# The Effect of Sense of Failure and Alexithymia on Perceived Temptation in Substance Users

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**Abstract -** considering the importance of perceived level of temptation on treatment programs in substance users and the role of cognitive aspects, this study was conducted to investigate the effect of sense of failure and alexithymia on perceived temptation. Materials and Methods: In this study, the effect of sense of failure and alexithymia on the perceived temptation in substance users in Saravan [south of IR. Iran] was investigated. In this cross-sectional descriptive study, 270 addicts living in addiction treatment centers in Saravan in the first four months of 2018 were selected by convenience sampling method. The Defeat Scale, the Alexithymia Scale, and the Drug Perceived Temptation Questionnaire-20 were used to assess variables. SPSS software version 22, Pearson correlation test and multiple regression were used to analyze the data. Results: The results showed that there is a relationship between inactivity, sense of loser and satisfaction with temptation [r = 0.32, 0.51, - 0.46]. There is also a significant relationship between alexithymia, difficulty in identifying emotions, difficulty in describing emotions and objective thinking with temptation [r = 0.60, 0.51, 0.48, 0.30]. Based on regression analysis, alexithymia [$R^2$ = 0.37] and sense of failure [$R^2$ = 0.32] can negatively predict temptation. Conclusion: Based on the results of the study, considering the sense of failure, alexithymia, and receiving appropriate care can play an important role in reducing perceived temptation.

**Key words:** sense of failure; alexithymia; substance use; perceived temptation

## Introduction

According to the latest reports, there are two million drug addicts in Iran and six million recreational drug users [1]. The literature highlights two major aspects of substance abuse treatment: First, the treatment process known as recovery. Second, relapse prevention [2]. According to Brown, Seraganian and associates, the first six months after treatment are critical for clients because most recurrences occur during this period [3,4].

Various researchers and theorists in the study of the causes of drug abuse and addictive behaviors have mentioned various emotional factors such as emotional dysregulation disorder, emotional avoidance and alexithymia [5]. A number of variables contribute to a person's vulnerability to relapse. In the cog-

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nitive-behavioral model, temptation is recognized as an important predictor of relapse. The cognitive-behavioral model of relapse provides a basis for understanding the social and cognitive mechanisms of relapse such as alexithymia and sense of failure as part of the recovery process [6].

Alexithymia refers to the impaired cognitive process of emotional information. In other words, the inability to evaluate emotional information in perceptual cognitive processing confuses the individual emotionally and cognitively and affects his or her ability to organize emotions and perceptions [7]. Isazadegan and Fathabadi consistently showed that alexithymia has a significant positive relationship with other-blaming, self-blaming and catastrophic thinking behaviors. While with different dimensions of positive re-attention and acceptance have a significant negative relationship [8]. Among the variables of research, social dysfunction, anxiety, acceptance, self-blame, catastrophic thinking and other-blame can explain 25 % of the variance of alexithymia. Crystal believes that alexithymia, as an emotional dysfunction, makes people vulnerable to drug dependence [9]. Hamidi and associates also confirmed this relationship between addiction and alexithymia [10].

According to some studies, alexithymia and difficulty in identifying the senses predicted students' tendency to addiction [11-13].

In their study, Hosseini Kotaki and associates showed a significant difference in the factors of alexithymia [difficulty in identifying emotions, difficulty in describing emotions and externally oriented thinking] and aggression [physical aggression, verbal aggression, anger and hostility] between addicts and normal people [14].

According to some studies, there is a significant difference between addicts and normal people in all three sub-factors of alexithymia [10]. Some researchers have pointed to the role of alexithymia in alcohol and cocaine use [9,15].

The sense of failure is another important factor derived from the Marlatt Relapse Prevention [RP] model. Accordingly, deficits in general coping skills reduce self-efficacy and increase the likelihood of developing addictive behaviors as a coping strategy in high-risk situations [16].

This model suggests that the ability to provide effective adaptive responses assures individuals that they can cope with these situations [increasing self-efficacy], which in turn reduces the likelihood of relapse. In contrast, people with ineffective coping strategies have less self-efficacy and expect to improve it through alcohol consumption. In fact, expecting positive results may lead to an initial slip. This interruption, in turn, can lead to sense of guilt and failure [the effect of abstinence]. This effect of abstinence can only increase the likelihood of relapse when one's expectations lead to positive results [17].

Sense of failure also play a considerable role in predicting high-risk behaviors. Panagioti, Gooding, and Tarrier examined important suicide factors in people with post-traumatic stress disorder. Their results showed that sense of frustration and failure are key factors in the development of suicidal behaviors in patients with post-traumatic stress disorder [18].

There are few studies on the sense of failure in Iran. However, psychologists have acknowledged its significant effects on major disorders such as depression, suicide, anxiety, post-traumatic stress disorder, suicide thoughts, and suicide commitment [19].

Therefore, the objectives of the study were:

1. Predict the perceived level of temptation in drug addicts based on sense of failure

2. Predict the perceived level of temptation in drug addicts based on alexithymia

## Subjects and Methods

The statistical population included 1000 addicts located in rehabilitation centres [camps] of addicts as well as addicts referred to 6 rehabilitation centres in Saravan in the first quarter of 2018, of which 270 addicts were selected using convenience sampling based on Karajcie and Morgan table. Inclusion criteria included detoxification in the past six months, male gender, and age between 20 and 50 years. Exclusion criteria were unwillingness to participate and unwillingness to complete the questionnaire.

### Data Collection Instruments

#### *Defeat Scale*

The Defeat Scale [DS] was developed by Gilbert and Allen based on social status theory. This scale consists of three subscales of inactivity, loser and satisfaction. This scale has a very high internal consistency [female: $\alpha = 0.94$; male: $\alpha = 0.93$] and a confidence interval of 0.94 for students and 0.93 for people with depression [20]. Participants were asked to rate their agreement with each of the 16 items on a five-point scale from 'never' (0) to 'always' (4) on the last week. Tarsafi, Kalantar-Kosheh, and Lester calculated Cronbach's alpha of 0.91 for women, 0.92 for men, and 0.91 for the general questionnaire [21].

In addition, according to the above study, the alpha coefficient of subscales for the Persian version of the questionnaire was reported as follows: inactivity 0.9, loser sense 0.82 and satisfaction sense alpha 0.72. According to this, the defeat scale has acceptable validity and reliability among Iranian students.

#### *Alexithymia Scale*

The Alexithymia Scale [AS] was designed in Toronto. This 20-item scale measures difficulty in identifying the senses, difficulty in describing the senses, and objective thinking. The psychometric properties of the Toron- to Emotional Dysfunction Scale have been measured and validated in various studies]. In the Persian version of the Toronto Emotional Dysfunction Scale, Cronbach's alpha values for general alexithymia, difficulty in identifying the senses, difficulty in describing the senses, and objective thinking were 0.85, 0.82, 0.75, and 0.72, respectively, indicating acceptable internal consistency. Concurrent validity has also been verified [22]. The overall reliability of the scale in the present study using Cronbach's alpha was 0.79.

### Drug perceived temptation questionnaire

Salehi Fedredi, Barfani and Ziyae developed this 20-item questionnaire. They reported the convergent validity of this questionnaire as 0.48 based on Desires for Drug questionnaire and its reliability using Cronbach's alpha of 0.94 [23]. The overall reliability of the present study using Cronbach's alpha was 0.83.

### Patients and methods

First, data related to the main variables of the research were collected. Then, the necessary permits were obtained from the Islamic Azad University, Zahedan Branch, and the researcher attended the rehabilitation centres of the addicts. Ethically and due to the unwillingness of the centre officials, the names of these centres are not mentioned in the study. The required information about the research method and confidentiality, right of withdrawal and full consent was provided to the eligible participants. Then the research questionnaires were completed and finally the data collected were analysed in SPSS software.

### Data analysis

Data analysis was performed using SPSS 22 software, Pearson correlation and multiple regression.

**Table 1.** Correlation coefficients between the sense of failure and amount of perceived temptation

| Variables | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1.  Inactivity | 1 | | | |
| 2.  Sense of Loser | 0.303** | 1 | | |
| 3.  Sense of Satisfaction | 0.316** | 0.615** | 1 | |
| 4.  Amount of perceived temptation | 0.324** | 0.516** | -0.461** | 1 |

* $P \leq 0.05$; ** $P \leq 0.01$

## Results

The results showed that 21.5 % of people were between 20 and 30 years old, 35.9 % were between 31 and 40 years old, 28.1 % were between 50 - 41 years old and 14.4 % were upper 50 years old. The history of substance abuse among the samples was 32.2 % less than one year, 29.2 % between 1 - 5 years, 21.5 % between 6 - 10 years and 17.1 % over 10 years.

Pearson correlation coefficient and multiple regression were used to examine the relationship between failure feelings and perceived temptation of drug addicts.

Based on the results, all correlation coefficients were significant at the level of $\alpha = 0.01$. There was a positive relationship between the sense of inactivity and loser with the perceived temptation. While there was a negative correlation between sense of satisfaction and perceived temptation.

Since the tolerance statistics were higher than the cut-off point (0.1) and VIF (variance inflation factor) was lower than the cut-off point the assumption of linearity is not challenged [10]. According to Table 4, senses of powerlessness ($p < 0.01$ and $\beta = 0.156$) and sense of defeat ($p < 0.01$ and $\beta = 0.347$) can positively predict the perceived temptation of drug addicts. Whereas the sense of Satisfaction ($p < 0.01$ and $\beta = -0.198$) had a negative correlation with the perceived temptation of this group.

According to Table 3, all correlation coefficients were positive and significant at $\alpha =$

**Table 2.** Regression analysis for predicting perceived level of temptation using the sense of defeat factors

| | Standardized Coefficients | | | | | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|
| | Beta | t | P | R | R² | Tolerance | VIF |
| Constant | | 4.101 | 0.001 | 0.566 | 0.321 | | |
| 1. Inactivity | 0.156 | 2.897 | 0.004 | | | 0.881 | 1.135 |
| 2. Sense of Loser | 0.347 | 5.354 | 0.001 | | | 0.608 | 1.645 |
| 3.Sense of Satisfaction | -0.198 | -3.044 | 0.003 | | | 0.603 | 1.659 |

VIF=variance inflation factor

**Table 3.** Matrix of the correlation coefficient between alexithymia and amount of perceived temptation

| Variables | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 1. Difficulty in Identifying Senses | 1 | | | | |
| 2. Difficulty in Describing Senses | 0.459** | 1 | | | |
| 3. Objective Thinking | 0.169** | 0.196** | 1 | | |
| 4. Alexythimy | 0.745** | 0.758** | 0.652** | 1 | |
| 5. Amount of perceived temptation | 0.511** | 0.486** | 0.305** | 0.602** | 1 |

* $P \leq 0.05$; ** $P \leq 0.01$

0.01 ($p < 0.01$). Positive values of these coefficients indicate a direct relationship between alexithymia and the perceived temptation.

Since the tolerance statistics were higher than the cut-off point (0.1) and the VIF was lower than the cut-off point, the assumption of collinearity is not challenged [10]. According to Table 4, difficulty in identifying the feelings, difficulty in describing the feelings and objective thinking significantly and positively predict the perceived temptation of substance abusers.

The results showed that the probability of perceived temptations in people with more difficulty in identifying and describing the feelings and objective thinking is higher and can predict the perceived temptation in drug addicts.

## Discussion

Previous studies have confirmed the relationship between intolerance of failure / defeat with motivation to use drugs, academic failure with pyromania, sense of defeat, and sense of frustration, as the major causes of suicide behaviours [18,24].

To explain these findings, people who feel less efficient or have sense of defeat, feel helpless and unable to control the events of their

**Table 4.** Regression analysis for predicting the amount of perceived temptation by the alexithymia factors

| | Standardized Coefficients | | | | | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|
| | Beta | t | P | R | R² | Tolerance | VIF |
| Constant | | 3.013 | 0.003 | 0.566 | 0.613 | | |
| Difficulty in identifying senses | 0.347 | 6.332 | 0.001 | | | 0.783 | 1.277 |
| Difficulty in describing senses | 0.290 | 5.270 | 0.001 | | | 0.775 | 1.290 |
| Objective thinking | 0.190 | 3.828 | 0.001 | | | 0.954 | 1.049 |

VIF=variance inflation factor

lives. They believe that everything they do is useless. In the face of obstacles, if their initial efforts to deal with the problem are unsuccessful, they will quickly lose hope and fail. Senses of frustration can destroy motivation, destroy hope, cause cognitive impairment, and affect physical health [25]. Individual and social failures are experienced due to the reuse of the method used in a severe failure experience in the past, and depression appears in behavioural patterns based on the amount of the loss and / or change in the quality and quantity of sleep [26].

It can also be explained that the sense of failure increases the likelihood of less tolerance for stressful events. In addition, it weakens the sense of self-esteem and self-value [27].

The results of the correlation between alexithymia and its components with the perceived temptation of drug addicts showed a direct relationship between alexithymia and the perceived temptation and higher crave to use drugs in people with more emotional problems. The results of multiple regression to predict the perceived temptation based on the components of alexithymia showed that difficulty in identifying senses, difficulty in describing senses and objective thinking can positive and significantly predict the perceived temptation of drug addicts. These findings are consistent with the results of the literature.

Sohrabi and associates also showed that emotion regulation strategies in recovered individuals were better than others [28]. Others studies showed that alexithymia and difficulty in identifying the senses predict the tendency to addiction in students and is related to Self-destructive behaviours [11,29,30]. Husseini-Kataki and associates in a comparative study showed a significant difference between the components of alexithymia between addicts and normal people [14].

Since people with alexithymia misinterpret the physical symptoms of emotional arousal, they show emotional helplessness through physical complaints and seek treatment for physical problems. As a result, they tend to use drugs. People with alexithymia have vague senses associated with physical arousal. However, due to the difficulty in distinguishing, describing, and regulating the senses, arousal remains active and disrupts the nervous system and autonomic immune system. This arousal, which is associated with alexithymia, causes symptoms of physical illness, anxiety, and depression that may increase the likelihood of drug abuse aimed at reducing these symptoms, as well as reducing high levels of anxiety, depression, and alexithymia [29].

It can be explained that alexithymia as a deficiency in understanding, processing and describing emotions makes some people more vulnerable to substance abuse. Since people with alexithymia misinterpret the physical symptoms of alexithymia, they show it through physical complaints and seek treatment for physical problems. As a result, there is a tendency to use drugs in them. People with high alexithymia have difficulty verbalizing their inner senses. Instead, their bodies express their senses. Pain is a good example of such a tool that these people tend to self-medicate and drug abuse to deal with such sensations. In addition, alexithymia, as an emotional dysfunction, makes some people vulnerable to substance abuse. Moreover, people with alexithymia have difficulty in distinguishing the feelings of others and have a limited capacity for empathy. They also have difficulty establishing an emotional relationship as a key feature of alexithymia, which can facilitate substance abuse [31].

Study limitations were:

1. Self-report based data collection instrument

2. Cross-sectional nature of the study

3. Conduction of the study only on male residents in Saravan, which affects its generalizability

Regarding the role of the sense of defeat in perceived temptation, it is recommended to address educational intervention based on a supportive approach and to explain the causes of perceived temptation to reduce the likelihood of relapse behaviour. In addition, it is recommended to consider educational workshops in emotional regulation and the role of cognitive and emotional variables in drug-dependent individuals.

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