



# Enhancing Relapse Prevention: Examining the Impact of Experiential Avoidance, Integrative Self-Knowledge, and Basic Psychological Needs in Substance Use Treatment

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## Abstract

**Background:** The harmful effects of drug relapse have always been one of the major challenges in addiction treatment. The present study aimed to predict drug relapse in addicted men under treatment based on experiential avoidance, integrative self-knowledge, and basic psychological needs.

**Methods:** The present study was a correlational one. The statistical population included all addicted men in Choubindar prison in Qazvin in 2021, among whom 200 individuals were selected randomly. Then, the participants filled out the Relapse Prediction Scale (RPS), Multidimensional Experiential Avoidance Questionnaire (MEAQ), Integrative Self-Knowledge Scale (ISK), and Basic Psychological Needs Scale (BPNS). Data were analyzed using stepwise regression via SPSS software (version 25).

**Findings:** The results of the study demonstrated that some of the components of experiential avoidance including distraction, distress endurance, behavioral avoidance, and distress aversion could account for 14.0% of the variance of the relapse in the addicts ( $P < 0.05$ ). Moreover, the obtained results considering the reflective self-knowledge component and the overall score of integrative self-knowledge could explain 15.0% of the variance in relapse in the addicts. Among the basic psychological needs, communication could predict 3.8% of the variance in relapse.

**Conclusion:** Based on the results of the present study, it is suggested that through addiction treatment and prevention of relapse programs, psychologists reduce drug relapse in addicts by decreasing distractions and behavioral avoidance, increasing distress endurance, enhancing self-knowledge, and improving efficient relationships.

**Keywords:** Drug use relapse, Experiential avoidance, Integrative self-knowledge, Basic psychological needs

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## Introduction

Substance use disorders pose a considerable challenge to the health system, characterized by a notable incidence of drug relapse. Drug relapse denotes a pernicious dependence and maladaptive response to drugs, culminating in disorder or marked distress.<sup>1</sup> Relapse represents a pivotal facet of addiction following a period of abstinence despite preventative endeavors.<sup>2</sup> Usually, people who are involved in relapse, experience signs of variance in their thoughts, perceptions, excitements, and actions. Although there are several factors that increase the risk of relapse after drug abuse treatment,<sup>3,4</sup> the most important factor in drug relapse is craving.<sup>5</sup> Craving is a multi-dimensional and difficult construct.<sup>6</sup> In the present study, the craving for drug use was considered a mental experience. It is demonstrated that craving can be experienced as an emotional state,<sup>7</sup> physical feeling,<sup>8</sup> irritating thought,<sup>9</sup> and the sense of desire.<sup>10</sup> However, it is not limited to the above-mentioned emotional

states. Individual factors (e.g., low self-efficacy and negative interpretation of events) as well as social and environmental factors (e.g., the presence of an excess crisis and a lack of social support)<sup>11,12</sup> contribute to drug relapse. In comparison with social/environmental factors, the individual reasons for drug relapse must be considered important to the same degree.<sup>13</sup> In sum, what causes drug abuse and its relapse is a dynamic interaction of personal and background factors.

In the present study, experiential avoidance, integrative self-knowledge, and basic psychological needs were considered predictors of the intensity of relapse. The tendency of an individual to avoid specific experiences (e.g., body sensations, feelings, thoughts, memories, images, behavioral talents) is defined as experiential avoidance. Thus, an individual tries his best to avoid or change these experiences. The lack of inclination toward or avoidance of annoying personal experiences, along with attempts to control or prevent annoying experiences,



are accompanied by a wide range of psychological signs and clinical manifestations of agitation and fear. These attempts to control experiences can increase the intensity of annoyance and may limit behaviors. Experiential avoidance of fear is related to negative assessments, anxiety, fear of bodily signs, fear of the importance or meaning of thoughts, and fear of traumatic events and contextual stressors.<sup>14,15</sup> Elmquist et al<sup>16</sup> concluded in their study that experiential avoidance has a meaningful and negative relationship with the capacity for drug use.

Integrative self-knowledge is another factor that affects addiction and the tendency to use drugs. Integrative self-knowledge refers to a person's attempt to unite his past, present, and future experiences in the direction of advancement and compromise.<sup>17</sup> Integrative self-knowledge means that an individual can consider the world understandable, meaningful, and controllable. It also enables an individual to show more resistance against situations full of tension as well as life stressors.<sup>18</sup> People with poor integrative self-knowledge are more inclined to drug abuse.<sup>19</sup> According to the findings of the study by Hajloo et al, craving for usage with an overall score of sense of integration had a negative and significant relationship with the effective factors in treatment, and their persistence in addicts was a provocation component.<sup>20</sup>

Basic psychological needs include communication and attachment, competence and autonomy, and optimum satisfaction. These three needs cause the formation of inner stimulation, attachment, and the behavior of self-determination, which are related to an individual's effective performance and his psychological and social welfare.

According to Deci and Ryan,<sup>21</sup> autonomy, competence, and communication are fundamental psychological needs, and their fulfillment and support contribute to a wide range of behaviors across developmental stages, cultures, and personalities. It is broadly defined as an individual's natural tendency to move towards increasing self-organization, adjustment, and flourishing, which are essential for meeting basic psychological needs.<sup>22,23</sup> These three psychological needs, which have been summarized in meta-analyses,<sup>24,25</sup> appear to be an integral part of development, adjustment, and wellness across cultures, with significant implications for basic motivational science, applied practices, and even broad social policy development.<sup>26</sup>

In a study based on the theory of self-determination conducted in a residential center in Canada, Wild et al<sup>27</sup> found that external inclination, internal inclination, a sense of sin and shame in the case of drug abuse, and a distinguished inclination or valuable commitment to the aims of the program were effective in the treatment of addiction. Relatively little research has been carried out on the prediction of the intensity of relapse through

experiential avoidance, integrative self-knowledge, and self-determination. Accordingly, the present study attempts to fill the research gap by considering this issue. Thus, the purpose of this study was to discover how experiential avoidance, integrative self-knowledge, and basic psychological needs can construct variations in the intensity of drug relapse in addicted men under treatment.

## Methods

The present study was a correlational one conducted from April 28, 2021 to July 27, 2021. The statistical population included all men (350 cases under Methadone Maintenance Treatment) in Choubindar prison in Qazvin, Iran from April 2020 to July 2021 among whom 200 individuals were selected randomly. It has been proposed that, in correlational studies, the sample size should ideally encompass a minimum of 30 individuals and be at least 10 times the number of predictor variables.<sup>28</sup> In response to challenges encountered during the questionnaire administration, a sample comprising 200 individuals was selected. Due to restrictions preventing the female researcher from entering the ward where male individuals undergoing addiction treatment were housed, briefing sessions were conducted by a male colleague. These sessions, supervised by the prison's overseeing judge, provided guidance on completing the questionnaires and outlined appropriate procedures. The instructions emphasized:

1. Allocating sufficient time for responding
2. Avoiding feeling compelled to complete the questionnaires
3. Refraining from being displaced in the cells to maintain mental composure during questionnaire completion
4. Abstaining from engaging in additional physical activities to preserve the necessary energy for completing the questionnaires
5. Not completing the questionnaires on the day of the visit (in the event of having visitors)

The inclusion criteria comprised individuals who were Iranian, aged between 25 and 45 years, not sentenced to life imprisonment, with a stay of no more than one month in the section designated for addicted men (allowing for a recovery period after treatment), and not currently addicted to stimulant substances. The exclusion criterion was the failure to complete the questionnaires.

In the present study, gender was considered a control variable. Furthermore, SPSS software (version 25) was used to analyze the data.

## Measures

*Relapse Prediction Scale (RPS)*: This 45-item scale to predict drug use relapse was developed by Wright.<sup>29</sup> The scale comprises two sections, evaluating the intensity and

strength of inclination in specific situations, with each situation featuring 45 questions on a Likert scale (ranging from none = 0, poor = 1, moderate = 2, strong = 3, to very strong = 4). The participants' scores, reflecting both the desire to use drugs and the likelihood of drug usage, fall within the range of 0 to 180. Higher scores indicate a heightened inclination and an increased probability of drug use. The scores ranging from 0 to 60 suggest a poor prediction of relapse, while scores between 61 and 90 indicate a moderate prediction of relapse. Scores above 90 signify a strong prediction of relapse. In summary, based on the analyzed responses, we can anticipate the nature of confrontation, gauge the level of eagerness, and assess the probability of recurrent drug usage. Cronbach's alpha coefficient for the first part of the questionnaire, which measures the inclination to usage, is 58.0%, and for the second part, which measures the probability of usage and offense, is 63.0%.<sup>30</sup> The initial reliability of this scale was 94.0% for the subscale of the desire to use drugs and 97.0% for the likelihood of drug usage. In addition, the correlation between the scores of the first and second parts was reported as 85.0%.<sup>31</sup> The discriminative validity of the test was assessed using Mann-Whitney U test at a significant level of 99.0%. This suggests the suitability of the scale in distinguishing between individuals with different tendencies towards relapse and persistence in ceasing.<sup>32</sup> In the study by Taherifard et al, the reliability of the test, measured by Cronbach's alpha for the small-scale inclination to usage, was reported as 84.0%. In the current research, the reliability of the test, evaluated through Cronbach's alpha for the small-scale inclination to usage was 85.0%, while the small-scale probability of usage achieved a reliability of 87.0%.<sup>33</sup>

*Multidimensional Experiential Avoidance Questionnaire (MEAQ)*<sup>34</sup>: This 62-item self-report questionnaire was developed to address a broader spectrum of experiential avoidance compared to the Acceptance and Action Questionnaire-II (AAQ-II). This instrument was specifically designed to tackle issues related to internal consistency and poor discriminant validity identified in other measures of experiential avoidance. The MEAQ explores six dimensions of emotional avoidance: behavioral avoidance, distress aversion, procrastination, distraction and suppression, repression and denial, and distress endurance. Respondents rate each item on a Likert-type scale, ranging from 1 (strongly disagree) to 6 (strongly agree), with higher scores indicating elevated emotional intelligence. In addition to demonstrating excellent convergent validity, the MEAQ exhibits strong consistency with avoidance measures and related constructs, such as thought suppression, stress avoidance, social avoidance, and alexithymia. Moreover, it displays outstanding discriminant validity and furnishes reliable information on unique content through its six subscales. This study established a high level of internal consistency

for the MEAQ ( $\alpha = 87.0\%$ ). Notably, the MEAQ subscales also manifested robust internal consistency: behavioral avoidance ( $\alpha = 80.0\%$ ), distress aversion ( $\alpha = 81.0\%$ ), procrastination ( $\alpha = 80.0\%$ ), distraction and suppression ( $\alpha = 80.0\%$ ), repression and denial ( $\alpha = 82.0\%$ ), and distress endurance ( $\alpha = 81.0\%$ ).<sup>35</sup> In the present study, the reliability of the scale, assessed using Cronbach's alpha, was calculated at 84.0%.

*The Integrative Self-Knowledge Scale (ISK)*: This scale was developed and validated by Ghorbani et al<sup>36</sup> encompassing 12 items scored on a five-point Likert scale, ranging from extremely incorrect (1) to extremely correct (5). The scale investigates three dimensions: reflectional self-knowledge (items 1, 7, 5, and 8), experiential self-knowledge (items 3, 6, and 9), and integrating past and present experiences in shaping a desirable future (items 10, 1, and 12). Total scores range from 12 to 60, with scores between 12 and 20 indicating poor self-knowledge, and a score of 41 representing the highest predictive value beyond the overall score. Demonstrating robust internal consistency in a sample of 230 students at Tehran University, the Cronbach's alpha coefficient for experiential self-knowledge was 90.0%, and for reflectional self-knowledge, it was 84.0%. The correlation between these two dimensions was 74.0%.<sup>37</sup> The test-retest reliability after 7 to 8 weeks, involving a sample of 44 individuals, indicated consistency for experiential self-knowledge at 76.0% and for reflectional self-knowledge at 68.0%.<sup>38</sup> Ghorbani et al conducted a study comparing three Iranian and three American samples. They observed that the Cronbach's alpha of the scale was 0.82 in the first Iranian sample, 0.81 in the second Iranian sample, and 0.81 in the third Iranian sample. Likewise, the first, second, and third American samples reported a Cronbach's alpha of 0.78, 0.78, and 0.74, respectively.

*Basic Psychological Needs Scale (BPNS)*: This scale was developed to evaluate psychological needs with three subscales (autonomy, competence, and relatedness) through a total of 21 items. The scores on each subscale indicate the level of satisfaction with the corresponding psychological need.<sup>39</sup> Correlations between achievement, autonomy, and closeness subscales of the Edwards Personal Preference Inventory and autonomy, competence, and relatedness subscales were found to be 39.0%, 58.0%, and 36.0%, respectively ( $P > 0.05$ ), in the criterion-related validity assessment of the scale. Internal consistency, as determined through Cronbach's alpha calculations, revealed an overall consistency of 76.0%. The autonomy subscale demonstrated consistency at 73.0%, competence at 61.0%, and relatedness needs at 73.0%.

Besharat conducted a comprehensive examination of the Persian version of the Basic Psychological Needs Satisfaction Scales on a sample comprising 584 Iranian university students (273 males and 311 females). The

investigation encompassed assessments of reliability, validity, and exploratory factor analysis. The findings led to the conclusion that the scale can be deemed valid for measuring basic needs within Iranian samples.<sup>40</sup> In the current study, the Cronbach’s alpha consistency test yielded a reliability score of 70.0%.

**Results**

As shown in Table 1, the majority of the participants were 25 to 30 years old (39.5%) and most of them had high school diploma (52%) and were unemployed or job seekers (39.0%).

Table 2 demonstrates that the experiential avoidance of the participants was at the average level (168.7 ± 39.78). The mean score of anxiety avoidance (37.94 ± 11.72) was higher than that of the other components. Furthermore, the mean of integrating past and present self-knowledge (15.75 ± 3.58) was higher than that of the other components. Participants’ self-determination was at an average level (86.9 ± 12.16). Lastly, the mean for relatedness (33.67 ± 5.71) was higher than that of the autonomy and competence components.

The multivariate assumption of the regression model

is depicted in Table 3. As is evident, the results of Kolmogorov-Smirnov test indicate normal variances in usage relapse, experiential avoidance, integrative self-knowledge, and self-determination ( $P > 0.05$ ). The variance inflation factor (VIF) value serves as an indicator of the absence of a linear relationship between variables; a VIF greater than 2 suggests an increasing degree of collinearity. Eigenvalue analysis results further supported the lack of a linear relationship among predictor variables, with values closer to zero indicating the presence of such a relationship. Condition index values also confirmed the absence of a linear relationship between predictor variables, and when the index surpasses 30, it signals a linear relationship that renders regression inapplicable. Moreover, the Durbin-Watson statistic, falling between 1.5 and 2.5, underscores the predictability of observations. Consequently, the results affirmed the fulfillment of the assumption of predictability of observations in the examined data.

According to Table 4, suppression, distraction, and distress endurance are the aspects of experiential avoidance that can predict the intensity of relapse in addicts in three steps, and the observed F-value was

**Table 1.** Demographic characteristics of the participants

Variable	Frequency	Percent
<b>Age</b>		
25-30	9	39.05
31-35	44	22.0
36-40	45	22.05
41-45	32	16.0
<b>Level of education</b>		
High school non-graduate	44	22.0
High school diploma	104	52.0
Associate’s degree	41	20.05
Bachelor’s degree	5	20.05
Master’s degree	5	20.05
PhD degree	0.5	1.0
<b>Marital status</b>		
Single	75	37.05
Married	75	37.05
Divorced	40	20.0
Widowed	10	5.0
<b>Occupational status</b>		
Unemployed and job seeker	78	39.0
Student	20	10.0
Part-time employed	42	21.0
Full-time employed	39	19.05
Retired	21	1.05
<b>Record of relapse</b>		
I’ve had a record of relapse	97	48.05
I haven’t had a record of relapse	103	51.05

**Table 2.** The minimum, maximum, mean, and standard deviation of research variables in individuals under the study

Variable	Minimum	Maximum	Mean
Intensity of relapse	0	158	93.21 ± 30.58
Behavioral avoidance	10	55	31.48 ± 10.3
Distress aversion	11	65	37.94 ± 11.72
Procrastination	5	29	16.44 ± 4.62
Distraction	5	35	19.73 ± 6.78
Suppression	17	53	33 ± 6.5
Distress endurance	10	53	27.19 ± 8.81
Overall score of experiential avoidance	69	255	168.7 ± 39.78
Reflective	3	15	9.93 ± 2.58
Experiential	4	20	13.26 ± 2.23
Integrating past and present self-knowledge	5	23	15.75 ± 3.58
Overall score of integrative self-knowledge	17	56	38.93 ± 7.36
Autonomy	17	43	29.51 ± 5.1
Competence	14	40	23.73 ± 4.66
Relatedness	19	54	33.67 ± 5.71
Self-determination	58	137	86.9 ± 12.16

**Table 3.** The results of Kolmogorov-Smirnov test for normality of research variables

Variance	Durbin-Watson	CI	EV	VIF	P	z
Intensity of relapse	-	8.61	0.03	1	0.20	0.05
Experiential avoidance	1.85	10.69	0.017	1	0.20	0.04
Integrative self-knowledge	1.90	14.40	0.010	1	0.20	0.03
Self-determination	1.87	8.61	0.03	1	0.20	0.07



**Table 4.** Stepwise multivariate regression analysis of experiential avoidance, integrative self-knowledge, and self-determination in predicting the intensity of relapse

Predictor variables	F	Adj R <sup>2</sup>	B	SE	β	T	P
<b>Determination of the impact of experiential avoidance on the intensity of relapse in individuals with addiction</b>							
Intercept	-	-	129.5	10.98	-	11.8	<0.001
Distraction	13.26	0.058	-1.49	0.32	0.32	-4.64	<0.001
Distress endurance	14.2	0.11	2.8	0.41	0.46	5.1	<0.001
Behavioral avoidance	13.62	0.16	-1.4	0.31	-0.3	-3.37	0.010
<b>Determination of the impact of integrative self-knowledge on the intensity of relapse in individuals with addiction</b>							
Intercept	-	-	137.17	8.2	-	17.1	<0.001
Reflective self-knowledge	32.7	0.13	-4.43	0.78	-0.37	-5.66	<0.001
<b>Determination of the impact of self-determination on the intensity of relapse in individuals with addiction</b>							
Intercept	-	-	55.73	12.7	-	4.39	<0.001
Relatedness	8.96	0.38	1.11	0.37	0.21	2.99	0.003

significant ( $P < 0.05$ ). Thus, the other components of cognitive avoidance were omitted from the regression equation. Based on the results, suppression, distraction, and distress endurance were able to account for 0.16 of the changes related to the intensity of relapse in addicts. The regression coefficients of suppression, distraction, and distress endurance variables indicated that suppression ( $B = -1.49$ ,  $t = 4.64$ ), distraction ( $B = 2.08$ ,  $t = 5.1$ ), and distress endurance ( $B = -1.04$ ,  $T = 3.37$ ) could significantly explain the variance of relapse intensity in addicts. From among the components of integrative self-knowledge, reflective self-knowledge could explain 0.13 of the changes related to relapse intensity in addicts. The regression coefficients of reflective self-knowledge showed that reflective self-knowledge ( $B = -4.43$ ,  $t = -5.66$ ) could significantly explain the variances of relapse intensity in addicts. From among the components of self-determination, communication could explain 0.038 of the changes contributing to the intensity of relapse in addicts. The correlation and regression coefficients showed that communication ( $B = 1.11$ ,  $t = 2.99$ ) could significantly explain the variances of relapse intensity in addicts.

## Discussion

The present study aimed to predict the intensity of drug use relapse in addicted men who underwent treatment based on experiential avoidance, self-integrative knowledge, and basic psychological needs. The results demonstrated that distraction, distress endurance, behavioral avoidance, anxiety avoidance, reflective self-knowledge, and communication could predict the intensity of relapse among the addicts. These findings are in line with those of the studies by Elmquist et al.,<sup>16</sup> Hajloo et al.,<sup>20</sup> and Wild et al.<sup>27</sup>

Concerning the prediction of relapse intensity based on experiential avoidance, it can be stated that avoiding the experiences is the basis for forming a type of psychological vulnerability, based on which a variety of adverse psychosocial consequences, including substance abuse, are

created and sustained. In individuals who experience these conditions, the avoidance of inner experiences is usually unpleasant and confrontation with them would prevail resulting in difficulty having an effective confrontation with the condition. Therefore, experiential avoidance leads to many problems, such as personal injuries. People who abuse drugs experience unpleasant feelings and thoughts (e.g., "I'm a defeated person"), and the distressing and unavoidable negative consequences of drug abuse often lead to a continuous cycle of experiential avoidance.<sup>41</sup> These experiential avoidance strategies (in this case drug abuse) result in the loss of flexibility and vitality in life. Finally, the reduction of energy and vitality causes more avoidance. Accordingly, experiential avoidance plays an important role in treating addiction and acts as a restraining factor for entering treatment. Hence, it can be concluded that experiential avoidance and its components can predict the intensity of relapse in addicts.

Regarding predicting the intensity of relapse through integrative self-knowledge, it can be asserted that integrative self-knowledge plays a crucial role in providing insights derived from personal experiences, essential for effectively confronting challenges and achieving goals. Additionally, it serves as a deterrent against automatic and uncontrollable responses commonly observed in individuals with addictive tendencies. Moreover, individuals equipped with integrative self-knowledge engage in the formulation of more intricate mental plans, facilitating adaptive responses through sophisticated cognitive actions. Conversely, a deficiency in integrative self-knowledge undermines one's ability to confront challenges effectively. Consequently, inadequate beliefs and behaviors may lead to difficulties in mental health and a neglectful attitude toward personal well-being. Individuals lacking self-integration are at a higher risk of substance abuse, as observed in previous studies.<sup>36</sup> Therefore, it appears that compromised integrative self-knowledge stands out as a significant contributing factor

to encountering, maintaining, and relapsing into self-destructive behaviors, such as drug dependence.

Regarding the prediction of the intensity of relapse through basic psychological needs, it can be stated that according to the theory of self-determination proposed by Deci and Ryan,<sup>21</sup> human beings will be stimulated innately and internally to deal with activities that are interesting to them and naturally hilarious. According to this theory, satisfying basic psychological needs is necessary for making effective internal behaviors and developing psychological stimulation and welfare. For example, the need for self-control refers to the need for the experience of choosing, confirming, and having authority in the initiation and completion of behavioral activities. According to the concepts presented and the motivational force of basic needs, these needs can be considered an effective factor in reducing the intensity of drug relapse.

The difficulty in entering the research location was the main limitation of the present study. Moreover, due to the reluctance of the officials of the welfare organization and the prisons organization in Qazvin, as well as the officials of Choubindar prison, to accept the existence of disorders and to have a criminal view of addicts, it was not possible to examine psychiatric disorders among the participants.

### Conclusion

The results of the present study showed that distraction, distress endurance, behavioral avoidance, distress aversion, reflectional self-knowledge, integrating past and present self-knowledge, and relatedness could predict the intensity of relapse. Based on the results of this study, psychologists are recommended to reduce the intensity of relapse in addicts by decreasing distraction and behavioral avoidance, increasing distress endurance and reflective self-knowledge, and improving effective communication methods.

To generalize the findings of this study, similar studies are recommended in other centers that take care of and treat addicts to determine whether the type and method of treatment would be effective in preventing drug abuse relapse. It is suggested that other researchers replicate this study and investigate addicted women under treatment. Furthermore, psychologists in the programs of treatment and prevention of relapse can help addicts have less intense relapses by reducing distractions and behavioral avoidance, increasing distress endurance, improving self-knowledge, and making communication more effective.

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### Authors' Contribution

**Conceptualization:** Leila Ayaz.

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### Competing Interests

The authors have no conflict of interest.

### Ethical Approval

The study was approved by the Research Ethics Committee of Islamic Azad University, Zanjan Branch, Zanjan, Iran (IR. IAU.Z.REC.1400.004). Ethical considerations, including scientific honesty and trustworthiness, obtaining informed consent to participate in the study, and preserving the participants' rights such as anonymity and confidentiality of information were taken into account.

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