

Research Paper: Comparing Psychological Hardiness in People With and Without Substance Use Disorder in Hamadan City, Iran



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ABSTRACT

Background: Substance abuse is one of the most common psychiatric problems in the world. It results from the interaction of genetic and environmental factors with unfavorable psychosocial statuses.

Objectives: The present study aimed to compare psychological hardiness between individuals with and without Substance Use Disorder (SUD) in Hamadan City, Iran.

Materials and Methods: The present causal-comparative study was conducted on 200 people (individuals with and without SUD) referring to substance abuse treatment centers in Hamadan, during 2016. The participants were selected by the stratified random sampling method. The required data were collected by the Ahvaz Psychological Hardiness Questionnaire and analyzed by the independent-samples t-test.

Results: The results indicated a significant difference in psychological hardiness among participants with and without SUD. Accordingly, the psychological hardiness of the participants with SUD was generally lower than that of the participants without SUD ($t=3.33$, $df=198$, P-value of the first column <0.05 , P-value of the Levene's test $=0.37$).

Conclusion: Psychological hardiness is statistically different in individuals with and without SUD.

1. Introduction

Substance abuse is one of the most common psychiatric problems in the world. It results from the interaction of genetic and environmental factors with unfavorable psychosocial statuses [1]. The complexity of addiction calls for comprehensive therapeutic approaches. How-

ever, despite the use of various psychological and social interventions along with medical and psychiatric treatments, the success rate in treatment is still not promising. Although the complete eradication of addiction seems unlikely, it is necessary to develop addiction-related knowledge and to promote the treatment approaches for addiction [2]. Since addiction is one of the most critical social issues, it is important to investigate

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its causes along with factors affecting people's tendency to drug abuse. Substance abuse cannot only be attributed to physical, social, or psychological factors. It results from the interaction of several factors. The higher the number of risk factors in one person, the higher would be the likelihood of substance abuse [3].

One of the variables associated with addiction and substance abuse is psychological hardiness. Psychological hardiness is a set of personality traits that acts as a source of resistance in dealing with stressful life events. These personality traits include three dispositions of commitment (instead of giving up), control (instead of renouncement), and challenge (instead of threat). Kobasa found out that people who experience a high level of mental stress had a different personality construct [4]. She also reported that the structure of this different personality had been reflected in a construct termed "psychological hardiness." Hardiness is a belief system that plays a fundamental role in the quality of human life by creating a balance between its various dimensions [5].

The importance of psychological hardiness theorists have used the term "psychological stress" differently. One way to define psychological stress is to consider it as a stimulus. In 1967, Holmes et al. defined psychological stress as an impetus requiring extraordinary measures and significant changes in one's life pattern [6]. Now psychological stress is defined as a process rather than a stimulus or a physiological response. In 1984, Lazarus [7] disagreed with the definition of psychological stress as a stimulus or a physiological response, because people acted differently in response to potentially stressful situations owing to their individual differences.

On the other hand, many human activities, such as working out and falling in love increase the activity of the automatic nervous system and make people, even those who are immensely nervous, feel more contented physically and mentally. Therefore, since a similar physiological response can be considered positive in one situation and negative in other contexts, and psychological stress must be considered something more than a physiological response. According to Lazarus, psychological stress is a process termed the "subjective cognitive judgment," mostly arising from the three-step process of prediction, expectation, and outcome [7].

Finally, it is worth mentioning that in administrative, educational, military, and other similar settings, conflict management is more effective than punishment, detention, suspension, and dismissal. Violent behaviors are

not effective in developing hardiness in people. It must be noted that psychological hardiness training can significantly facilitate the process of conflict management. Therefore, psychological hardiness training is one of the most critical factors in developing the mental health of individuals [4].

The research has shown that psychological stress disturbs emotional states, damages cognitive activities, and disrupts the balance of the human body. Studies examining the relationships between mental stress and various illnesses have shown a broad range of correlations [4]. In some studies, strong correlations have been reported between psychological stress and illness, and in others, the observed correlations were not so strong [4]. Such a wide range in these correlations implies the existence of moderator variables and the importance of individual differences in the relationship between psychological stress and illness. In other words, some people do not feel ill in stressful situations.

In response to psychological stress, people with high psychological hardiness are less likely to experience physical or mental damages [5]. Psychological stress can cause physical illnesses or unpleasant emotions, such as anxiety and depression. However, as noted before, people have different reactions to psychological stress. Kobasa defined psychological hardiness as a set of personality traits that functions as a source of resistance when confronting stressful life events [4].

Psychological hardiness acts as a mediator between stressful events and illness and reduces the risk of catching the disease. Maddi and Kobasa argued that psychological flexibility in people with stress-hardy personality was not merely due to the individual effects of the three dispositions of commitment, control, and challenge but it originated from a particular coping style consistent with a dynamic combination of those dispositions [8]. Rhodewalt et al. [9], Rhodewalt et al. [10], and Wibe [11] reported that people with high levels of psychological hardiness evaluated stressful events more positive and controllable; hence, they would suffer less from severe physiological responses that people with low levels of psychological hardiness would usually experience because of their negative assessment of stressful situations.

Regarding substance abuse, addiction is characterized by an intense, uncontrollable, and obsessive desire for drug abuse. The consumption of various substances create the toxic effects along with sheer pleasure in the abuser called addiction that changes various brain

circuits, including systems of reward and pleasure, motivation, emotions, memory, behavioral control, and learning. Substance abusers make changes in their daily routine that gradually turn into multiple physical illnesses, secondary psychiatric disorders, and several social, familial, occupational, and educational problems [3].

The rising rate of substance abuse among the youth is very upsetting because most young drug abusers continue their addiction in the coming years and increase the rate of addiction and its related problems [12]. Substance abuse-related disorders are among the most common psychiatric problems that arise from the interaction of genetic (e.g. growth abnormalities) and environmental (e.g. critical psychosocial statutes) factors [1].

Previous studies have mentioned that one of the reasons for the inefficacy of addiction treatments is the lack of basic knowledge about addicts' personality. Given the fact that young people are more vulnerable to addiction, every person in a society is required to fight back against addiction. In the pathology of addiction and successful/unsuccessful quit attempts, various environmental, sociological, and psychological factors have been recognized. However, an addict's response to the substance s/he uses is a combination of all those factors. Addiction has a psychological aspect too, so that many addicts, who have successfully quit once, return to their maladaptive behavior of drug abuse again. Thus, addiction and addiction relapse must be rooted in more solid personality constructs with more determining impacts on addicts' behaviors [13].

Over the past few decades, many researchers investigated the relationships between substance abuse and various personality traits. Also, the psychoanalytic headings of drug dependency have discussed the assumption of the existence of a personality type or trait prone to addiction. However, the role of psychological hardiness in addiction has received less attention, especially in Iranian studies.

Psychological hardiness helps people tolerate stressful events or situations. Thus, people with high levels of hardiness are probably less vulnerable to substance abuse. It is possible to gain a better understanding of addiction along with its treatment and prevention by identifying persistent factors that increase the risk of addiction in individuals. Studies have shown that psychological hardiness has a positive relationship with mental and physical health. As a source of resistance, psychological hardiness reduces the adverse effects of stress and prevents further mental and physical disor-

ders. Moreover, psychological hardiness may be related to people's tendency to addiction. The present study aimed to compare psychological hardiness in individuals with and without Substance Use Disorder (SUD).

2. Materials and Methods

The study population included individuals with and without SUD, who visited substance abuse treatment centers in Hamedan City, Iran, during 2016. Five treatment centers were selected using a stratified random sampling method. Then, 20 patients were randomly selected from each center. The number of individuals with SUD in the selected centers was 140. However, using Morgan's Table, the sample size was determined to be 100. Also, 100 individuals without SUD, who had visited the treatment centers, were selected. Then, Ahvaz Psychological Hardiness Questionnaire (APHQ) was distributed among them to complete. Finally, the collected data were analyzed by descriptive (mean and standard deviation) and inferential (the independent samples t-test) statistics in SPSS.

Study instruments

APHQ was used to collect the required data. Kiamarsi has examined the test-retest reliability and internal consistency of this questionnaire [14]. She reported the test-retest reliability of 0.85 and the internal consistency of 0.76, indicating that the questionnaire is reliable enough.

Kiamarsi also examined the concurrent validity of the questionnaire with Ahvaz subscales of anxiety and depression and Maslow's self-actualization scale. She confirmed the concurrent validity of the questionnaire by reporting coefficients of 0.55, 0.62, and 0.55, respectively, with the subscales and scale mentioned above ($P < 0.001$) [14].

3. Results

Tables 1, 2 and 3 presented a summary of the data obtained from the questionnaires. The independent samples t-test was used to compare psychological hardiness scores between addicts and non-addicts.

Table 4 presents the mean and standard deviation of psychological hardiness scores of addicts and non-addicts. The average psychological hardiness scores of addicts and non-addicts were 73.56 and 77.76, respectively, indicating a difference between the two groups.

Table 5 presents the results of the independent samples t-test. The test assumptions were initially examined

so that considering the Levene's test significance levels ($P=0.37$), the assumption of homogeneity of variances was met. The obtained values of $t=3.33$, $df=198$, and the P -value for the first column <0.05 indicated a significant difference in psychological hardiness scores between the two groups. The results of the independent samples t -test ($t=3.33$, $df=198$, P -value of the first column <0.05 , and the P -value of Levene's test $=0.37$) showed a significant difference between psychological hardiness scores of addicts and non-addicts.

4. Discussion

This study aimed to compare psychological hardiness in individuals with and without SUD in Hamadan, Iran. The findings showed a significant difference between psychological

hardiness scores of individuals with and without SUD. Therefore, psychological hardiness of individuals without SUD was generally higher than that of addicts. This finding was in line with the results of previous studies by Moradi [15], Hejazi, Aghayari, and Jarchi [16], Shirbim et al. [17], and Maddi et al. [8]. This finding is justified because psychological hardiness creates a particular internal attitude that affects the way an individual deals with various life issues. People with a high level of psychological hardiness can see stressors more realistically. Moreover, hardiness results from knowledge. Based on this knowledge, people decide how to react appropriately in stressful situations. In other words, psychological hardiness is an underlying sense of control, enabling a stress-hardy person to access to a list of useful coping strategies. Finally, psychological hardiness creates a realistic view of stressors. In other words, accepting life challenges enables

Table 1. Frequency and percentage of the participants in each group

Groups	Statistical Indices	No. (%)
Healthy		100(50)
Addicted		100(50)
Total		200(100)

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Table 2. Frequency and percentage of participants in each group based on their age

Age Groups (y)	Statistical Indices		No. (%)
	Healthy	Addicted	
20-30	36(36)	31(31)	
31-40	40(40)	42(42)	
41-50	24(24)	27(27)	
Total	100(100)	100(100)	

AJNPP

Table 3. Frequency and percentage of participants in each group based on their education level

Education Level	Statistical Indices		No. (%)
	Healthy	Addicted	
< High school diploma	26(26)	30(30)	
High school diploma	44(44)	47(47)	
BA/BS/MA/MS	30(30)	23(23)	
Total	100(100)	100(100)	

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Table 4. Groups' statistics

Groups	Mean	Number	Standard Deviation	Mean Standard Error
Healthy	77.76	100	8.38	0.84
Addicted	73.56	100	9.42	0.94

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Table 5. Results of the independent sample t-test

Groups	Levene's Test For Equality Of Variance		t-test For Means					
	F	Sig.	T	df	Sig.	Mean±SD	95%Confidence Interval	
							Lower Bound	Higher Bound
Assuming the equality of variances	0.8	0.37	3.33	198	0.001	4.2±1.26	1.71	6.68
Assuming the inequality of variances			3.33	195.39	0.001	4.2±1.26	1.71	6.69

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people to see events (even unpleasant ones) as possibilities for learning not a set of threats to their safety [18]. One of the reasons for addicts' tendency to abuse substances is their lack of tolerance to life-threatening events. Psychological hardiness prevents the negative impacts of stressful events (e.g. substance abuse and addiction) on individuals.

5. Conclusion

There was a significant difference between psychological hardiness scores in individuals with and without SUD. Therefore, psychological hardiness of individuals without SUD was generally higher than that of addicts. According to the obtained results and other similar studies, psychological hardiness can be a source of resistance in confronting stressful life events. It acts as a mediator variable between stressful events and illness and reduces the risk of disease. Finally, considering the critical role of psychological hardiness in stress and other psychological problems, we suggest that health authorities hold educational programs to enhance families' psychological hardiness. Such programs will improve people's mental health and reduce their psychosocial problems.

Ethical Considerations

Compliance with ethical guidelines

All ethical principles were considered in this article. The participants were informed about the purpose of the research and its implementation stages; they were also as-

sured about the confidentiality of their information; Moreover, They were allowed to leave the study whenever they wish, and if desired, the results of the research would be available to them.

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Authors' contributions

All authors contributed in preparing this article.

Conflict of interest

The authors declared no conflict of interest.

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