	0	0
Normal	59	76.62	50.74	8.42
Antisocial Behavior (RC4)				
High	65	84.42	78.20	11.69
Low	0	0	0	0
Normal	12	15.58	54.92	6.36
Ideas of Persecution (RC6)				
High	30	38.96	78.33	12.24
Low	0	0	0	0
Normal	47	61.04	50.34	7.03
Dysfunctional Negative Emotions (RC7)				
High	43	55.84	72.02	6.60
Low	0	0	0	0
Normal	34	44.16	50.36	8.30
Aberrant Experiences (RC8)				
High	43	55.84	78.88	13.11
Low	0	0	0	0
Normal	34	44.16	51.15	6.58
Hypomanic Activation (RC9)				
High	27	35.06	70.17	8.60
Low	0	0	0	0
Normal	50	64.94	50.12	8.03
Aggressiveness (AGGR)				
High	25	32.47	70.20	4.83
Low	0	0	0	0
Normal	52	67.53	47.65	7.66
Psychoticism (PSYC)				
High	36	46.75	77.61	12.89
Low	0	0	0	0
Normal	41	53.25	52.46	11.00
Disconstraint (DISC)				
High	35	45.45	70.34	5.79
Low	0	0	0	0
Normal	42	54.54	52.95	7.47
Neuroticism / Negative Emotionality (NEGE)				
High	36	46.75	68.80	4.08
Low	0	0	0	0
Normal	41	53.25	52.60	7.75
Introversion / Low positive emotionality (INTR)				
High	20	25.97	72.16	7.07
Low	32	41.56	42.67	7.40
Normal	25	32.47	55.40	5.03
Descriptives				

with Dysfunctional Negative Emotions (r=-0.238; $p=0.04$; $p<0.05$). THC use negatively correlated with Introversion - Low Positive Emotionality scale (r=-0.245; $p=0.03$; $p<0.05$), and LSD use positively correlated with Demoralization ($r=0.230$; $p=0.04$; $p<0.05$) and Dysfunctional Negative Emotions ($r=0.283$; $p=0.01$; $p<0.05$) (see Tables 4 and 5).

A significant regression equation was found between Cocaine and Demoralization (F(1,75)=5.122; $p=0.03$; $p<0.05$), with an R^2 of .064. This means that Cocaine predicted 6,4% of Demoralization variances. A significant regression equation was found between Cocaine and Dysfunctional Negative Emotions as well (F(1,75)=4.499; $p=0.04$; $p<0.05$), with an R^2 of 0.057, that is, Cocaine predicted 5,7% of Dysfunctional Negative Emotions variances. Likewise, a significant regression equation was found between THC and Introversion - Low Positive Emotionality (F(1,75)=4.776; $p=0.03$; $p<0.05$), with an R^2 of 0.060, showing that THC predicted 6% of Introversion - Low Positive Emotionality variances. Furthermore, there was a significant regression equation between LSD and Demoralization (F(1,75)=4.179; $p=0.04$; $p<0.05$), with an R^2 of 0.053, thus, LSD predicted 5,3% of Demoralization variances. Lastly, we saw a significant regression equation between LSD and Dysfunctional Negative Emotions (F(1,75)=6.547; $p=0.01$; $p<0.05$), with an R^2 of 0.080: LSD predicted 8% of Dysfunctional Negative Emotions variances.

5. Discussion

This research explored clinically relevant information on a group of NPS users in Hungary at the beginning of their treatment. The gender rate of respondents (about 1:3) can be compared to the gender rates of lifetime prevalence for illicit drug use in 2019, which was 19,9% for men and 8% for women (Hungarian National Focal Point, 2020). Women have less chances for treatment as men do, as female users are usually exploited and battered sex workers, in addition, a woman with SUD faces heavier stigma than a man does (Kaló, 2020).

Material deprivation was present with more than half of the patients, but many had an adequate level of education. This could challenge the idea that NPS use is mainly the result of material deprivation (Csák et al., 2020). However, persons in this sample were included in treatment that is less accessible for those living in rural areas and/or are characterized by lower levels of education. Parental divorce rate in the sample roughly corresponds to the Hungarian average. Respondents reported frequent parental substance use, especially alcohol use—a source of childhood traumatization, neglect, and abuse. Alcohol use is a traditional and heavy problem in Hungary (Elekes, 2014). In this sample, both parents' substance (alcohol) use is above the average, and parents probably serve as role models for substance-related problems.

The respondents are polydrug users, and their preferred substances include new and classical, illicit, and legal psychoactive substances as SCB, SCH, extasy, amphetamine, cocaine, cannabis, and alcohol. This confusing pattern, also found in a previous study with NPS-users by Higgins et al. (2021) has its implications for the treatment systems. In this context, medication is usually considered but a further, easily accessible substance; or a risky attempt at self-medication to terminate drug-induced psychotic states (Valeriani et al., 2015). Mothers' benzodiazepine use in some families is a direct model for such a misuse of prescription medication.

The overall profile of this group on MMPI-2 Restructured Clinical Scales and the PSY-5 Scales has confirmed key

Table 4. Correlations between substance use and Restructured Clinical Scales (Rc).

	Demoralization (RCd)	Somatic Complaints (Rc1)	Low Positive Emotions (RC2)	Antisocial Behavior (Rc4)	Ideas of Persecution (Rc6)	Dysfunctional Negative Emotions (RC7)	Aberrant Experiences (Rc8)	Hypomanic Activation (Rc9)
	r	r	r	r	r	r	r	r
SCB	.17	.19	.12	**.24**	.12	.12	.20	.12
SCH	.02	−0.07	−0.05	−0.02	−0.05	.01	−0.10	.01
XTC	−0.00	−0.07	.00	.06	−0.00	−0.03	−0.16	−0.10
AMPH	.09	.07	.02	.12	.12	.17	.04	.09
COCA	**−0.25**	**−0.22**	−0.16	−0.05	−0.20	**−0.23**	−0.14	−0.02
THC	−0.10	.10	−0.15	.20	.20	−0.00	.16	.18
LSD	**.23**	**.26**	.07	**.27**	**.30**	**.28**	**.33**	**.26**
PSYL	−0.06	**.24**	−0.02	.16	.03	.06	.17	.13
HRN	.05	.05	−0.06	**.27**	.10	.13	.13	.11
ALC	.08	.13	.09	.11	−0.01	.05	.07	.14
KETA	−0.13	−0.10	−0.00	−0.10	−0.11	−0.08	−0.04	.06
CRACK	−0.01	−0.22	−0.13	.11	−0.11	−0.06	−0.12	.12
MESC	.09	**.23**	.20	.08	.20	.20	**.26**	−0.00
GHB	−0.03	−0.09	−0.06	.01	−0.04	.00	.02	−0.00
SYNSOL	.14	−0.04	.12	.15	.08	.11	.04	.00

Sig. $p < 0.05$.

Note: Substances (1) synthetic cannabinoids; (2) synthetic cathinones; (3) extasy; (4) amphetamine; (5) cocaine; (6) cannabis; (7) LSD; (8) psilocybin; (9) heroine; (10) alcohol; (11) ketamine; (12) crack cocaine; (13) mescaline; (14) gamma-hydroxybutyrate - GINA; (15) synthetic solvents. Bold values represent statistically significant results.

Table 5. Correlations between substance use and PSY-5 Scales.

	Aggressiveness (AGGR)	Psychoticism (PSYC)	Disconstraint (DISC)	Negative Emotionality-Neuroticism (NEGE)	Introversion- Low Positive Emotionality (INTR)
	r	r	r	r	r
SCB	.17	.15	.17	.09	.06
SCH	−0.03	−0.05	−0.01	.00	−0.06
XTC	−0.16	.00	.06	−0.02	.00
AMPH	.00	.11	.03	.09	−0.01
COCA	−0.05	−0.10	.10	−0.18	−0.17
THC	.16	.19	.17	−0.12	**−0.24**
LSD	.07	**.32**	.09	.20	.01
PSYL	.08	.04	.03	−0.04	−0.11
HRN	.05	.03	.17	.16	−0.00
ALC	.08	.03	.10	.05	−0.01
KETA	.14	−0.08	−0.13	−0.11	.00
CRACK	.13	−0.06	.21	.00	.02
MESC	−0.06	**.27**	−0.03	.11	.07
GHB	.13	.03	−0.02	.01	−0.00
SYNSOL	.00	.09	.11	.11	.06

Sig. $p < 0.05$.

Note: Substances (1) synthetic cannabinoids; (2) synthetic cathinones; (3) extasy; (4) amphetamine; (5) cocaine; (6) cannabis; (7) LSD; (8) psilocybin; (9) heroine; (10) alcohol; (11) ketamine; (12) crack cocaine; (13) mescaline; (14) gamma-hydroxybutyrate - GINA; (15) synthetic solvents. Bold values represent statistically significant results.

findings on the challenging nature of NPS use. RC4 scores indicating antisocial behavior comprising "aggressiveness, antagonism, argumentativeness, tendency to lie, cheat, difficulty conforming to societal norms, acting out, substance abuse, family conflicts and poor achievement" (MMPI Info, n.d.a) were elevated with 65 persons. RC 8, Aberrant Experiences measuring hallucinations, bizarre perceptual experiences, delusional beliefs, and impaired reality testing was elevated with 43 respondents. The PSY-5 scale Disconstraint as "insufficient delay of gratification, be unreliable, rebellious, hedonistic, and acting out" (MMPI Info, n.d.b) and PSY ("poor reality testing, are suspicious, delusional and hostile") scores were elevated in approximately half of the sample, with 35 and 36 respondents, respectively. Interestingly, while the use of classical substances, particularly the stimulant Cocaine, and LSD, a hallucinogen, was interrelated with specific problems in emotion regulation, supporting Khantzian's claim (2011), NPS types were not related to any of the MMPI-2 scales that are informative on emotion regulation, reflecting the rapidly changing, more instable and chaotic character of NPS use. When considering all the RC scales we have used, LSD takes the lead with significant positive correlations except RC2. LSD also correlates with PSYCH. Interestingly, we could identify a significant positive correlation with SCB use and RC4, similar in strength to the relation between LSD/Heroin use and RC4. In a study using Interpretative Phenomenological Analysis, Kassai et al. (2017) have identified SCB use as a particular type of trauma. There is strong evidence in the professional literature that childhood trauma and antisocial behavior are related, and this may explain for our findings (Schorr et al., 2020).

This population's problems in emotion regulation are salient. Elevated scores may indicate a problem that existed prior to or is parallel with substance use. More than half of the respondents had high scores on RCd and RC7. Nearly half of the sample, 36 of the 77 patients also scored high on NEGE. These scales are strongly associated with PTSD, primarily with internalizing psychopathology, though Wolf and associates (2008, p. 338) claim that „…while more strongly associated with the internalizing spectrum, (NEGE) may also

play a role in externalizing disorders". In the same study, authors found a negative correlation between SUD and RC2.

Our results are consistent with the studies connecting substance use (Hien et al., 2022; Roberts, 2021; Van den Brink, 2015), or more specifically, NPS use (Csák et al., 2020; Kassai et al., 2017) to psychological trauma.

6. Conclusions. Implications for therapy and research

In this study, authors examined a group that is rarely accessible for scientific research, though their problems challenge the existing medical and social services for persons with SUD. Currently, relatively little is known about NPS users' social context, life experiences and psychopathology, and this is a barrier to providing more adequate treatment options. NPS use, likewise the use of classical substances, seems to be characterized by specific problems in emotion regulation and is related to psychological traumatization (Kassai et al., 2017), also supported by the results of our analysis. Though our results are tentative due to the limitations of the sample size, and to lack of a control group, and, most importantly, to the fact that NPS use is embedded in polydrug use, these users do not seem to self-medicate their emotional dysfunctions in a traditional way, choosing a specific NPS according to the problem type. These efforts are related to classical substances. Their chaotic polydrug use may render pharmacotherapy difficult or contraindicated, as users consider prescription medication just another cheap substance to be mixed with the ones they normally use. Psychotherapeutic services, as viable options in these cases, are not widespread in Hungary, and in certain regions may be available in private practice only. Female users' underrepresentation in this sample supports the claim that women's drug use is a specific problem, and it would demand more targeted interventions (Kaló, 2020). Helping parents with alcohol or substance use disorder recover, and thus protect their children from the long-term consequences of the transgenerational transfer of SUD should be made part of the solution.

From a methodological point, the strengths of this study are triangulation and controlled sampling, eliminating potentially problematic self-reports on respondents' drug use. As for the limitations, a more homogenous sample could have resulted a clearer picture on NPS use, but this population is hard to reach and involve in a study, so we had to accept this as a barrier. The broad age range implies diverse paths and stages in the development of substance use disorder. We only included one legal substance (alcohol) and did not examine the use of nicotine or the illicit use of prescription drugs. Further, the sample comprised persons who participated in some form of a treatment. This is one reason why persons with lower levels of education and/or living in rural areas had less chances to be included in the sample. One of the methods, MMPI-2, excluded persons with less than 5th grade elementary school education. Further, estimates on parental substance use were based on respondents' report. The Covid-19 restrictions in the country during the one year of data collection in 2020 and 2021, significantly changing the conditions for access to care, somewhat delimited sample size.

Ethical approval

Ethical approval was issued by the University of Pécs, on the condition that respondents' anonymity is ensured (PTE KK RIKEB, 2019. 05. 02.).

Patient consent statement

Respondents were informed by the first author about the study and all of them agreed to participate.

Disclosure statement

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ORCID

Marta B. Erdos http://orcid.org/0000-0003-1618-9875
Rebeka Javor http://orcid.org/0000-0002-3077-6948

Data availability statement

The quantitative data that support the findings of this study are openly available in the library repository of the University of Pecs at https://pea.lib.pte.hu/handle/pea/34040.

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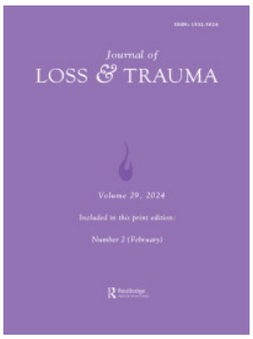

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Narrative Means to Recovery Ends. Novel Psychoactive Substance Users in Early Recovery

Ferenc Császár[a], Marta B. Erdos[b], Rebeka Javor[c], and Gabor Kelemen[d]

[a]Doctoral School of Clinical Neurosciences, Medical School, Addiction Rehabilitation Department of Szigetvár Hospital, University of Pécs, Szigetvár, Hungary; [b]Department of Community and Social Studies, Faculty of Humanities and Social Sciences, University of Pécs, Pécs, Hungary; [c]Faculty of Humanities and Social Sciences, Social Innovation Evaluation Research Center, University of Pécs, Pécs, Hungary; [d]Bromley Drug & Alcohol Service, Bromley, UK

ABSTRACT

The relationship between trauma and subsequent substance use has been extensively studied. Substance dependence and its consequences are a source of further traumatization. This explorative qualitative study is an analysis of the recovery narratives of persons with polydrug dependence, using mainly novel psychoactive substances (NPSs). NPS use, with its unpredictability and major health risks poses a challenge to treatment systems, but only few studies are available on NPS users' recovery processes. In this longitudinal study, authors explore processes of identity reconstruction in the emotionally valent episodes of 10 respondents' life interviews. The interviews had been conducted with 77 patients at the beginning of their residential treatment and were repeated a year later with those in recovery and available for the study, altogether 10 persons. Narrative Oriented Inquiry was used as a framework, focusing on the key themes and changes in the narrative mode. Our results support the findings on previous and subsequent NPS use-related traumatization. In this perspective, NPS use corresponds to revictimization. Contrary to available but sporadic evidence suggesting a marked difference between the recovery processes of users of classical substances and NPS users, the respondents in this study could utilize the traditional cultural stock of recovery stories during their treatment. Changes involved more reflective and responsible attitudes and the broadening of a healing social network. Contents describing care/self-care and the emergence of hopeful attitudes were also identified. Further research, involving larger samples and cross-cultural comparisons, could deepen our understandings of NPS users' recovery processes.

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CONTACT Marta B. Erdos erdos.marta@pte.hu Department of Social and Community Studies, Faculty of Humanities and Social Sciences, University of Pécs, Rókus Street 2, Pécs, 7624, Hungary.

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Introduction

Novel psychoactive substances (NPSs) are drugs—either in pure form or in preparation—that are not controlled by international drug control conventions. Individual and community-level risks caused by their use are commensurable with or exceed those elicited by classical substances. By 2023, NPSs have become a global concern affecting 141 countries. The several hundreds of rapidly proliferating substances are categorized by their effect or chemical composition (United Nations Office on Drugs and Crime, 2024). The main four types of these synthetic drugs are stimulants, cannabinoids, hallucinogens, and depressants (Shafi et al., 2020). Two common NPS types are synthetic cathinones (SCH, beta-ketone amphetamine analogs) and synthetic cannabinoids (SCB) (Prosser & Nelson, 2012). Early studies on NPSs focused on the puzzling multitude of these substances and the new risks associated with use, such as HIV-1 outbreak among synthetic cathinone users (Hanke et al., 2020), increased risk of Hepatitis C infection (McAuley et al., 2019), incidences of severe and sudden cardiac, neurological and psychiatric symptoms, and occurrences of death (Funada et al., 2019; Prosser & Nelson, 2012; Van Hout et al., 2018). Psychiatric symptoms include paranoia, bizarre and violent behavior, and acute psychotic episodes (Bennett et al., 2017). Further, NPS use is usually polydrug use, the concomitant use of two or more psychoactive substances multiplying the serious health risks (Higgins et al., 2021; Neicun et al., 2020; Rinaldi et al., 2020). Polydrug use entails unpredictable adverse effects and higher risks of overdose. Dependence occurs when the frequency or quantity of use leads to serious impairments in the bio-psycho-social domains (European Monitoring Centre for Drugs & Drug Addiction, 2021). Polydrug use and dependence are a feature possibly related to patient characteristics and to the addictive potentials, volatility, and unpredictability of NPSs.

In addition to the risks associated with the various NPSs, the ethnography of the different user groups, their motives and experiences, and appropriate clinical guidelines were among the researchers' main questions (Abdulrahim & Bowden-Jones, 2015; Gittins et al., 2018; Van Hout et al., 2018; Wieczorek et al., 2022). Marginalized and nightlife users are a traditional user group. The broadband internet, smartphones, and social media established new user communities and new risks (Kaló & Felvinczi, 2017). Enhancement and expansion were associated with the contexts of use or NPS type (Wieczorek et al., 2022), whereas social and conformity motives characterized the user groups (Benschop et al., 2020). In several countries, NPS use is widespread among marginalized groups living under the poverty threshold (Felvinczi et al., 2020). In these groups, users' preexisting poor physical and mental conditions, hopelessness, and helplessness add to the above risks. In addition, access to health services for persons with

drug-related problems might be deficient in these areas. Marginalized groups use NPS to escape from their everyday reality and the pains of unsolvable problems (Csák et al., 2020). In a study, however, NPS use was found to be associated with mental health problems more than with socioeconomic vulnerability (Neicun et al., 2020).

Several studies have confirmed the strong relationship between traumatic life events and substance use disorder (SUD) (Van den Brink, 2015). The connections between post-traumatic stress disorder (PTSD) and substance use have been extensively studied (Basedow et al., 2020; Dass-Brailsford & Myrick, 2010; Najavits, 2015; Schein et al., 2021; Van den Brink, 2015). Few articles are available on the specific relationship between NPS use and psychological trauma (Gittins et al., 2018). Kassai et al. (2017) identified SCB use as a particular type of trauma.

Recovery processes from NPS dependence have also remained an under-researched area as only few subjects are available for the studies (Kassai et al., 2017). These studies are the first step to know more about the recovery processes from NPS use, which represents a new paradigm deeply challenging the treatment systems (Rácz et al., 2016).

Recovery from addictions

Recovery is a process to improve one's health, wellness, and autonomy and develop one's full potential in life (SAMSHA, 2012). Anthony, highlighting the relational aspects of recovery, described it as "a deeply human experience, facilitated by the deeply human responses of others." (Anthony, 1993, p. 531). Mudry et al. (2019) explored the transformative pathways in natural recovery and the major changes in interpersonal relationships from pathologizing modes to healing relational patterns.

The recovery concept and practices of self-help groups informed the professional theories and models in addictions (Arbour & Harris, 2023; Madácsy, 2020). Twelve-step recovery communities and therapeutic communities (TCs) rely on the social support provided by the sober community as well as on the rich knowledge of those in sustained recovery as experts by experience. These communities equip the service users with SUD with rich narrative resources to facilitate therapeutic change (Harrison et al., 2020; Mudry et al., 2019). Recovering persons' own interpretations of recovery include adopting new lifestyles, enhanced well-being, self-development, accepting what life can give, abstinence, the ability to identify problems, and adequate help-seeking behavior (Laudet, 2007). Recently, studies on the potential connections between recovery from addictions and post-traumatic growth have appeared, emphasizing the role of spirituality and community support (Haroosh & Freedman, 2017; Ogilvie & Carson, 2022; Stokes et al., 2018).

Though abstinence is not sobriety, programs that require abstinence have been proven more effective. In their survey study, Kaskutas et al. (2014) described four recovery domains: abstinence, essentials of recovery, enriched recovery, and a spiritual orientation. Essential recovery comprises honesty to oneself, an ability to manage negative emotions while maintaining abstinence and enjoying life without substance use. Enriched recovery involves growth and development, giving a balanced response to life's ups and downs, and taking responsibility for the things one can change (Kaskutas et al., 2014). Jacob et al. (2017) found that carers', and consumers' perspectives on recovery differed: carers focused more on the outcomes, mainly understood as freedom from symptoms; for the consumers, recovery was a complex process comprising personal growth and transformation while finding new meaning and purpose in life. Available social support, reciprocity in one's relationships, follow-ups, and taking personal responsibility for one's health were identified as key elements during the personal journey from an addict identity to a sober identity marked by increased well-being.

In sum, recovery from addictions is understood as a substantial identity transformation, a second birth or redemption leading to a personally, socially, and spiritually meaningful life (James, 1902/1982). The journey with its crises, guiding the person toward a sober identity with vital improvements that permeate all areas of life, is a demanding developmental task. It is a holistic, nonlinear process involving not only deep transformations but the restructuring of daily life as well (Betty Ford Institute Consensus Panel, 2007; Costello et al., 2020). The process requires growing commitments and an ability to learn from one's mistakes.

Stages and processes of recovery are usually determined according to the transtheoretical model by Prochaska et al. (1992). Precontemplation is characterized by denial, defensiveness, and a focus on the positive impacts of the drug. Recovery seems an irrational, meaningless, and unmanageable endeavor. The next phase, contemplation is characterized by ambivalence. The person is willing to consider drug-free ways of life. Preparation involves steps to quit and/or organize some treatment. Minor changes in personal life are possible, including temporary abstinence. The action stage is about commitment to change. In this phase, persons learn how to ask for help when needed and can identify and manage relapse. Maintenance is characterized by self-care and a sober lifestyle.

The health learning model, describing the specific recovery processes in the context of a therapeutic community (TC), comprises three main elements:

1. reacting to the program with a focus on the whats (actions, structures, etc.), but not understanding the hows and the whys yet,

2. working the program and building conscious recovery competence manifested in self-monitoring and an awareness of risks,
3. responding to the program and achieving a stage of reflective competence with deepening explorations and insights into the personal meaning of recovery (Kelemen & Erdos, 2010).

Based on these models, a constructive therapeutic change involves growing commitment to recovery, developing healthier habits, an ability to identify the risk of relapse, asking for help when needed, and the development of reflective skills. For the majority, it takes about two years to reach a stage marked by some stability. Therefore, we identified the respondents in this study as patients in early recovery, proceeding from their preparations to actions and reflections.

Narrative practice

The title of this study refers to a seminal work by two narrative therapists (White & Epston, 1990). Changes in narrative identity take place in the dual landscape of events and actions, establishing new coherence and directionality by reconstructing and expressing personal meanings. Narratives connect personal experiences to cultural meanings and social structures and establish the narrator's position for potential actions (Hiles & Čermák, 2013). Narrative frames open the door to new possibilities for deconstructing and reconstructing disorganized, dissociated, or oppressive-dominant narratives—the silenced stories in the domain of the not-yet-said (Neimeyer, 2006; Rober, 2002). Narrative therapies highlight the importance of telling and retelling (re-authoring, restructuring) the problem-saturated life story, thereby creating new positions and prospects for the future (Tarragona, 2008). Trauma, if unexpressed and unanalyzed, often becomes insidious, leading to a variety of health problems. Studies have confirmed that speaking and writing about one's traumatic experiences lead to enhanced well-being (Chung & Pennebaker, 2007; Pasupathi et al., 2015; Pennebaker & Smyth, 2016).

Storytelling has always been central to twelve-step practices (Arminen, 1998; Kiss et al., 2022; Madácsy, 2020). Rennick-Egglestone et al. (2019) identified several positive outcomes of using personal narratives to support the recovery process. The recipients of the stories could experience connectedness, validation, hope, empowerment, appreciation, reference shift, and stigma reduction. Negative impacts comprised feelings of inadequacy, disconnection, pessimism, and burden. Perceived authenticity facilitated positive changes, while a crisis state was conducive to negative impacts (Rennick-Egglestone et al., 2019).

Hänninen (2004) distinguished between three main narrative modes in her model on narrative circulation. The told narrative is a manifest verbal representation of events. The inner narrative is the domain of the not-yet-said that can be externalized and validated by relying on one's cultural resources and can be transformed into a told narrative during therapy (Rober, 2002). The lived narrative is the "real-life drama" with its situational constraints (Hänninen, 2004, p. 69). In the model, the inner narrative is connected to both the told and the lived modes, and the personal stock of stories is defined by the cultural stock of stories and the person's own experiences.

Hänninen and Koski-Jännes (1999) in a qualitative study on 51 recovery narratives have described five story types. As tools for meaning making, the different types offer personalized and culturally matching storylines for identity change.

- The AA story: excessive drinking, loss of control, and hubris—as the symptoms of a lifelong disease—lead to isolation and impairments in all areas of life. In the AA narratives, this is hitting rock bottom, the most profound crisis in the addict's life. Repeated own attempts at recovery fail until the person has learned humility and has joined Alcoholics Anonymous, a potent community resource to master decent ways of life. In this conception, the person is a victim of a disease, and they must learn how to live with it. The only cure is one' personal commitment to a sober community.
- The personal growth story sees addiction as the result of early oppressive relationships and neglect. Growing emancipation, autonomy, and agency are the keys to recovery. The person, a previous victim, should find their own true self instead of conforming to others' wishes. They are like a "butterfly breaking out of a cocoon" (Hänninen & Koski-Jännes, 1999, p. 1842).
- The co-dependence story is characterized by silenced stories, a transgenerational "curse." Addiction is the result of secrecy and the repression of own negative feelings, and recovery is that of honesty and breaking the curse of the transmission by the victim of a victim.
- The love story: addiction is a compensation for the lack of love. Recovery occurs when love is given.
- The mastery story: initially, addiction is seen as a source of autonomy and later as a threat to autonomy, self-respect, and responsibility. This insight, as the triumph of reason, leads to recovery and the construction of a strong and good self.

These storylines help the person comprehend addiction and recovery, release them from guilt, and give them hope. Each framework is related to

a particular gender and type of addiction, though the respondents often integrated the elements of other stories into their narratives. The AA story as a framework was used predominantly by men with alcohol dependence, whereas women preferred the personal growth story. The co-dependence story was characteristic of polydrug users. Love story as a framework was used mainly by persons with bulimia, and the mastery story was characteristic of smokers (Hänninen & Koski-Jännes, 1999).

Current study

Kassai et al. (2017) have claimed that NPS users' recovery processes may differ from those of the users of classical substances. Unpredictable and rapid alternations between NPS users' positive and negative experiences result in a more fragmented user identity. Therefore, SCB users cannot successfully organize their experiences into collective structures of meaning, and the narrative resources for SCB users to construct a new, non-addict identity during recovery are limited. However, Kassai et al. (2017) could explore a small sample of patients at the beginning of their treatment.

In the TCs providing long-term residential care, the interventions are directed at the social self and facilitate the improvement of mentalizing skills (Fonagy et al., 2002), the management of emotions, and the overall reconstruction of identity. Respondents are familiar with and actively use twelve-step resources that highlight relational ethics in interpersonal relationships and the role of spirituality in the healing process.

Therefore, we would predict that progress in recovery is indicated by a more elaborate and balanced view, mirroring the overall development of reflective skills. A spiritual orientation, characteristic of post-traumatic growth, may appear. However, no specific results concerning NPS users' use of recovery narratives are available. As this is a qualitative exploratory study, we maintain the openness of our analysis, also focusing on the emerging issues—the whats and hows.

Methods

Participants

This sample is a sub-sample of a longitudinal study conducted among 77 patients. Respondents were recruited at the beginning of their treatment. NPS use was confirmed by biological tests. A year later, 10 persons could meet the inclusion criteria of this research (1 year abstinence, and at least 3 months spent in treatment) ($M_{age} = 28.50$; $SD = 9.03$; Min. = 18.00; Max. = 45.00), 1 female and 9 males ($M_{months} = 9.1$; $SD = 1.91$; Min. = 5.00;

Table 1. Respondents' demography.

Pseudonym	Gender	Age	Drugs used	Therapeutic community	Months spent in treatment
Aiden	M	45	SCH, XTC, amphetamines, cocaine, THC, alcohol	TC1	10
Patrick	M	43	SCB, SCH, THC, alcohol	TC1	10
Rory	M	20	SCB, SCH, XTC, amphetamines, cocaine, THC, alcohol	TC1	10
Charles	M	29	SCH, XTC, amphetamines, cocaine, alcohol	TC2	5
Devin	M	24	SCB, SCH, XTC, amphetamines, cocaine, THC, heroine, alcohol	TC3	10
Chloe	F	26	SCB, SCH, XTC, amphetamines, cocaine, THC, heroine, crack cocaine	TC1	10
Alex	M	23	SCB, SCH, XTC, amphetamines, cocaine, THC, psilocybin, alcohol	TC1	10
Pete	M	31	SCB, SCH, XTC, amphetamines, cocaine, THC, psilocybin, heroine, alcohol	TC2	6
Zach	M	26	SCB, SCH, amphetamines, cocaine, THC, LSD, alcohol, GHB	TC1	10
Archie	M	18	SCH, XTC, amphetamines, cocaine, THC, LSD, psilocybin, ketamine, GHB	TC1	10

SCH: synthetic cathinones; SCB: synthetic cannabinoids; XTC: methylenedioxymethamphetamine (ecstasy); THC: tetrahydrocannabinol (marijuana); GHB: gamma-hydroxybutyric acid.

Note: The three different therapeutic communities are anonymized. Naming could potentially identity the patients as the number of these facilities and the number of patients in treatment are low (usually, below 20). TC 1 is a church-based community and the other two TCs are secular ones.

Max. = 10). All of them were polydrug users diagnosed with substance dependence and treated in a TC. Table 1 is a summary of patient data.

Considering Malterud et al. (2016) principles on information power, this sample size is adequate for our research questions. The narrow research aim, a specific sample, a hybrid analysis combining deductive and inductive directions, and a strong dialogue (the interviews were conducted by a therapist) result in high information power. The study combines case-based and cross-case analyses (Malterud et al., 2016).

Ethical approval was issued by the University of Pécs (PTE KK RIKEB, 2019.05.02). The procedures used in this study adhere to the tenets of the Declaration of Helsinki. Informed consent was obtained from all the patients before their inclusion in the study.

Measures

The Foley Life Interview (FLI) is a scheme to facilitate in-depth explorations of the life narrative (McAdams, 1993, 2007). FLI designates key scenes (nuclear episodes) as peak or nadir experiences, turning points, childhood/adult memories, major loss, and a spiritual/religious experience. In a study conducted in the US on emotionally valent episodes among persons with SUD, the occurrence of redemption sequences as positive meaning making in one's nadir point texts, together with positive meaning making in high point texts, were indicative of enhanced well-being (Cox & McAdams, 2014).

The episodes used in this study were translated by the authors and were the responses to the following questions (the first sentences are quoted verbatim from the original):

1. High point. Please describe a scene, episode, or moment in your life that stands out as an especially positive experience. This might be the high point scene of your entire life, or else an especially happy, joyous, exciting, or wonderful moment in the story (…)
2. Low point. The second scene is the opposite of the first. Thinking back over your entire life, please identify a scene that stands out as a low point, if not the low point in your life story (…)
3. Turning point. In looking back over your life, it may be possible to identify certain key moments that stand out as turning points—episodes that marked an important change in you or your life story (…) (McAdams, 2007, p. 2); for further details, please see McAdams (2007).

Procedures

In our study, FLI was conducted when respondents entered treatment after detoxification. Basic sociodemographic data were also collected. The interview was repeated a year later. FLI was conducted in the respondents' own language, Hungarian.

Following the phenomenological tradition by staying close to the data with a strong focus on the respondents' unique experiences and meaning making enables the researcher to identify the potentially relevant themes and thematic connections when studying an unexplored phenomenon. For the analysis, we used Narrative Oriented Inquiry (NOI), which, with its pluralistic approach, is a flexible qualitative framework enabling case-based, idiographic approaches and cross-case comparisons (Hiles & Čermák, 2013; Kiss et al., 2022). This analysis, a combination of theoretically established and explorative directions, utilizes the fabula/sjuzet differentiation as an analytical tool. Fabula describes the events and themes (what exactly is told), and sjuzet, the way the stories are told (Hiles & Čermák, 2013). After reading the narratives, we decided to focus on the emotionally valent nuclear episodes (high point, nadir point), an approach by Cox and McAdams (2014), and on the turning point, a recurrent topic in the studies on recovery. The analysis involved parallel readings and re-readings of the episodes and repeated discussions between the authors. As a concluding step, we used ATLAS.ti 8.3, a tool for qualitative data analysis, to make our work more robust and transparent, and the results, easily comparable (For the data, please see the data availability statement).

Results

In this section, we summarize the major changes in the respondents' perspectives. We also provide brief quotations mirroring the respondents' lived experiences and then interpret and discuss these. Tables 2–4 are a summary of the main results, comprising the key contents and the changes in the three nuclear episodes between the first and second interviews.

Changes in high point episodes

Table 2 shows that initially, six speakers identified high points as identical with or closely related to substance use. Chloe and Patrick (seeing drinking "necessary" in the first episode) mentioned the birth of their own child as a peak experience, accompanied by substance use. Interestingly, both Rory's and Zach's initial high point texts follow the narrative organization of a recovery narrative (a personal growth story, Hänninen & Koski-Jännes, 1999), but these newly discovered, more colorful, and attractive selves are related to the use and not recovery. Positive experiences of "normie" life are also related, such as good education and having a family. However, these matter-of-fact descriptions are in contrast with the high emotional valence of Devin's and Zach's summaries on substance use. Religious spirituality is a core theme for Charles.

In the second excerpt, entering the TC is often seen as a high point, and the key concepts of recovery appear. Substance use is not identified as a high point experience anymore ("was not real"), and the idea of controlled use (as in Alex's first text) is not raised either. Reflections on happy and painful moments, a broadening social network with sober fellows, and emotionally meaningful relationships are a common themes in the episodes. Aidan and Alex speak about the beginnings of a new life and experiencing recovery-related spirituality. Others refer to the end of denial and self-deception—a recognition that the "more colorful self" was a false one (Patrick, Charles, Chloe, and Zach).

Rory's narrative is rich in the prototypical elements of a hero's story, in which the protagonist successfully fights the difficulties, and his achievements are validated in the new environment. This finding is similar to the results of a narrative study involving experts by experience by Kiss et al. (2022).

Speakers are more reflective and self-reflective, also establishing links between past and present experiences and future anticipations. In the second high point episode, several speakers gave a more balanced and realistic evaluation, mentioning some negative aspects of a generally positive experience. Taking responsibility for others is another new theme (Patrick and Pete). When speaking about reconstructing his relationship with his

Table 2. Major changes in the fabula/sjuzet in high point excerpts in the 1st and 2nd interviews.

Patient	1st interview	2nd interview
Aiden	Being clean, works, mother helps/*"it* (high point) *is now"; "at the top"*	Completing treatment, changes/chances in life, wide social network/*"this gives me goosebumps"; "another chance in life"*
Patrick	First son's birth/mentioning the exact date and his attempt to reduce drinking/*"a child will be given in my hands, and I cannot wabble"; "surely I drank a little as I was so excited"; "I drank more than necessary."*	A visit to his kids/self-reflection: *"the elder son was a bit distancing himself from me, but it was my fault and I have to work hard to prove … "*
Rory	Substance use (SU)/*"bad direction"; "from my grey self into a much more colourful self"*	Own accomplishments: leaving the TC and entering the halfway house/*"my fellows were waiting for me (…) my happiest moment so far."; "I was even crying"; "I stepped out of the house as, so to say, a winner."*
Charles	A pilgrimage to El Camino/absolution, catharsis *"after the first whirlpool"*	Returning to TC/self-reflective, committed: *"has changed a thousand times since last year"; "my genuine way"; "such a good place"*
Devin	SU/*"the first shot gave me such, such a good feeling that, that, that, that I cannot describe it"; "the most, most, the best, the most liberating, the most joyful, the most enhanced, the warmest, the most, the best."*	Entering rehabilitation/self-reflection: *"then, I did not think that it was the best thing, but I had fears"; "this is where change began, the whole thing, that is, my life."*
Chloe	Romantic love, son's birth/*"it was wonderful when I could hold him in my hands"; "I was completely out."*	Son's birth/self-reflective: *"I was using. I could not really experience that happy moment."; "I missed it because I numbed it with drugs."*
Alex	A satisfactory life, meeting own needs, working, own home, girlfriend; controlled use/*"I felt like a king. I did not need the substance."*	A satisfactory life by meeting own needs, happy moments of life; being related/ more emotional and spiritual: *"I have life, I have feelings, I have a meaning in life."*
Pete	Own family/speaking about the future *"I do not want to see in my daughter's eyes that Daddy is drinking again."*	Becoming a father again/responsible parenting: *"not like before"; "I can become a responsible father now"; "see the world differently"*
Zach	SU/reflecting on the transformation of previous self: *"it gave me what I had always wanted to become"; "high-spirited, open, talkative, determined, self-assured" "easy-going with women"*	SU, cool life/reflecting on the illusion: *"this was just a dream, this was not real"; "I felt as if I were God. Lots of money. Always drugs. Always a drink in my hand."*
Archie	Admitted to a good school/*"What else should I tell you?"*	Being with the mother, a momentary relief from father's physical and psychological abuse/more emotional and reflective: *"I could see my mother and I hugged her, and this was one of my happiest moments"; "I was entirely lost when I was with my father and my life was miserable."*

elder children, Patrick noted the relational distance and interpreted it as a natural consequence of his former use. Devin mentioned his fears, and Archie reflected on his traumatizing relationship with his father. However, these negative experiences did not compromise the overall positive value and did not transform the high point story into a sequence of contamination (Cox & McAdams, 2014).

Table 3. Major changes in the fabula/sjuzet in low point texts in the 1st and 2nd interviews.

Patient	1st interview	2nd interview
Aiden	SU-related accident, a broken car and hospital treatment/*"this is the end" "I will never understand," "cannot delete"*	Own aggression, beating his wife while his kids were around/self-reflection: *"an unarticulated beast"*
Patrick	Aggression, police intervention/both an aggressor and a victim; severe injuries; prison/mentioning the contrast with his upbringing, now *"a beast"*	Aggression, police intervention/remorseful, reflective, and more responsible: *"I did not even know where I was"; "that policewoman was a family mother of two kids"; "scary"; "nothing worse could have happened"; "proud to get out of this"*
Rory	Loss of friends, blocked by them on social media/*"while I was lapsing they were building their lives"; "they were distancing themselves from me and the lowest point was the why"*	Father's death, grief, suicidal, emotions as guilt, shame and sadness/a result of drug use is missed opportunities to be with his father for the last time: *"I was not even here to say goodbye to him."*
Charles	Raped/*"this is what I deserve, I am ashamed of coming to this, I am contemptible"; "associations of hell"; "with a complete stranger"*	Bad sexual experience (same story)/*"unfeeling"; "Sodoma"; "the worst thing was that it did not give me anything"*
Devin	Sex worker/*"the worst, the biggest, that, that I was careless enough to sell my own body that I should appreciate the most."*	Substance-related way of life/mentioning more consequences: *"five of us in one room, she is pregnant, I'm using bioweed, from morning to evening, sleeping, not working, not doing anything."*
Chloe	Neglecting mother/*"my little boy was taken away from me for the second time now"; "I have not visited him for two weeks."; "that fucked bioweed"; "I hate the* (nation) *for making this stuff."*	The childcare service takes her son; moves to a dealer, SU, victim of sexual abuse/self-reflective: *"I did not even know which planet I was on."*
Alex	Bad company, others abusing his girlfriend at a party/*"17th, last week"; "must have been a different type of crystal as it made me very aggressive";" I will either get mad or become a murderer, or dead, or a prisoner"; "you cannot believe a user"; "I do not believe myself."*	Experiencing extreme parental neglect as a teenager; homeless, starvation, isolation/reflecting on the loss of major social identity elements (education, family connections): *"failed at school and failed in life."*
Pete	Major loss, grandfather's death/*"I miss him so much, we have experienced so much together, and he has suffered a lot"; "I missed him. And I bought something to drink."*	Major losses, his grandfather's and friend's death/*"I forgot to tell you that I was his carer (…) I could stop using for six months, I think."*
Zach	Family-level child protection intervention because of his use (a threat to take his little sister); parents want a divorce; lives alone and as a homeless while an adolescent/*"They made me live in the street and my mother said that she would not sacrifice two children for one"; "I was revengeful (…) wanted to execute my family" "the substance took control over me."*	A homeless, other people are ashamed of him/self-reflective, mentions many different losses; understands family reactions: *"I was spending Christmas alone with a bottle of wine and some designer drugs. And I was thinking about suicide"; "Self-pity makes me tolerate all these and use."; "no other way out of using but suicide" "always blaming others" "I had to use because I was blaming myself."*
Archie	Mother's death, he was abroad/mentions the event but does not speak about emotions.	Mother's death, missing leave-taking/very emotional, focussing on the loss: *"she had deceased just a couple of hours before we could arrive home"; "the only person who stood by me, always" (…) I did not have the chance to hug her"; "she asked my brother where I was. She was looking for me."; "It was very painful, and I was only 14."*

Changes in nadir point episodes

In the first nadir point episodes (Table 3), speakers usually reported problems associated with substance use or a traumatic event before the onset

Table 4. Major changes in the fabula/sjuzet in turning points in the 1st and 2nd interviews.

Patient	1st interview	2nd interview
Aiden	Signs of mother's, and others' trust; work; mother bought him a car, but he also achieved a lot/*"my life has changed entirely."*	Entering the TC/mentions the exact date: *"this is where I got my second chance."*
Patrick	Asking for help, first therapy, able to live an ordinary life, life abroad; recreational drinking/lonely life abroad as *"isolation period"*	Clean or die, suicidal, first treatment was not successful, asking for help/*"in the middle of a desert among the beasts"; "why should I go on like this?"*
Rory	Grief, father's death, change of workplace/ impersonal style	Asks mother for help/mentions exact date/*"this day began to bring me the change."*
Charles	Parents' divorce/*"endless pilgrimage between the parents"; "a week here, a week there"; "this was the time when I got mad."*	Catharsis at a psychodrama session; leaving destructive relationships; onset of recovery/ self-reflection: *"I was always finding faults with others."*
Devin	Entering TC/self-reflection, liberation, *"like the first shot"*	Entering TC/self-reflection, same as high point: *"from this time on, everything has changed."*
Chloe	Others, including her father, got to know that she was a sex worker/blaming the father	Entering the TC/*"thinking differently"*
Alex	Onset of drug use/*"I was not even interested in the stuff before"; "I was sensitive to this."*	Suicidal; then meeting his girlfriend/rich in recollections and reflections: *"I started to write a suicide note"; "I listed my goals, why I should stay alive that day"; "I and my father could not even talk to each other unless we had some beer on the table."*
Pete	Physical deterioration, substance-related death of a friend, leaving behind his daughter/*"my body is in ruins"; "he used a stuff (…) I think bioweed (…) this quantity of poison, he just went home and died"; "she* (the little girl) *is running to the grave with a bunch of flowers."*	Completing treatment/mentioning the exact date *"I can be happy because the sun is shining"; "I can be a father to my daughter, and they trust me enough to leave her alone with me"; "a new life"*
Zach	First treatment/change of perspective: *"using was not good anymore"*	Relapse, a self-destructive way of life, mother helps and trusts, own attempts fail, hitting rock bottom, asks for help/*"she was hoping that it was over"; "the moment she left I bought alcohol and took the prescription drugs"; "they were shouting at me if they should call the ambulance"; "I don't want this anymore."*
Archie	Ankle monitor/*"without this, I'd be hanging around with my chums."*	From home arrest to TC/*"my deeds have consequences"; "this is where all 'me' begins" (…) what type of person I am."*

of use. Some respondents told a different second story; for example, Aiden mentioned a traffic accident first, but his second story was about his own role as a perpetrator in a family conflict leading to violence, with his children witnessing the event. For Rory, rejection by his former friends made him come face to face with the fact that he was no longer acceptable to his former classmates as a heavy user. The same speaker's grief experience in the second episode—the loss of his father and the guilt he felt about it—is at a much deeper emotional level. Alex's initial story, a chaotic report on a party experience, is also in sharp contrast with the consequences of the extreme parental neglect he experienced as a teenager. These speakers could share a deeply personal story of the losses they had suffered and the shame they had felt. The three stories seem to be the ones that the respondents

were not able to relate to a year before. Others, as Patrick, Charles, Devin, Chloe, Zack, Pete, or Archie told the same or a very similar story, but this time they could share more details, also identifying and describing their own painful emotions. They took responsibility for what they had done—or had missed to do. They could reflect on their own aggression and the harm they had caused to others; and on the emotional numbness related to addiction. They could speak about their previously suppressed grief experiences and suicidal ideations accompanying their substance use.

Changes in turning point episodes

In the turning point episodes (Table 4), speakers either mentioned various events related to substance use or their first attempts at recovery, which might imply that they were at different stages in the recovery cycle when entering treatment. Initial help-seeking or previous treatment attempts often changed the user's perspective and interfered with substance use. Confrontation with the potential consequences also appears in the excerpts, as, for example, in Pete's recollections on a friend's NPS-related death or the ankle monitor Archie had to use. Patrick's hopes for controlled use, a way back to recreational drinking represents a common idea of dependent persons—one that they usually give up in the ongoing recovery process.

A year later, the turning point was entering the TC and/or progressing from an initially ambivalent phase toward a growing commitment to the therapeutic program. These second stories are often about asking for help. A deep change, a choice between life and death ("second chance," "clean or die," "this is when all 'me' begins," etc.) is present in almost all the cases. One respondent, Pete defined change as a developing ability to experience and value everyday realities. Taking responsibility for their own lives is also a common theme for most respondents. Mentioning the exact dates (Aidan, Rory, and Pete) is telling about the emotional significance of the event. It is worth noting that Alex instinctively used the 24-h focus (a practice of twelve-step groups) to stay alive and cope with his suicidal thoughts.

Summarizing group-level changes in the three episodes

When quantifying the results, we could see that most follow-up excerpts (21 of the 30 by the 10 respondents) were about a different story in either the high, low, or turning point texts. In some cases, the storyline was essentially the same, but the narrative mode was quite different (nine of all the episodes by seven respondents). This included, among others, a marked increase in reflections, understood here as connecting one's own or others' emotions and behavior to life events and experiences. In the first

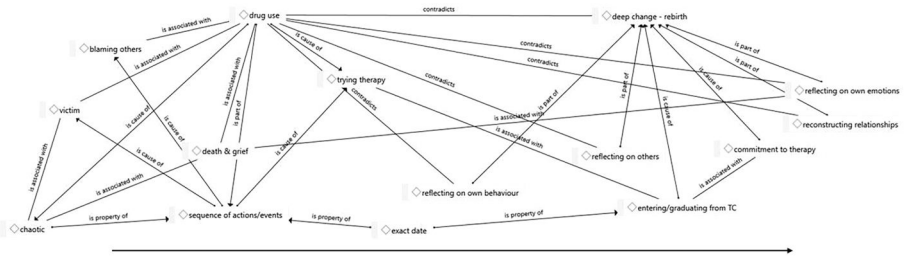

Figure 1. Changes in the themes and narrative mode

interviews, non-reflected sequences of actions and events were related, usually in a chaotic manner. Blaming others for one's fate, unresolved traumas, such as death and grief, and identifying oneself as a victim of substance use and of other people were characteristic of the texts. First attempts at entering treatment were also related. Contrastingly, the second excerpts were about deep changes in life (in 12 excerpts by eight respondents). Commitment to therapy also appeared in six episodes by five interviewees. In the 30 excerpts by the 10 respondents before therapy, we could identify four occurrences of reflections on the participant's own behavior by three respondents. In the follow-up interviews, we coded 18 occurrences by nine speakers. Initially, reflections on the respondent's own emotions were presented in five excerpts by four respondents. After one year, this was the second most frequent content with 15 occurrences in nine of the cases. These reflections included a more elaborate view of past relational losses, grief, drug use, and suicide attempts. Reflecting on others' situations, and parallel efforts to reconstruct one's relationships were entirely missing from the first interviews but appeared in the second narratives, with five occurrences/four persons of the first one (reflecting on others) and eight occurrences/six persons of the second one (reconstructing relationships). Figure 1 is a summary of the results. The arrow indicates the direction of the changes during the one year.

Discussion

This study used NOI (Hiles & Čermák, 2013) to explore changes in NPS-user polydrug dependent persons' narratives during early recovery as they were working through the recovery program and progressed from their preparations to actions and reflections.

In light of previous results on the etiological role of psychological trauma in SUD (Van den Brink, 2015), also supported by our research, NPS use corresponds to revictimization. Respondents' experiences could meet the rigorous definition of psychological trauma by DSM-5 (Pai et al., 2017). This population suffered severe traumas, such as the loss of a parent at an

early age, neglect and abuse, criminalization, sex work, rape, homelessness, social isolation, aggression, and severe mental and physical conditions associated with drug use. These traumatic experiences existed either as inner narratives in the domain of the not-yet-said when the respondents entered treatment, or their first stories were chaotic, self-centered, and polarized. Balanced reflections were missing. These features indicate the high emotional significance and low levels of integration of the traumatic experience, which explains speakers' inability to structure and narrate their life stories adequately. Previous studies found that the appearance of growth meanings was related to enhanced well-being and more adaptive emotion regulation strategies (Cox & McAdams, 2014; Pasupathi et al., 2015). In this study, respondents were able to restructure the disorganized and dissociated narratives that had existed only as inner narratives. Some speakers mentioned exact dates in their texts, conforming themselves to 12-step storytelling traditions. This is how they designated the boundary between the addict self as "damaged self" or "spoiled identity" as in Kassai et al. (2017, p. 1048), or a "beast" as a respondent's self-identification in the current study, and the sober, recovering, new-born self, more ready to cope with life's challenges.

The recovery journey is unique and cannot be described as a simple linear movement between the different stages. As relapse is frequent in persons with SUD, respondents' nuclear episodes may reflect varied levels of commitment to treatment. At the beginning of the treatment, substance use was strongly attached to high point experiences in life, even if ambivalence was present. However, the turning point stories, predominantly negative events in the first excerpts, were exchanged for positive experiences and commitment to treatment.

Speakers mentioned few relationships in the first episodes, and the social connections they reported were either fellow users or close family members. Most low point stories were about substance use-related personal losses or betrayal. A year later, a healing social network was formed, and sober fellows, friends, and colleagues populated the recovering persons' lifeworld. This is a finding that Costello et al. (2020) could also identify in their study on early recovery.

In their second nuclear episode, the respondents related substance use to their other difficulties in life. Changes in the narrative mode included more emotional and self-reflective content. Several studies have concluded that thematic and stylistic changes in one's narratives are parallel to transformations in mental states and identity (Cox & McAdams, 2014; Pasupathi et al., 2015; Pennebaker et al., 2003; Stelzer et al., 2019; Stephenson et al., 1997). In a study on a non-clinical sample by Pennebaker and Smyth (2016), expressing and reflecting on trauma-related contents and on the

accompanying emotions have resulted in marked and sustained positive changes in respondents' physical and mental health—even if expressing was initially painful for the participants. Further, naturally switching between the perspectives when relating a traumatic experience has led to marked improvements in physical and mental health (Pennebaker & Smyth, 2016; Seih et al., 2011).

Reflections on others' emotions and behaviors and efforts to reconstruct interpersonal relationships were key contents in the second nuclear episode. Respondents were willing to consider other people's perspectives, conforming themselves to shared social realities. These changes can best be described as developments in mentalization, an ability to assess, interpret, and adequately respond to others' and our own mental states and connect these to our experiences (Fonagy et al., 2002). As a result, guilt and shame were exchanged for responsibility, and respondents could accept their imperfections.

Kassai et al. (2017) identified salient differences between NPS users' meaning-making processes and experiences and those of the users of classical substances at the beginning of their treatment. The results of our longitudinal study suggest that NPS users with polydrug dependence can learn to utilize the traditional narrative resources of sober communities, most importantly, the AA-story (Hänninen & Koski-Jännes, 1999). Though the AA-story seemed dominant in this study, elements of the personal growth story, love story, co-dependence story, or mastery story also appeared. In the active phase of their addiction, these patients used a variety of substances; now as persons in recovery, they combined the narrative elements of the different recovery stories.

With NPS users, the drugs, the patterns of use, and the initial experiences differ, but the underlying problems of dependence, as well as subsequent constructive meaning-making processes, are similar to those of the users of classical substances. Their recovery processes can be interpreted as post-traumatic growth involving the reevaluation of major life events and people, the appreciation of everyday pleasures in life, and understanding oneself more (Ogilvie & Carson, 2022).

Limitations

The strengths of this study are its novelty, a highly specific sample of persons who are difficult to reach, the respondents' confirmed NPS use and abstinence to eliminate self-report bias (McKernan et al., 2015), the interview scheme facilitating in-depth explorations, and a longitudinal approach. Patterns of use—NPS use embedded in polydrug use—is consistent with a recent finding by Higgins et al. (2021). This may be a limitation, but

perhaps a fact of life that researchers must cope with. Respondents in this sample used different types of NPSs, classical substances, prescription drugs, and alcohol in a chaotic manner, as patients with severe forms of SUD often do. Further, it was difficult to judge respondents' exact stage of recovery, as it is a cyclic process, and NPS use, with its volatility and unpredictable consequences, probably added to the confusion. The age range was relatively broad, with one female participant in the sample. With all these constraints, the results of this research may add to our understanding of recovery from NPS-related polydrug dependence.

Implications

Our results suggest that the long-term treatment needs of patients with NPS dependence—a form of polydrug dependence—are similar to those of the users of classical substances. Recovering persons in this study could utilize the narrative resources that enabled them to learn and adopt a mentalizing stance, a combination of empathy and mindfulness (Fonagy et al., 2002).

Future directions

Further research, preferably involving larger and international samples enabling cross-country comparisons is necessary to investigate the recovery processes of this specific population. Controlled trials could be convincing, but in such cases, researchers would face many practical difficulties due to the chaotic nature of NPS use and the confused patterns of recovery with frequent episodes of relapse. Further, those not in recovery are usually not motivated to participate in a research project. Case studies to evaluate long-term advances in recovery from NPS use could also be utilized as a complementary in-depth research method.

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Notes on contributors

Ferenc Csaszar, MSc in Clinical Psychology, MD, Psychiatrist at the Department of Psychiatric Rehabilitation, University of Pécs, Clinical Center, Szigetvár Hospital Branch. He is a PhD candidate at the Doctoral School of Neurosciences, University of Pécs. His main area of interest is novel psychoactive substance use and psychotherapeutic methods to increase the efficacy of treatment for substance use disorder, affective disorders, and bipolar disorder.

Marta B. Erdos, Ph.D. is an Associate Professor in Mental Health and Clinical Social Work at the Department of Community and Social Studies, Faculty of Humanities and Social Sciences, University of Pécs, Hungary. Before starting her academic career as a lecturer and qualitative researcher in 2000, she used to work as a counselor at an outpatient crisis intervention center. Her main area of research interest is identity transformations.

Rebeka Javor, Ph.D. is a counselor at the Medical School, University of Pécs, Hungary and a member of the Social Innovation Evaluation Research Center at the Department of Community and Social Studies, Faculty of Humanities and Social Sciences, University of Pécs. Her main area of research interest is clinical psychology, student counseling, and identity development.

Gabor Kelemen, PhD, MD, is a Professor Emeritus at the Department of Community and Social Studies, University of Pecs, Hungary, and a consultant psychiatrist at CGL Bromley Drug & Alcohol Service, UK. His areas of research interest are recovery from addictions and the phenomenology of shame.

ORCID

Ferenc Császár http://orcid.org/0000-0002-6516-8504
Marta B. Erdos http://orcid.org/0000-0003-1618-9875
Rebeka Javor http://orcid.org/0000-0002-3077-6948
Gabor Kelemen http://orcid.org/0000-0002-7013-6056

Data availability statement

The ethical approval excludes publishing the interviews (in Hungarian) as these could identify the respondents. The codebook and the frequency tables are generated by ATLAS.ti 8.3 are available at https://pea.lib.pte.hu/handle/pea/44417.

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