



Research Article

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PREDICTION OF ADDICTION POTENTIAL IN UNIVERSITY STUDENTS BASED ON THE ROLE OF MENTAL HEALTH, SELF-EFFICACY, AND PERCEIVED SOCIAL SUPPORT

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Abstract

Objectives: One of the main areas of investigation about substance use among young people is to predict factors of an individual's vulnerability to it and recognize the variables affecting it. This study aimed to investigate of prediction of addiction potential in university students based on the role of mental health, self-efficacy, and structures of perceived social support.

Materials and Methods: In the current cross-sectional investigation 438 students of Mashhad Universities of Applied Sciences were collected using cluster sampling. The data collection tools were the Iranian version of the addiction potential scale, the general health questionnaire, the perceived social support questionnaire, and the Sherer general self-efficacy questionnaire. Data were analyzed by applying SPSS.

Results: The results of the linear regression analysis showed a significant relationship between addiction potential, perceived social support, self-efficacy, and mental health. Furthermore, self-efficacy was the strongest addiction potential predictor.

Conclusion: Based on the finding that self-efficacy is the strongest predictor of addiction potential, it is recommended to prioritize interventions and training aimed at increasing self-efficacy beliefs. By providing essential training and interventions that focus on increasing self-efficacy beliefs, we can empower young people to make healthier choices and reduce their vulnerability to addiction.

Keywords: Addiction potential, mental health, social support, self-efficacy

Introduction

Addiction is a complex disease that arises from the misuse and excessive consumption of substances such as opium, alcohol, and hashish. It affects individuals psychologically, physiologically, and socially.¹ Globally, approximately 210 million people use substances, resulting in around 200,000 deaths annually.² In Iran, substance abuse is particularly prevalent among university students.³ This can be attributed to factors such as the country's unique geographic location, cultural characteristics, and misconceptions surrounding addiction. Various factors contribute to the tendency of university students to engage in drug use. These include a lack of emotional support from families, inadequate recreational facilities, relationship issues, association with friends who use substances, and economic problems.¹ The consequences of substance abuse among young people are significant and alarming. They include physical and mental injuries, dependence on substances, engagement in illegal behaviors, risky sexual behaviors, poor academic performance, and substantial costs to society.⁴ Therefore, it is crucial to investigate the factors that make individuals vulnerable to substance abuse and understand the variables that influence it. It is important to consider both psychological and social aspects when designing treatment plans for individuals struggling with substance abuse.

Mental health is a crucial factor in addiction prevention and treatment. It refers to a state of well-being where individuals recognize their abilities, can function effectively, cope with everyday stressors, and contribute to their communities.⁵ Mental health disorders have a significant impact on the mortality rates of young individuals in many societies. Additionally, there is a strong association between poor mental health and various concerns among young people, particularly substance abuse.⁶ Research has demonstrated that an individual's mental health plays a significant role in their overall quality of life and resilience against risk factors. Individuals with good mental health are less likely to engage in substance use.⁷ Promoting mental well-being through early intervention, access to mental health services, and support systems can help individuals develop healthy coping mechanisms and reduce the likelihood of turning to substances as a means of escape or self-medication.

Self-efficacy is an important determinant related to drug use and has been extensively studied in the field of behavior change, including substance abuse.⁸ It refers to an individual's belief in their capabilities to utilize cognitive skills, motivation, and control over a specific event.⁹ According to Bandura's social learning theory, drug use can be influenced by individuals imitating others who have positive expectations regarding drug use.¹⁰ Research has shown that low self-efficacy is associated with an increased likelihood of drug use among both adults and adolescents.¹¹ Enhancing self-efficacy can be a valuable strategy in preventing and addressing substance abuse.¹²

Social support is a crucial factor in coping with stressful situations and is one of the strongest and most effective coping mechanisms for individuals facing challenging circumstances.⁸ It helps individuals tolerate problems and navigate through difficult times more easily. Social support can be categorized into two dimensions: perceived support, which refers to an individual's belief that they can turn to others for help, and enacted support, which involves actual supportive actions or behaviors.⁸ Numerous studies have demonstrated the significant role of perceived social support in the prevention, treatment, and relapse prevention of substance abuse.^{8,13} Having a strong support system can provide individuals with emotional encouragement, practical assistance, and a sense of belonging, all of which contribute to their ability to resist drug use. Conversely, loneliness, social relationship deficits, and social isolation are believed to contribute to an increased risk of substance abuse.¹⁴ Therefore, it is essential to promote social support networks as part of addiction prevention and treatment efforts. This can involve strengthening existing relationships, fostering new connections through support groups or community programs, and providing resources for individuals to access social support when needed.¹⁵

Due to the high outbreak of substance use and the treatment difficulties, it is essential to recognize the related effective determinants among various populations such as college students. The study aims to explore the predictive factors of addiction potential among university students, specifically focusing on the role of mental health, self-efficacy, and perceived social support.

Materials and Methods

Participants and sampling

In the current cross-sectional investigation 438 students of Mashhad Universities of Applied Sciences were collected using cluster sampling, on December 2022. At the beginning of the research, informed consent was taken from all students. The inclusion criteria included informed consent and a complete questionnaire, and the excluded criteria included incomplete questionnaires and personal unwillingness. The research protocol was approved by the Mashhad University of Medical Sciences.

Tools

Information on demographics such as participants' age, sex, marital status, and education was assessed in the first section of the questionnaire.

To assess the addiction potential, we used the Iranian version of the Addiction Potential Scale (IAPS) which has been approved by Zargar et al.¹⁶ The questionnaire includes 36 items and 5 lie detector questions. Each question is scored from zero (completely true) to three (completely false); so, the total score range is zero to 108. In the current investigation, a reliability of 0.90 was assessed for this scale by Cronbach's alpha.

A General Health Questionnaire (GHQ-12) was used to determine the mental health status. Because of the brevity, this measure is one of the most appropriate applied scales to study psychological disorders.¹⁷ The GHQ-12 consists of 12 questions with a 4-degree scale (0=Not at all to 3=More than usual). Scores are between 0 and 36, with a higher score demonstrating a higher degree of mental disorders. The validity of this scale has been approved by Yaqoubi et al for the Iranian population.¹⁸ Furthermore, a reliability of 0.86 was estimated for this scale by Cronbach's alpha.

Perceived Multidimensional Social Support was applied to assess the perceived support status. This questionnaire includes 12 questions about three domains of perceived support from friends, families, and important others. Individuals demonstrate their agreement with questionnaire items on a 5-point Likert scale (very strongly disagree to very strongly agree). A higher score displays a higher perceived social support level. The validity of this scale has been confirmed by Akbari et al.¹⁹ A reliability of 0.87 was estimated for this scale by Cronbach's alpha.

Sherer questionnaire was applied to assess general self-efficacy.²⁰ It contains 17 items with a 5-point Likert scale (completely disagree=1, completely agree=5). Scores are between 17 and 85. The validity of this scale was confirmed by Najafi et al.²¹ Moreover, a reliability of 0.78 was estimated for this scale by Cronbach's alpha.

Data analysis

Data were analyzed by applying SPSS 21 software via linear regression analysis and Pearson correlation coefficient at the significance level of 0.05. The quantitative data were demonstrated by mean and standard deviation and qualitative variables were displayed by percent and frequency.

Results

Demographic characteristics of students are displayed in Table 1.

Table 1. Demographic characteristics of the participants

	Mean	Standard Deviation
Age (Year)	21.53	3.34
Education	n	%
Associate degree	297	67.8
Bachelor science	141	32.2
Marital status	n	%
Married	104	23.7
Single	334	76.3
Sex	n	%
Male	160	36.5
Female	278	63.5

The results displayed in Table 2 are related to the mean and standard deviation of addiction potential, perceived social support, self-efficacy, and mental health.

Table 2. Mean and standard deviation of variables

Variable	Mean	Standard deviation
Addiction Potential	56.93	15.82
Social Support	43.01	10.13
Self-efficacy	52.33	6.57
Mental Health	18.34	6.67

Table 3. Regression analyses for addiction potential

Independent Variables	β standard	P	R ²	Dependent variable
Social Support	-0.27	0.0001		Addiction Potential
Self-efficacy	-0.42	0.0001	0.77	
Mental Health	0.35	0.0001		

The results of the linear regression analysis (Table 3) showed a significant relationship between addiction potential, perceived social support (β standard=-0.27, $p \leq 0.001$), self-efficacy (β standard=-0.42, $p \leq 0.001$), and

mental health (β standard=0.35, $p \leq 0.001$). As shown in the table, self-efficacy was the strongest addiction potential predictor.

Table 4. Correlation matrix among variables

Variables	Addiction Potential	Social Support	Self-efficacy	Mental Health
Addiction Potential	1	-0.68**	-0.79**	0.72**
Social Support		1	0.59**	0.45**
Self-efficacy			1	0.59**
Mental Health				1

** Correlation is significant at the 0.01 level (2-tailed)

The findings showed that there is a significant positive correlation between mental health and addiction potential ($P \leq 0.001$). Moreover, perceived social support and self-efficacy had a significant negative correlation with the addiction potential ($P \leq 0.001$) (Table 4).

Discussion

Insufficient self-efficacy is identified as a significant factor influencing addiction potential.²² The study findings reveal a strong relationship between self-efficacy and addiction potential, with a significant negative correlation. Self-efficacy plays a crucial role in preventing negative behaviors and enhancing self-esteem among individuals.²³ When individuals have low self-efficacy, they may perceive substance use as a way to cope with stress, socialize, or fit in with their peers. This can increase their vulnerability to addiction and make it more difficult for them to resist engaging in substance use behaviors.¹² Numerous studies provide evidence that self-efficacy is a key factor in building confidence and resisting drug use, particularly in high-risk situations, while also reducing the risk of relapse.^{24,25} High levels of self-efficacy act as a protective factor, enabling individuals to reject offers of alcohol, cigarettes, and other substances, thereby strengthening their self-esteem and shielding them from the detrimental effects of substance abuse.²⁴ This finding can be explained by the fact that individuals with well-defined and stable self-efficacy exhibit higher levels of psychological well-being. Consequently, they are less likely to engage in unhealthy and risky behaviors such as substance use when faced with obstacles or problems.²⁶ By providing training and interventions that focus on increasing self-efficacy beliefs, individuals can develop the confidence and skills necessary to resist substance use temptations. These

interventions can include activities that enhance problem-solving skills, decision-making abilities, assertiveness training, and building resilience.

Social support is indeed another significant factor influencing addiction. The study findings reveal a significant relationship between perceived social support and addiction potential. Social support has both direct and indirect effects on health, through coping strategies, cognitive mechanisms, and health behaviors.¹⁹ Having a strong support system can provide individuals with a sense of belonging, connection, and validation. This can help reduce feelings of loneliness, stress, and anxiety, which are often associated with substance use as a coping mechanism. Social support can also provide individuals with alternative sources of enjoyment and fulfillment, reducing the need for substances to fill those voids.²⁷ Sadri Damirchi et al.'s study also demonstrates a significant negative correlation between perceived social support and addiction potential among soldiers.⁸ Sohrabi et al. further highlight the negative relationship between readiness for addiction and social support.²⁸ Perceived social support serves as a powerful external coping resource that plays a crucial role in psychological well-being and enhances individuals' adjustment. Lack of perceived social support, particularly from friends, family, and society, reduces an individual's resistance to environmental pressures, which can lead to substance use. For example, when there is commitment and solidarity within a family, individuals can rely on their assistance to overcome obstacles and problems, viewing them as a source of comfort that prevents the need for substance use as a short-term solution. Additionally, supportive friends can provide various forms of informational, instrumental, and emotional support to individuals.⁷ Further longitudinal interventions focusing on social support are necessary to strengthen the evidence supporting the role of social support in preventing drug use among young individuals.

The findings of this investigation demonstrated a significant relationship between mental health and addiction potential. Considering the importance of mental health in predicting and preventing many disorders, paying more attention to this area is so important. Therefore, facilitating the provision of help for people to achieve mental health is an effective strategy for reducing the risk of addiction. The findings of the investigations related to the field of drug use and mental health status showed that people who lack mental health or in other words have a specific mental disorder are more inclined towards drug use.⁵ The finding of the research by Sohrabi et al showed that there is a significant positive relationship between mental health and readiness for addiction.²⁸ In explaining this finding, it can be acknowledged that mental health plays a fundamental role in all aspects of a person's life, and if people do not have good mental health and in other words have symptoms of anxiety, depression, distress, and worry, to deal with them, they choose the fastest and shortest strategy of opponents, which is often a negative and inappropriate method. In other words, these people use drugs, cigarettes, and alcohol to get rid of these problems, unaware that such strategies are short-term and often lead to mental health problems, including depression and anxiety, sleep problems, worry, and other problems in

life. Accordingly, if people do not have good mental health, they will most likely have more tendency towards addiction and drug use.

The regression analysis results confirm that self-efficacy is the strongest predictor of addiction potential. Rostami et al.'s study demonstrates that general self-efficacy can predict acceptance of addiction and explain up to 30% of the variance in acceptance of addiction among students.²⁰ Substance abuse is a behavior that is not entirely under an individual's control, as it is influenced by various internal and external factors. Therefore, having constructs such as self-efficacy, which are effective in behavior control, increases the predictive power of behavior.²⁹ In general, psychological constructs like self-efficacy can help explain a portion of complex issues such as addiction. Based on these findings, it is recommended to prioritize and design educational plans and interventions that focus on increasing self-efficacy beliefs. Providing essential training and interventions related to enhancing self-efficacy can be beneficial in preventing and addressing addiction.

The use of self-report as the data collection method is indeed a limitation of the study. Self-report measures rely on participants accurately and honestly reporting their behaviors and experiences, which can be influenced by social desirability bias or memory recall issues.³⁰ Therefore, the findings should be interpreted with caution. Another limitation is the use of a cross-sectional design. Cross-sectional studies provide a snapshot of data at a specific point in time, which limits our ability to establish causal relationships or determine the directionality of the observed associations. Longitudinal data would be valuable in providing more robust and accurate findings.

Despite these limitations, the findings of this study offer a valuable framework for understanding addiction behavior among students and can inform the development of more effective strategies for addiction control. Future research should consider using more rigorous study designs and longitudinal data to further investigate these relationships and validate the findings.

In conclusion, to effectively control drug use among young individuals, it is crucial to identify and be aware of the contributing factors. This study has provided valuable insights into the factors related to addiction potential among university students, including perceived social support, self-efficacy, and mental health. The results demonstrate a significant relationship between addiction potential and these factors. Given that self-efficacy emerged as the strongest predictor of addiction potential, it is recommended to prioritize interventions and training aimed at increasing self-efficacy. These interventions can be incorporated into educational plans and given high priority in substance use prevention efforts. Furthermore, utilizing models and theories of health promotion and behavior change can be beneficial in designing and implementing educational intervention programs. These programs can help raise awareness, provide necessary skills, and promote positive behaviors to prevent substance use among young individuals. By addressing these factors and implementing evidence-

based interventions, we can work towards more effective substance use prevention strategies for young people.

Ethical Considerations: The study was approved by the Mashhad University of Medical Sciences ethics board (Number: IR.MUMS.FHMPM.REC.1401.115).

Conflict of Interest: The authors declare no conflict of interest.

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