



Role of Spiritual Intelligence and Positive Thinking in the Prediction of Psychological Hardiness in Women Recovered from Addiction

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Abstract

Background and Objective: This study aimed to explore the role of spiritual intelligence and positive thinking in the psychological hardiness of women who have recovered from addiction.

Materials and Methods: This study was conducted based on a descriptive-correlational design. The research population included women who had quit addiction in addiction treatment centers in Districts 8 and 13 of Tehran in 2021. The participants were 150 women who were selected using simple random sampling. The data were collected using the Self-Report Measure of Spiritual Intelligence, Positive Automatic Thoughts Questionnaire, and Psychological Hardiness Scale. The collected data were analyzed using the Pearson correlation test and synchronous multiple regression analysis by SPSS Software (V. 21).

Results: The results showed that spiritual intelligence and positive thinking are significant predictors of psychological hardiness of women recovered from addiction ($F=59.09$; $P<0.001$). It was also revealed that psychological hardiness is positively correlated with the dimensions of spiritual intelligence and components of positive thinking ($P<0.001$).

Conclusions: Following the findings of the present study, it can be suggested that spiritual intelligence and positive thinking can play a constructive and critical role in the recovery process of women with substance abuse. Moreover, spiritual intelligence and positive thinking can predict psychological hardiness in women quitting the addiction.

Keywords: Addiction, Spiritual intelligence, Positive thinking, Psychological hardiness, Women

Background

Addiction is a progressive and destructive chronic. Addiction of women is one of the factors that endanger the health of people in the community. Women who use drugs experience more severe physical problems than their male counterparts. They are also more at risk of reproductive problems, infectious diseases, and HIV, compared to non-addict women [1]. Research has shown that some psychological factors, such as psychological hardiness, self-compassion, and spiritual intelligence can reduce the risk of addiction in individuals. People with more psychological hardiness tolerate lower levels of stress and are also more immune to diseases, compared to people with low levels of psychological hardiness [2].

Psychological hardiness was introduced by Kubasa and Madi in the 1980s and is a set of personality traits that determine one's resilience in stressful situations. This psychological characteristic consists

of three components, namely commitment (being active in the face of problems instead of being passive), control (believing that life events are controllable and predictable), and challenge (believing that the challenges of life are an opportunity to grow, and one can benefit from failure as much as success) [3]. Bartone et al. found that high psychological hardiness can act as a source of resilience against alcohol consumption and addiction in individuals [4].

Positive thinking is another psychological component that reduces the risk of drug and alcohol abuse. Positive thinking is having positive assessments of phenomena, positive expectations about events, the future, and quality of lifestyle, positive attribution of efficiency, and creation of cognitive, emotional, social, and spiritual emotions [5]. May et al. found that hope and self-efficacy can be considered basic deterrents of substance and

alcohol use [6].

Generally, psychological factors, such as psychological hardiness, positive thinking, and spiritual intelligence may play a constructive role in the prevention of substance abuse and the recovery process in people with substance abuse. Spiritual intelligence causes a person to look at problems with more gentleness and compassion, better endure the hardships of life, and give dynamism and movement to their life [7]. Spiritual intelligence represents a set of abilities and capacities and spiritual resources whose application in daily life increases one's adaptability. By definition, spiritual intelligence plays an effective role in solving existential problems and finding meaning and purpose in the actions and events of daily life [8]. Spiritual intelligence causes a person to look at problems more gently, make more efforts to find solutions, and endure the hardships of life better [7]. One issue to be noted by experts in the field of substance and alcohol addiction rehabilitation is helping people return to life and community after recovering from a harmful situation. Reinforcement of spiritual intelligence and positive thinking in the affected people leads to the achievement of better outcomes in terms of increased self-confidence and psychological hardiness. Although women play a positive and significant role in the family and society, only a few studies have addressed women who have quit addiction in Iran. Moreover, many addicted women have addicted husbands, and this makes it more difficult for them to quit the addiction.

This study aimed to explore the role of spiritual intelligence and positive thinking in the psychological hardiness of women who have recovered from addiction.

Objectives

This study aimed to explore the role of spiritual intelligence and positive thinking in the psychological hardiness of women who have recovered from addiction.

Materials and Methods

Following the research problem and objectives, a descriptive-correlational design was used in this study. The research population included all women who referred to addiction treatment clinics, including Helia Center in District 8 and Sara Center in District 13 of Tehran, from April to late September 2021. The participants were selected using simple random sampling. The criteria for enrollment in the study were: [1] at least 2 years of addictive substance use and [2] minimum primary education level to fill in the questionnaires. After

the estimation of the sample size, 150 people completed the questionnaires.

A: Self-Report Measure of Spiritual Intelligence

This 24-item instrument was developed by King (2008) to measure critical existential thinking (7 items: 21, 17, 13, 9, 5, 3, and 1), personal meaning production (5 items: 23, 19, 15, 11, and 7), transcendental awareness (7 items: 22, 20, 18, 14, 10, 2, and 6), and conscious state expansion (5 items: 24, 16, 12, 8, and 4). The items were scored based on a five-point Likert scale [1-5] and their scores varied from 24 to 120 with the cutoff point of 96.

In a pilot study, King administered the questionnaire to 619 undergraduate students (488 females and 131 males) at the University of St. Petersburg. He reported a Cronbach's alpha of 0.95 and an average inter-item correlation of 0.36. To validate the scale, in another study, it was administered to 305 undergraduate students and the Cronbach's alpha coefficient was 0.95 [7-9]. Hossein Jari and Zakeri (2011) estimated the reliability as equal to 0.93 using Cronbach's alpha coefficient. Besides, Cronbach's alpha values for the subscales of critical existential thinking, personal meaning production, transcendental awareness, and conscious state expansion were 0.78, 0.68, 0.74, and 0.72, respectively [10].

Positive Thinking Skills Scale

This scale was developed by Ingram et al. (1988). It contains 30 items and 5 components: daily positive functioning (10 items), positive self-evaluation (6 items), others' evaluation of self (4 items), positive future expectations (2 items), and self-confidence (8 items). According to Ingram et al., this measure is suitable for the examination of positive thinking and has the necessary validity and reliability [11, 12].

Psychological Hardiness Scale

This scale has 20 items and three subscales of commitment (items 1 to 9), control (items 10 to 16), and challenge (items 17 to 20). It is scored based on a 4-point Likert scale ranging from never (0) to most of the time (3). Accordingly, higher scores indicate higher psychological hardiness [13]. Kobasa et al. tested the internal consistency of the scale by the Cronbach alpha (0.81) (14). The reliability of the translated version of the scale was confirmed in a study by test-retest as 0.87 [2].

To collect the data, the questionnaires were distributed among the participants and completed by them from April 1 to September 10, 2021. The collected data were analyzed using descriptive statistics, such as mean, standard deviation,

frequency, and percentage. In addition, inferential statistics, including correlation coefficients and multiple regression analysis, were carried out in SPSS Software (V. 21).

Results

The mean age of participants in the study was 43.27±11.15. Moreover, 22.7% of the participants were single, 72.7% were married, and 4.6 were divorced. Furthermore, 52.6% of women had completed the 10th grade of school.

The relationship among psychological hardiness, spiritual intelligence, and positive thinking of the women who recovered from addiction was investigated using the Pearson product-moment correlation coefficient. Before performing the test, the main assumption for all parametric tests was established.

The results of the Pearson correlation test (Table 1) showed that there are positive significant correlations between psychological hardiness and the components of spiritual intelligence, including existential critical thinking ability (r=0.239; P<0.01), personal meaning production (r=0.365; P<0.001), transcendental awareness (r=0.290; P<0.001), and conscious state expansion (r=0.205; P<0.05). These findings confirmed the relationship between spiritual intelligence and psychological hardiness. Furthermore, the Pearson correlation test was run to examine the relationship between psychological hardiness and positive thinking.

The results summarized in Table 1 showed a significant positive relationship between psychological hardiness and the components of positive thinking, including daily positive function (r=0.747; P<0.001), positive self-evaluation

(r=0.788; P<0.001), others' evaluation of self (r=-0.770; P<0.001), positive future expectations (r=0.654; P<0.001), and self-confidence (r=0.720; P<0.001). These findings confirmed the relationship between positive thinking and psychological hardiness.

To predict the psychological hardiness through spiritual intelligence in the women who recovered from addiction, (synchronous) multiple regression analysis was performed as shown in Table 3. The results confirmed the significance of the model predicting the relationship between the two variables (F=5.726; P<0.001). Accordingly, spiritual intelligence is a significant predictor of the psychological hardiness of women recovering from addiction. Given the coefficient of determination (R²), spiritual intelligence explains 14% of the variances of psychological hardiness for the participants in the study. The role of each dimension of spiritual intelligence (i.e., existential critical thinking, personal meaning production, transcendental awareness, and conscious state expansion) in the psychological hardiness of women quitting addiction is tabulated in Table 3.

Results of the multiple regression analysis confirmed the significance of the model for predicting psychological hardiness through positive thinking in the women quitting addiction (F=59.093; P<0.001). Accordingly, positive thinking is a significant predictor of the psychological hardiness of women recovering from addiction. Furthermore, given the value of the coefficient of determination (R²), positive thinking can explain 67% of the variances in psychological hardiness of the respondents in the research sample.

Table 1. Correlation coefficients of psychological hardiness with positive thinking and spiritual intelligence

Correlation between psychological hardiness and positive thinking					Correlation between psychological hardiness and spiritual intelligence				
Variables	1	2	3	4	Variables				
1. Psychological hardiness	-				1. Psychological hardiness	-			
2. Daily positive functioning	0.747*				2. Critical existential thinking	0.239**	-		
3. Positive self-evaluation	0.788*	0.879*	-		3. Personal meaning production	0.365**	0.552**	-	
4. Others' evaluation of self	0.770*	0.845*	0.801*	-	4. Transcendental awareness	0.290**	0.592**	0.756**	-
5. Positive future expectations	0.654*	0.823*	0.769*	0.772*	5. Conscious state expansion	0.205*	0.534**	0.444**	0.554**
6. Self-confidence	0.720*	0.894*	0.855*	0.823*	0.806*				

*<0.001; <0.001 **<0.05

Table 2. Model summary (psychological hardiness)

Predictor variable	R	R ²	SE	F	Sig.	P<0.001*
Spiritual intelligence	0.369	0.136	21.217	5.725*	0.001	P<0.001*
Positive thinking	0.821	0.674	13.068	59.093*	0.001	P<0.001*

Table 3. Regression coefficients for the prediction of psychological hardiness via spiritual intelligence

Predictor variable	B	SEB	β	t	Sig.	R ²
Constant	114.147	7.594		15.031**	0.001	
Critical existential thinking	0.174	0.465	0.038	0.373	0.709	0.001
Personal meaning production	2.352	0.862	0.328	2.727*	0.007	0.049
Transcendental awareness	-0.014	0.796	-0.002	-0.018	0.985	0.000
Conscious state expansion	0.332	0.817	0.040	0.407	0.684	0.001

* <0.01 ; ** $P<0.001$

The results of the standard multiple regression analysis in Table 3 showed that the personal meaning production ($t=2.727$; $P=0.01$), as a component of spiritual intelligence, plays a significant role in explaining the psychological hardiness of the women recovered from addiction. The results showed the dimensions of spiritual intelligence, including existential critical thinking ($t=0.373$; $P<0.05$), transcendental awareness ($t=0.018$, $P<0.05$), and conscious state expansion ($t=-0.407$; $P<0.05$) did not play a significant role in explaining the psychological hardiness of women quitting the addiction.

In addition, the results of multiple regression analysis (Table 4) showed that the personal meaning production ($R^2=0.049$) alone can positively explain 5% of the variances in the psychological hardiness of women quitting the addiction. Furthermore, spiritual intelligence can account for 14% of the variances of psychological hardiness in women quitting the addiction. Accordingly, the hypothesis stating that spiritual intelligence plays a role in predicting psychological hardiness in women quitting addiction was confirmed.

As can be seen, positive self-evaluation ($t=4.563$;

$P<0.001$) and others' evaluation of self ($t=4.267$ and $P<0.001$) as the components of positive thinking can significantly predict the psychological hardiness in women quitting the addiction. However, daily positive functioning ($t=0.344$; $P>0.05$), positive future expectations ($t=-0.427$; $P>0.05$), and self-confidence ($t=-0.368$; $P>0.05$) as the components of positive thinking do not significantly contribute to explaining the psychological hardiness of women quitting the addiction.

In addition, the results of multiple regression analysis in Table 4 showed that positive self-evaluation ($R^2=0.127$) and others' evaluation of self ($R^2=0.113$) each alone can explain 13% and 11% of the variances in the psychological hardiness of women quitting addiction in the research sample, respectively. Following these findings, the research hypothesis stating that positive thinking plays a role in the prediction of psychological hardiness in women quitting addiction was confirmed. The results of regression analysis showed that positive thinking can account for 67% of the variances in the psychological hardiness of women quitting the addiction.

Table 4. Regression coefficients for the prediction of psychological hardiness via positive thinking

Predictor variable	B	SEB	β	t	Sig.	R ²
Constant	64.915	5.000		12.983*	0.001	
Daily positive functioning	0.123	0.358	0.046	0.344	0.731	0.001
Positive self-evaluation	2.233	0.489	0.488	4.536*	0.001	0.127
Others' evaluation of self	2.852	0.668	0.407	4.267*	0.001	0.113
Positive future expectations	-0.461	1.078	-0.038	-0.427	0.670	0.001
Self-confidence	-0.156	0.425	-0.046	0.368	0.741	0.001

* <0.01

Discussion

The results of this study indicated that spiritual intelligence and positive thinking can be good predictors of psychological hardiness in women quitting the addiction. Addiction damages cognitive processes and causes underlying psychological problems [15]. Positive thinking helps addicts to make beneficial changes in their behavior, speech, and life. Adoption of this approach helps addicted people show higher levels of psychological hardiness [6].

The findings of this study on the prediction of the role of positive thinking indicated that positive thinking is a significant predictor of psychological

hardiness and its components, including daily positive functioning, positive self-evaluation, others' evaluation of self, positive future expectations, and self-confidence, in women recovering from addiction. Positive thinking training focuses on human abilities, such as living happily, enjoying, and being optimistic instead of focusing on disabilities. Adoption of this approach helps addicted people show higher levels of psychological hardiness [1, 4]. Accordingly, Kazemi found that psychological hardiness can serve as a factor in the prevention of drug addiction [16]. In the same vein, Kulak et al. concluded that psychological hardiness interventions can help reduce one's desire to

consume alcohol [17]. Moreover, the level of psychological hardiness is lower in addicted people, compared to non-addicted people [18]. In another study, Khodabakhshi-Koolae et al. found that optimism and positive thinking can help increase resilience in female nurses [19].

The findings of the present study also showed that spiritual intelligence can predict the degree of psychological hardiness of women quitting the addiction. People with a higher level of spiritual intelligence can cope with stressors more effectively and show dynamism and activity [20]. Possession of a sense of meaning and mission towards life and values, a sense of sanctity in life, a more balanced understanding of the value of material things, and a belief in the betterment of the world are aspects of spiritual intelligence [21, 22].

In general, positive thinking means emphasizing strengths instead of weaknesses in all situations in life, having good thoughts and feelings about oneself instead of real humiliation, thinking well of others and having a good relationship with them, expecting the best from the world, the belief that the best things will happen for the individual and the ability to understand that changes in life are natural. In fact, people with high levels of psychological hardiness always fully understand life events and consider them with diversity, but they continue to strive by emphasizing the positive aspects [19].

A study showed that people with high levels of religiosity can cope with stressful situations more effectively, experience lower levels of negative emotions and depression, had less anxiety, avoid psychedelics and alcohol, and receive more social support. Research has shown that religion and spirituality can promote mental health through positive religious confrontation, community, support, and positive beliefs [19, 20]. People with higher levels of spiritual intelligence are more tolerant of life problems and have a higher ability to adapt to the environment [22, 15].

In general, emotional intelligence can contribute to improving social relationships by strengthening mental health, empathy with colleagues, social adjustment, emotional well-being, and life satisfaction as well as reducing interpersonal problems [21-23]. According to the findings of the present study, the promotion of psychological hardiness in women who recovered from addiction, in addition to the prevention of the resumption of drug use, can also improve their psychological well-being.

It should be mentioned that this study was conducted with some limitations. For instance, the participants were selected only from two addiction

treatment centers in Tehran. Moreover, the data were collected through self-reporting instruments, and this could reduce the reliability of the results to some extent.

Future researchers are recommended to focus on the role of other psychological factors, such as humor, resilience, and optimism in preventing the tendency of women to use drugs and alcohol.

Conclusions

The results of the present study revealed that spiritual intelligence and positive thinking can play effective roles in the recovery process of women with substance abuse. Besides, these two factors have a positive and direct relationship with psychological hardiness in women quitting the addiction. In addition, spiritual intelligence and positive thinking can predict psychological hardiness in this group of women. The present study also showed that spiritual intelligence and positive thinking were predictors of psychological hardiness and were effective in the prevention and improvement of substance abuse in women who recovered from drug addiction.

Compliance with ethical guidelines

All ethical principles were considered in the present study. The participants were informed about the research participants and procedures. Informed consent was obtained from the participants, and they were assured of the confidentiality of their information. This research was registered with the code of ethics IR.IAU.SRB.REC.1400.119.

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Authors' contributions

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Conflicts of Interest

The authors reported no conflict of interest.

References

1. Dehghani Z, Khodabakhshi-Koolae A. Effectiveness of group hope therapy on quality of life and resilience in addicted women. *Journal of Education and Community Health*. 2017; 4:28-34. [DOI:10.21859/jech.4.1.28]
2. Khodabakhshi-Koolae A. Comparison of psychological hardiness and resiliency of employed and unemployed female-headed household. *Journal of Client-Centered Nursing Care*. 2020; 6(1):7-12. [DOI:10.32598/JCCNC.6.1.33.7]
3. Maddi SR, Khoshaba SC. Hardiness and Mental Health. *Journal of Personality Assessment*. 1994; 63(2):265-74. [DOI:10.1207/s15327752jpa6302_6] [PMID]

4. Bartone PT, Hystad SW, Eid J, Brevik JI. Psychological hardiness and coping style as risk/resilience factors for alcohol abuse. *Military Medicine*. 2012; 177(5):517-24. [DOI:10.7205/MILMED-D-11-00200]
5. Stame N, Presti VL. Positive thinking and learning from evaluation. United Kingdom: Routledge; 2017.p. 19-45.
6. May EM, Hunter BA, Ferrari J, Noel N, Jason LA. Hope and abstinence self-efficacy: Positive predictors of negative affect in substance abuse recovery. *Community Mental Health Journal*. 2015; 51(6):695-700. [DOI:10.1007/s10597-015-9888-y] [PMID]
7. King DB. Rethinking claims of spiritual intelligence: a definition, model and measure. Trent University, Canada. 2008.
8. King DB, Mara CA, DeCicco TL. Connecting the spiritual and emotional intelligence: Confirming an intelligence criterion and assessing the role of empathy. *International Journal of Transpersonal Studies*. 2012; 31(1):11-20. [DOI:10.24972/ijts.2012.31.1.11]
9. King DB, DeCicco TL. A viable model and a self-report measure of spiritual intelligence. *transpersonal Studies*. *International Journal of Transpersonal Studies*. 2009; 28(1):68-85. [DOI:10.24972/ijts.2009.28.1.68]
10. Hossein Jari M, Zakeri H. The effect of studying university majors, religious and art sciences on spiritual intelligence: a trial for validation and measuring the reliability of spiritual intelligence scale. *Quarterly of Educational Measurement*. 2010; 1(1):1-21.
11. Ingeram RE. Cognitive vulnerability to depression. *Cognitive Therapy and Research*. 2003; 27(1):77-88. [DOI:10.1023/A:1022590730752]
12. Ingram RE, Kendall PC, Siegle G, Guarino J, McLaughlin SC. Psychometric properties of the positive automatic thoughts questionnaire. *Psychological Assessment*. 1995; 7(4):495-507. [DOI:10.1037/1040-3590.7.4.495]
13. Kobasa SC, Maddi SR, Kahn S. Hardiness and health: a prospective study. *Journal of Personality and Social Psychology*. 1982; 42(1):168-177. [DOI:10.1037/0022-3514.42.1.168]
14. Maddi SR, Khoshaba DM. Hardiness and mental health. *Journal of Personality Assessment*. 1994 Oct 1;63(2):265-74.
15. Rahmati Z, Khodabakhshi Koolae A, Jahangiri MM. Investigating the moderating role of self-compassion in the relationship between resilience to stress and drug craving in drug-dependent men. *Scientific Quarterly Research on Addiction*. 2021; 15(60):253-76. [DOI:10.52547/etiadpajohi.15.60.253]
16. Kazemi A. Prediction of the attitude towards drug use based on assertiveness and psychological hardiness. [Phd Thesis]. Barcelona: Autonomous University of Barcelona; 2020.
17. Kulak JA, Homish DL, Hoopsick RA, Fillo J, Bartone PT, Homish GG. Hardiness protects against problematic alcohol use in males, but not female, soldiers. *Psychological Services*. 2021; 18(3):426-32. [DOI:10.1037/ser0000409]
18. Moradi A, Gholami E, Haghtalab T, Safaerad I. Comparing psychological hardiness in people with and without substance use disorder in Hamadan City, Iran. *Avicenna Journal of Neuro Psycho Physiology*. 2018; 5(1):29-34. [DOI:10.32598/ajnpp.5.1.29]
19. Khodabakhshi-Koolae A, Entekhabi F, Falsafinejad MR, Sanagoo A. Relationship between optimism and humor with resilience in female nurses of hospitals in Isfahan, Iran. *Journal of Gorgan University of Medical Sciences*. 2019; 21(1):87-93.
20. Weber SR, Pargament KI. The role of religion and spirituality in mental health. *Current Opinion in Psychiatry*. 2014; 27(5):358-63. [DOI:10.1097/YCO.000000000000080] [PMID]
21. Bhullar A. The growth of spiritual intelligence. *Indian Journal of Educational Studies: An Interdisciplinary Journal*. 2015; 2(1):122-31.
22. Srivastava PS. Spiritual intelligence: An overview. *International Journal of Multidisciplinary Research and Development*. 2016; 3(3):224-7.
23. Haghighat KR, Koolae AK. Comparison of spiritual intelligence and self-regulation of male and female nurses in intensive/general wards of hospitals in Tehran city. *Journal of Research on Religion & Health*. 2016; 2(1):3-10.