International Journal of New Findings in Health and Educational Sciences (IJHES)
ISSN 2980-0641
DOI: 10.63053/ijhes.121

Studying the relationship between substance use tendencies and maladaptive schemas in students

Shahrbanoo Saatloo[1] ,Saeideh Gheshlaghi, Ph.D[2]
1,2 Department of Psychology and Educational Sciences, North Tehran Branch, Islamic Azad University, Tehran, Iran

ARTICLE INFO

Keywords: *Substance use tendencies, maladaptive schemas, students*

ABSTRACT

The aim of this study was to determine the relationship between substance use tendencies and maladaptive schemas in students. The research method was applied in terms of purpose and descriptive in terms of method, correlational. The statistical population included all undergraduate students studying in the Faculty of Humanities, Islamic Azad University, North Tehran Branch. The sampling method was available and the sample size was 385 people according to Morgan's table. The Farjad Addiction Tendency Questionnaire (2006) and Young's Primary Maladaptive Schemas Questionnaire (2005) were used to collect data. Descriptive statistics and inferential statistics (regression analysis, correlation coefficient) were used to analyze the data. The results of the study showed that there is a significant relationship between maladaptive schemas and substance use tendencies, and as the number of maladaptive schemas increases in students, the tendency to use substances also increases among them.

Introduction

The period of university education, despite numerous challenges such as financial issues, housing, classroom conditions, exam preparedness, distance from family, and student adventures, represents a phase in life that may facilitate the experience and exacerbation of certain social harms, including addiction. The significance of the inclination and tendency of students toward substance use and its associated harms has rendered the student demographic a pivotal focus of drug prevention and addiction treatment programs (Mokbel et al., 2023).

Substance use disorders rank as the second most prevalent psychiatric disorders and pose a significant global issue (Moushchak et al., 2023). Addiction is defined as the physiological response of the body to the continuous consumption of addictive substances; such that repetition of consumption provides immediate pleasure and temporary relief for the individual (Navyanti et al., 2022). Substance abuse represents one of the most detrimental habits affecting the lives of individuals afflicted by drug addiction. According to statistics, this detrimental habit is increasingly prevalent within society, especially among the youth, particularly students. Approximately 30% of male students and 20% of female students have engaged in occasional substance use (Sourman et al., 2022).

One of the influential variables affecting the tendency towards addiction is primary maladaptive schemas (Paltel et al., 2022). A schema is a cognitive framework or concept that assists an individual in organizing and interpreting information. Schemas act as models and patterns that provide standards and tools for comprehending the surrounding environment and the information received. In other words, individuals judge their environment based on the information, knowledge, observations, and experiences they have acquired, which constitutes their schemas (Mousavi et al., 2022). Schemas are among the individual and psychological causes that hold particular significance in the study of substance dependence. They induce biases in an individual's interpretation of events, which manifest as distorted attitudes, erroneous assumptions, and unrealistic goals and expectations. Furthermore, maladaptive schemas are profound and pervasive patterns that relate to an individual's relationship with themselves or others and are highly ineffective (Miller et al., 2022). Since schemas form the cognitive foundations of individuals and can shape their behaviors, a connection can be established between maladaptive schemas, which typically originate during developmental stages, and maladaptive behaviors in later developmental stages (such as addiction) (Amzi-Nir et al., 2023).

The risk of addiction among adolescents and young adults is not uniform. Individuals raised in families with addiction are at greater risk. Adolescents and young adults facing familial issues, unsuitable living environments, and unfavorable academic and behavioral conditions, especially those associating with deviant peers, are at serious risk. Some investigations suggest the presence of unidentified genetic factors that may serve as influential elements in addiction; additionally, unfavorable social-cultural factors and poor value systems further elevate the risk of addiction among the youth (Alotaibi et al., 2022) .

Maladaptive early schemata represent a set of fundamental beliefs and cognitive patterns that emerge as a result of adverse experiences during childhood and ineffective interactions with parents and other significant individuals in one's life. These schemata, introduced by Jeffrey Young, can lead to feelings of worthlessness, insecurity, excessive dependency, fear of rejection, and an inability to manage emotions. Individuals possessing maladaptive schemata often resort to ineffective coping strategies in adulthood to escape the unpleasant emotions resulting from these schemata, one of which is substance use (Stellar et al., 2023). Consequently, the present study aims to determine the relationship between the propensity for substance use and maladaptive schemata among students.

The present research utilized a descriptive-correlational methodology. The statistical population of this study consisted of all undergraduate students enrolled at the Faculty of Humanities of the Islamic Azad University, North Tehran Branch, during the academic year 1403-1402. In this research, the sample size, referring to Morgan's table, comprised 385 students from the field of humanities at the undergraduate level (the largest sample size was considered for the larger population). The sampling method was convenience sampling, whereby a link to the questionnaire was initially created and subsequently shared in the university channel, where undergraduate students of the Faculty of Humanities are members. Moreover, informed consent and

confidentiality were principle considerations in this study.

a) Standard Questionnaire for Addiction Orientation: The Addiction Orientation Questionnaire was developed by Farjad (2006) to assess the degree of inclination towards addiction among individuals. This questionnaire consists of 16 items and encompasses three dimensions: social, individual, and environmental. It employs a Likert scale with inquiries such as (Is there a drug addict among your close friends?) to assess the level of inclination towards addiction among individuals. In this research, the term "inclination towards addiction" refers to the score that respondents obtain from the 16-item Addiction Orientation Questionnaire. Scoring is conducted as follows: a score of 1 is assigned for "very little," 2 for "little," 3 for "occasionally," 4 for "much," and 5 for "very much." To compute the score for each subscale, the scores of all items related to that subscale are aggregated. The total score of the questionnaire is derived by summing the scores of all items. The score range for this questionnaire falls between 16 and 80, with a score of 16 or lower indicating no internet addiction. The higher the score obtained from this questionnaire, the greater the inclination towards addiction among individuals; conversely, a lower score indicates less inclination. The components of this questionnaire are environmental, individual, and social, with questions 1 to 5 pertaining to the environmental dimension, questions 6 to 9 related to the individual dimension, and questions 10 to 16 addressing the social dimension. The validity of the questionnaire is articulated such that validity concerns how well a measurement instrument assesses what it is intended to measure (Sarmad et al., 2011). In the research conducted by Mirhasami (2009), the content, face, and construct validity of this questionnaire were deemed appropriate. Reliability is defined as the degree of consistency of a tool in measuring what it purports to measure, indicating the extent to which a measurement instrument yields consistent results under identical conditions (Sarmad et al., 2011). The calculated Cronbach's alpha coefficient in the study by Mirhasami (2009) for this questionnaire was estimated to be above 0.7. Ultimately, the reliability coefficient of the questionnaire (Cronbach's alpha) was found to be 0.79.

b) Questionnaire on Early Maladaptive Schemas: This questionnaire, designed by Young in 2005, consists of 75 items and assesses 15 schemas across five subscales: emotional deprivation, failure to achieve autonomy, impaired functioning, impaired limits, and excessive vigilance, with each schema being assessed through 5 items. Scoring is based on a Likert scale ranging from 1 to 6. The minimum and maximum scores for each of the domains are outlined as follows: for the first domain, which includes items 1 to 25, the maximum score is 150. The second domain, comprising items 26 to 45, has a minimum score of 20 and a maximum of 120. The third domain, covering items 66 to 75, has a minimum score of 10 and a maximum of 60. The fourth domain includes items 46 to 55, also with a minimum score of 10 and a maximum of 60. The fifth domain, which comprises items 56 to 65, has the same minimum and maximum scores. If an individual scores three or four higher marks (5 or 6) in a particular schema, it is typically clinically interpreted as the presence of that schema in their mind. In the original version of the questionnaire, reliability was reported using Cronbach's alpha coefficients ranging from 0.85 to 0.96, and test-retest reliability was reported between 0.50 to 0.82, with content and face validity also being confirmed (Young et al., 2005). In the research conducted by Firoozi et al., a reliability score of 0.93 was obtained, with the content and face validity of the questionnaire being corroborated by three specialists in the field of psychology (Alavizadeh et al., 2022). Given that the measurement tool in the current research is a questionnaire assessing continuous variables measured on an interval scale, descriptive statistical indicators such as measures of central tendency (mode, median, mean), measures of dispersion (range, variance, and standard deviation), and distribution measures (standard error, skewness, and kurtosis) were employed to determine the normality of variable distributions, while regression analysis was utilized for variable prediction. Additionally, SPSS software was employed for the data analysis.

Findings

Based on the relevant guidelines, the mean and standard deviation of the dimensions of substance consumption propensity were initially extracted, the resulting data is presented in the table below.

Table 1: Mean and Standard Deviation of Dimensions of Early Maladaptive Schema

standard deviation	average	Dimensions of Early Maladaptive Schema
5/2	23/1	Emotional Deprivation
6/3	21/7	Abandonment/Instability
5/1	21/6	Mistrust/Abuse
4/9	23/3	Social Isolation
4/8	25/8	Defectiveness/Shame
4/5	26/2	Failure
3/2	23/4	Dependence/Incompetence
4/7	23	Vulnerability to Harm
3/5	25/9	Enmeshment/Failure to Separate
3/6	24/8	Subjugation
3/3	18	Self-Sacrifice
5/05	23/1	Emotional Inhibition
4/5	15/7	Unrelenting Standards/Hypercriticalness
4/3	16/2	Entitlement/Grandiosity
5/7	19/8	Insufficient Self-Control/Self-Discipline
63/7	326/2	Overall Mean of Early Maladaptive Schema

Table 1 indicates that the overall mean of the early maladaptive schema is 2.326 .

Table 2: The normality status of the data utilizing the Kolmogorov-Smirnov (K-S) test.

Result	p	Kolmogorov-Smirnov Test z	Index / Variable
Normal	0/12	0/85	Consumption propensity for substances
Normal	0/11	0/97	Maladaptive schema

According to Table 2, the significance level of the variables is greater than 0.05 ($p > 0.05$), indicating the normality of the questionnaire data. Therefore, based on the results of the Kolmogorov-Smirnov test, the assumption of normality for the data is confirmed, and parametric tests can be employed for the analyses

.

Table 3: Indicators and Statistics of Regression Analysis

Significance Level	Balance F	Error in Assessment Criteria	Modified Tax	Square Root of the Coefficient of Determination R^2	Coefficient of Correlation R
0/001	94.052	1.01810	.359	.363	.603a

The results indicate that there is a correlation of 0.603 between the tendency towards substance use and maladaptive schemas, accounting for 36.3% of the variance in substance use tendencies.

The analysis of variance indicates that the maladaptive schemas significantly contribute to the propensity for substance use ($p < 0.05$, $df = 1$, $f = 383$). Thus, the findings clearly demonstrate a meaningful relationship between maladaptive schemas and the inclination towards substance use

.

Table 4. The Variables Entered into the Regression

Significance level	t ratio	Regression Discontinuity Design	Dismantling Tax		Indicators
		Beta	Criterion Error	B	
0/001	4.062		.232	.941	Constant Value
0/001	9.698	.603	.069	.666	Incompatible Schemas

The numbers included in the tables of Table 4 indicate that there is a statistically significant positive correlation between the maladaptive schemas of students and their propensity for substance use ($p < 0.05$). In other words, as the level of maladaptive schemas among students increases, so does their inclination towards substance use. Thus, it can be concluded that the third hypothesis of the research is confirmed.

Discussion

The objective of this study was to determine the relationship between the propensity for substance use and maladaptive schemas in students. The results obtained from the research indicated that there is a significant correlation between maladaptive schemas and the inclination towards substance use, such that an increase in the level of maladaptive schemas among students is associated with an increase in their propensity for substance use. In a comparative analysis concerning the third sub-hypothesis of the research, namely the relationship between the propensity for substance use and maladaptive schemas, the findings of this study are consistent with the results of both domestic and foreign researchers including the studies of Sabaghpour and Mahoor (2016), Ramirez et al. (2020), Ahliroo et al. (2019), Lang et al. (2017), Zilberman et al. (2018), Alavi et al. (2020), Karami et al. (2015), confirming their findings.

In interpreting the results of this hypothesis, it can be stated that early maladaptive schemas encompass deep-rooted beliefs and thought patterns that are developed during childhood as a result of negative experiences such as rejection, neglect, or abuse. These schemas can remain activated into adulthood and influence maladaptive behaviors, including substance use propensity. Among students, maladaptive schemas may play a significant role in the formation or exacerbation of substance use tendencies due to academic, social, and personal pressures.

Students with schemas such as social rejection or distrust often feel unaccepted by others or believe that others intend to take advantage of them. These schemas can lead to feelings of isolation and resentment, thereby driving the individual towards substance use as a means of escape from these emotions. Schemas of failure or inadequacy result in students perceiving themselves as incapable and undervalued in academic and social situations. These negative beliefs can exacerbate anxiety and depression, with substance use seen as a

temporary relief from these negative feelings. Individuals with schemas such as insufficient control or impulsivity may encounter difficulties in managing their behaviors and emotions. This lack of self-control can heighten the likelihood of risky behaviors, including substance use.

Schemas such as emotional deprivation lead students to feel that their emotional needs are unmet by others. This sense of deprivation may push them towards substance use as a method of alleviating emotional pain. Early maladaptive schemas can unconsciously influence students' behaviors. By fostering negative beliefs and intensifying negative emotions, these schemas increase the likelihood of substance use propensity. Substance use can act as a response to the activation of maladaptive schemas, yet the use of substances can simultaneously reinforce these schemas. For instance, substance use may exacerbate feelings of inadequacy or social rejection, thereby creating a vicious cycle of negative schemas and maladaptive behaviors. Consequently, there exists a significant relationship between maladaptive schemas and the propensity for substance use.

Early maladaptive schemas can predispose students to substance use by reinforcing negative thoughts and emotions. Psychotherapeutic interventions focusing on the identification and modification of these schemas may significantly mitigate the propensity for substance use and enhance adaptive behaviors among students. Therefore, given that youth, particularly students, represent a primary group at risk for substance use propensity, it is imperative that their education be prioritized in educational programs. Emphasis on counseling should be regarded as the most fundamental approach to preventing the emergence and prevalence of substance use inclinations within society. Ultimately, based on the findings of the research, it is recommended that university counselors, upon observing issues related to maladaptive schemas in students, conduct assessments and consider special counseling sessions for them.

References

1. Abotalebi, H., Yazdchi, N., & Esmaikhani Akbari Nejad, H. (2022). The effectiveness of emotional regulation training on psychological well-being and emotional regulation in men addicted in Isfahan. Community Health, 16(1), 23-33.
2. Babayi Nadini Louie, K., Gol Mohammad Zadeh, S., Shirzad, B., Shirzadpour, A., & Mezdarani Shahrzad. (2019). Psychological coping strategies and tendency towards addiction among adolescents: The moderating role of resilience and tolerance for ambiguity. Scientific Journal of Clinical Psychology and Personality, 17(1), 191-202.
3. Baqeri, M. J., Asgharnazad, F. A., & Nasrollahi, B. (2022). Investigating the relationship between distress tolerance and quality of life with psychological well-being as a mediating role in the elderly of Tehran. Journal of Disability Studies, 12(2), 261-261.
4. Bodafshan, H., & Khanjari, S. (2021). Examining the relationship between distress tolerance and social acceptance with psychological well-being in second-grade high school students in Gorgan.
5. Delavar, A. (2021). Research methodology in psychology and educational sciences. Tehran: Virayesh, 54th edition.
6. Rafiei, H. (2022). Predicting the reduction of substance abuse cravings based on resilience and self-control in men visiting addiction treatment centers in Rasht. Quarterly Journal of Psychological Educational Skills, 13(4), 42-52.
7. Salajegheh, S., Emami Pour, S., & Nematollah Zadeh Mahani, K. (2019). A structural model of the relationship between mindfulness and psychological well-being based on the mediating role of emotion regulation strategies in women with breast cancer. Quarterly Journal of Applied Psychology, 13(1), 77-98.
8. Shabahang, R., Baqeri, F., & Mousavi, M. (2020). Comparison of addiction memory severity and self-control in successful and unsuccessful addiction recovery. Addiction Research, 14(55), 168-151.
9. Sadri Demirchi, I., Asrafili H., & Misbahy, F. (2019). A model of readiness for addiction based on the three dark personality traits and schema mindsets. Quarterly Journal of Substance Abuse Research, 13(53), 119-138.
10. Mahbube Karbalaei Kamran, Yazdanbakhsh, P., & Karimi, P. (2021). Predicting psychological well-being based on emotion regulation, cognitive flexibility, and mindfulness in cancer patients. Health Psychology, 10(1), 1-37.
11. Mohammadi, S., Imani, S., & Fath Abadi, J. (2020). Predicting the tendency towards substance use based on personality dimensions and maladaptive schemas. Scientific Quarterly Journal of Addiction Research, 16(63), 65-84. Aboutalebi, H., Yazdchi, N., & Smkhani Akbarinejhad, H. (2022). Effectiveness of Cognitive Emotion Regulation Training on Psychological Well-being & Cognitive Emotion Regulation of Addicted Men in Isfahan City. *Community Health Journal*, *16*(1), 23-33.
12. Akbari, M., Hosseini, Z. S., Seydavi, M., Zegel, M., Zvolensky, M. J., & Vujanovic, A. A. (2021). Distress tolerance and posttraumatic stress disorder: A systematic review and meta-analysis. Cognitive behaviour therapy, 1-30.
13. Bakhshaie, J., Storch PhD, E. A., & Zvolensky PhD, M. J. (2023). Pain-related disability and opioid use in a sample of young adults with current pain: The explanatory role of distress tolerance. *Journal of American College Health*, *71*(4), 1206-1212.
14. BALCI, Ş., KARAKOÇ, E., & Nesrin, Ö. Ğ. Ü. T. (2020). Psychological Well-Being as a Predictor of Social Media Addiction: A Survey on Health Workers. *Online Journal of Technology Addiction and Cyberbullying*, *7*(1), 35-63.
15. Bozarth, M. A. (2023). Drug addiction as a psychobiological process. In *Addiction controversies* (pp. 112-134). CRC Press.
16. Chaleshtori, M. N., Heidari, A., Asgari, P., Bozorgi, Z. D., & Hafezi, F. (2022). Comparison of the effectiveness of mindfulness-based stress reduction therapy and emotion regulation training on the distress tolerance of adolescent girls with a drug-dependent parent. *Jundishapur Journal of Health Sciences*, *14*(1).
17. Kehyayan, A., Wright, P., Marks, J., Matura, J. M., Axmacher, N., Herpertz, S., & Kessler, H. (2023). The influence of the behavioural inhibition system on the development of PTSD-like symptoms after presentation of a traumatic film in healthy subjects. *European Journal of Psychotraumatology*, *14*(2), 2172258.
18. Koç, H., Şimşir Gökalp, Z., & Seki, T. (2023). The Relationships Between Self-Control and Distress Among Emerging Adults: *Emerging Adulthood*, *11*(3), 626-638.
19. Kraiss, J. T., Ten Klooster, P. M., Moskowitz, J. T., & Bohlmeijer, E. T. (2020). The relationship between emotion regulation and well-being in patients with mental disorders: A meta-analysis. *Comprehensive psychiatry*, *102*, 152189.

20. McNair, R., Monaghan, M., & Montgomery, P. (2023). Heroin assisted treatment for key health outcomes in people with chronic heroin addictions: a context-focused systematic review. *Drug and Alcohol Dependence*, 109869.
21. Miller, A. E., & Racine, S. E. (2022). Emotion regulation difficulties as common and unique predictors of impulsive behaviors in university students. *Journal of American College Health*, *70*(5), 1387-1395.
22. Moqbel, M., Nevo, S., & Nah, F. F. H. (2023). Unveiling the dark side in smartphone addiction: mediation of strain and moderation of hedonic use on well-being. *Internet Research*, *33*(1), 12-38.
23. Moschak, T. M., Sloand, T. J., & Carelli, R. M. (2023). Prelimbic cortex activity during a distress tolerance task predicts cocaine-seeking behavior in male, but not female rats. *Journal of Neuroscience*, *43*(4), 647-655.
24. Mousavi, B., Fathi, A., Malekirad, A., Sarkhare, E., & Ykkalam, F. (2022). The Effectiveness of Spirituality Therapy Based on Communication Skills on Drug Craving, Life expectancy and Psychological well-being of drug addicts. *Journal of Modern Psychological Researches*, *17*(67), 249-257.
25. Noviyanty, H., Ismail, Z., Hamjah, S. B. H., & Mohamad, A. D. (2022, February). Spiritual Psychotherapy and Mental Health: The Forgiveness Therapy in Achieving Spiritual Well-Being of Drug Addicts with Depression Disorders. In *Second International Conference on Public Policy, Social Computing and Development (ICOPOSDEV 2021)* (pp. 7-14). Atlantis Press.
26. Noviyanty, H., Ismail, Z., Hamjah, S. B. H., & Mohamad, A. D. (2022, February). Spiritual Psychotherapy and Mental Health: The Forgiveness Therapy in Achieving Spiritual Well-Being of Drug Addicts with Depression Disorders. In *Second International Conference on Public Policy, Social Computing and Development (ICOPOSDEV 2021)* (pp. 7-14). Atlantis Press.
27. Orgeta, V. (2011). Emotion dysregulation and anxiety in late adulthood. Journal of Anxiety Disorders, 25(8), 1019–1023.
28. Paltell, K. C., & Berenz, E. C. (2022). The influences of posttraumatic stress disorder and distress tolerance on trauma and alcohol cue reactivity in a sample of trauma-exposed college students. *Journal of Studies on Alcohol and Drugs*, *83*(1), 106-114.
29. Paltell, K. C., & Berenz, E. C. (2022). The influences of posttraumatic stress disorder and distress tolerance on trauma and alcohol cue reactivity in a sample of trauma-exposed college students. *Journal of Studies on Alcohol and Drugs*, *83*(1), 106-114.
30. Sörman, K., Garke, M. Å., Isacsson, N. H., Jangard, S., Bjureberg, J., Hellner, C., ... & Jayaram-Lindström, N. (2022). Measures of emotion regulation: Convergence and psychometric properties of the difficulties in emotion regulation scale and emotion regulation questionnaire. *Journal of Clinical Psychology*, *78*(2), 201-217.
31. Sörman, K., Garke, M. Å., Isacsson, N. H., Jangard, S., Bjureberg, J., Hellner, C., ... & Jayaram-Lindström, N. (2022). Measures of emotion regulation: Convergence and psychometric properties of the difficulties in emotion regulation scale and emotion regulation questionnaire. *Journal of Clinical Psychology*, *78*(2), 201-217.
32. Stellern, J., Xiao, K. B., Grennell, E., Sanches, M., Gowin, J. L., & Sloan, M. E. (2023). Emotion regulation in substance use disorders: A systematic review and meta-analysis. *Addiction*, *118*(1), 30-47.