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Aim and Scope

One of the elements of modern time is reliance on scientific thinking. With respect to thought provoking philosophical nature of the present time, Modern psychology has proposed theories in the field of psychological processes based on empirical studies. Hence Journal of Modern Psychology has been launched to provide a space for scholars to publish thoughts and scientific studies in personality, abnormal and social psychology.



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Research Paper: Factors Associated with Relapse from the Perspective of Drug Abusers in Self-Referral Centers Affiliated with the Welfare Organization for Addiction Treatment



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Abstract

Addiction is a complex and difficult issue, with relapses occurring in about 50 to 70 percent of addicts after quitting. To better understanding the factors associated with relapse, we conducted a study from the perspective of drug abusers in self-referral centers affiliated with the Welfare Organization of Bandar-e Anzali. Our sample consisted of 181 men referred to addiction treatment centers in Bandar-e Anzali in 1400. We used a researcher-made questionnaire to collect data on demographic information and factors related to relapse. Our findings revealed that associating with addicted and deviant friends (2.62%) was the most important factor associated with relapse from the perspective of addicts. Based on our results, we suggest that training and intervention for assertiveness (the skill of saying no) in front of friends and changing clients' lifestyles, as well as teaching interpersonal relationships and moderation to family members after quitting drug use, are necessary.

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1. Introduction

One of the various social harms that result from the malfunctioning of corrupt social systems is addiction. The United Nations declared in 1950 that addiction is a severe or chronic poisoning caused by the use of natural or industrial drugs, causing harm to individuals or society and increasing day by day. [United Nation Office for Drug \(2020\)](#) reports a 30% increase in drug users compared to 2009. According to this report, drug use among developing countries, including Iran, is on the rise, and there are approximately 6 million addicts reported in our country ([Madden et al., 2021](#)).

Drug addiction, as a psychiatric disorder with biological, psychological, social, and spiritual dimensions, is one of the most significant problems of humankind in the present era. Numerous problems, including physical and mental health issues for individuals, families, and society, are caused by the second most common mental disorder. It will have a significant impact on cognitive and behavioral processes ([Kazemian Moghaddam, 2021](#)).

Currently, there is no accurate and reliable statistics in Iran on the percentage of individuals who have quit and recovered from addiction but have relapsed back to drug use. However, the increasing statistics of drug users and substance abuse can indicate the fact that various treatment methods and strategies used so far have not been successful or comprehensive in preventing relapse and recurrence and acting as a barrier to re-use ([Khammarnia & Peyvand, 2017](#)).

Among the individual factors affecting the return to addiction are psychological characteristics and physical problems: the temptation, enjoyment, pleasure-seeking, personal satisfaction, physical pain, and illnesses ([Ahmadpanah et al., 2018](#)), which can lead to a relapse into addiction. Additionally, other factors contributing to substance abuse relapse can be categorized as individual, family, social, geographical, and economic factors ([Nastizayi, 2010](#)).

Various studies have also referred to social factors that contribute to relapse into addiction. The collapse of social support resources, reduced social interactions, and limited social networks due to a history of drug use, experiences, and social stigmatization and ostracism by peers; family conflicts and inappropriate relationships between family members are factors that create psychological pressure and a sense of loneliness. These factors disrupt the continuity of quitting addiction ([Fouladiyan & Mohammadi, 2023](#)).

Several studies have investigated the causes of addiction relapse. [Fouladiyan and Mohammadi \(2023\)](#) compared factors related to relapse into addiction between two groups of individuals who had quit definitively and relapsed back into drug use. They found significant differences in variables such as family support, experience, social stigmatization and ostracism, drug-related friendships, and treatment facilities in favor of the group who had quit definitively.

[Nemati Sogolitappeh and Khaledian \(2022\)](#) found that factors influencing relapse include individual, psychological,

interpersonal, family, social, cultural, and treatment-related factors. The results of Kabisa et al. (2021) study showed that 40 to 60 percent of individuals generally relapse after completing detoxification and rehabilitation treatments. Relapse after successful detoxification and rehabilitation is a public health concern worldwide.

Andersson et al. (2019) results showed that relapse rates in addiction ranged from 40 to 75 percent and varied depending on the type of substance and use and in different individuals. Identifying the characteristics and features of the addicted individual and the type of treatment is important in preventing relapse. Emotional states such as anxiety, depression, severity of disorders, and psychological symptoms can predict relapse.

Based on the above, it can be inferred that addiction relapse is a multifactorial phenomenon that arises because of the interaction between personal, individual, environmental, social, and political factors. Generally, Iranian society considers individuals with substance abuse disorders, whether rehabilitated or not, as undesirables and does not readily accept them. In other words, the various aspects of addiction are not clear to people, and this issue is not addressed based on scientific principles.

There is a compelling need for a comprehensive and systematic review of prevention, treatment, and control of addictive substances to combat addiction. Addiction endangers human life, especially young people, as one of the social harms (Kabisa et al., 2021). Using the opinions of

individuals with substance abuse disorders can be an effective way to recognize the reasons for addiction relapse.

Identifying the causes and influential factors in relapse and return to addiction can play a significant role in treatment and planning to prevent relapse. Given the regional differences in people's thoughts, beliefs, and opinions, the aim of this study is to investigate the causes of addiction relapse from the perspective of individuals with substance abuse disorders who refer to addiction treatment centers affiliated with the Welfare Organization in Bandar-e Anzali County.

2. Methods

2.1. Statistical Population, Sample, and Sampling Method

This study was a descriptive research and the statistical population included men who had referred to the addiction treatment centers of Bandar-e Anzali County in 2021. They had been drug-free for at least three months after a period of drug use, had a history of at least three months of drug addiction treatment, but had relapsed and returned to drug use and sought treatment again. The approximate number of this population was 600.

The sample was selected using a purposive sampling method. The researcher obtained permission from the Welfare Organization of Bandar-e Anzali County and selected four addiction treatment centers using convenience sampling. Then, by visiting these centers and using purposive sampling method, 181 men who had been drug-free for at least three months, had

relapsed and returned to drug use, and sought treatment for drug addiction, were selected.

2.2. Instrument

The researcher created a questionnaire as the data collection tool and restructured it into two sections: demographic information and factors related to relapse. They assessed the validity of the tool using content validity and measured the reliability using a retest with a Spearman correlation coefficient of 0.81. The study examined factors related to treatment non-compliance under the headings of individual and environmental factors. It divided individual factors into physical and psychological factors, and environmental factors into family, social, and treatment factors. The researcher performed descriptive statistical analysis of the data using SPSS-27 software.

2.3. Entrance and Exit Criteria

Ethical considerations included providing complete and transparent information to participants, their voluntary participation in the study, confidentiality and preservation of their rights, respect for individuals' rights, human dignity, and diversity of beliefs and opinions. The researchers also had to avoid harm and discrimination, maintain professional, scientific, and educational responsibility, obtain permission from participants, and keep their identities anonymous.

To participate in the study, individuals had to meet certain criteria. They had to be male and between the ages of 25-45. They also had to give their consent to participate. Participants needed to have a history of at least one three-month period of drug abstinence and be drug-free for at least three months or more. They also needed to be currently addicted to drugs. Participants had to have a file in addiction treatment clinics. Finally, they needed to have a history of drug use and addiction before a period of drug abstinence.

The exit criteria included being diagnosed with a disorder or disease, unwillingness or dissatisfaction with participation in the study, and having a contaminated questionnaire.

3. Results

The study sample for this research consisted of 181 individuals who were drug users and had voluntarily referred themselves to addiction treatment centers. The average age of the participants was 35 years, with the youngest being 25 years old and the oldest being 45 years old. Overall, 41 participants (23%) were unemployed, 69 participants (36%) were self-employed, 58 participants (31%) were laborers, and 13 participants (6%) were employees. The average number of times that drug users had attempted to quit drug abuse was reported to be 2.73 (ranging from once to a maximum of 12 times).

Table 1

Frequency distribution of the most important inter-personal factors related to addiction relapse.

Interpersonal factors	Frequency
Association with addicted and deviant friends	62.2 % (102 people)
Relationship with addicted colleagues	29.9 % (49 people)
The prevalence of the use of specific opium substances in society	22 % (36 people)
Not being accepted by friends and society	15.2 % (25 people)

Table 1 shows overall, 62.2% of drug users identified socializing with addicted and

deviant friends as the most important inter-personal factor related to addiction relapse.

Table 2

Frequency distribution of the most important economic factors related to addiction relapse

Economic factors	Frequency
Cost of living	44.5 % (73 people)
Poverty	22 % (36 people)
Cheap materials	9.8 % (16 people)
Buying and selling materials for a living	8.5 % (14 people)

Table 2 shows that among economic factors, 44.5% of drug users identified the

cost of living as the main factor related to addiction relapse.

Table 3

Frequency distribution of the most important occupational factors related to addiction relapse

Occupational factors	Frequency
Overwork and exhaustion	28.7 % (47 people)
Unemployment	28% (46 people)
Lack of interest and satisfaction in the job	28% (46 people)
Occupational and professional problems	22% (36 people)
Long working hours	22% (36 people)
Lack of permanent employment	17.7 % (30 people)
Failure and defeat in occupational affairs	17.7 % (29 people)

According to Table 3, excessive and exhausting work was the most important occupational factor related to addiction

relapse from the perspective of 28.7% of drug users.

Table 4

Frequency distribution of the most important familial factors related to addiction relapse

Family factors	Frequency
Inappropriate behavior of family members (father, mother, etc.)	24.4% (40 people)
Lack of proper communication in the family	17.7% (29 people)
Existence of discrimination in the family	14.6% (24 people)
Pressures resulting from being single	11% (18 people)
Absence or absence of father	9.8% (16 people)
Illiteracy or low literacy of mother	8.5% (14 people)
Crowded house based on the number of people	6.1% (10 people)

According to Table 4, from the perspective of 4.24% of drug users, inappropriate behavior of family members

(father, mother, etc.) was the most important familial factor related to addiction relapse.

Table 5

Frequency distribution of the most important psychological factors related to addiction relapse.

Family factors	Frequency
Addiction of relatives	4.24% (40 people)
Lack of understanding with spouse	4.13% (22 people)
Inappropriate treatment by spouse's family	8.9% (16 people)
Differences arising from marital affairs	5.8% (14 people)
Bad treatment by spouse and children	9.7% (13 people)
Spouse not being committed to life	9.7% (13 people)
Forced marriage	1.6% (10 people)

According to Table 5, 4.24% of drug users who were married identified addiction in family members as the most important familial factor related to addiction relapse.

exhausting work, bad family treatment, and addiction of relatives were reported in order of priority as other factors affecting the re-consumption of opium substances after initial quitting. Most of the patients were in the age group of 25 to 45 years.

4. Discussion

The results of this study showed that most of the addicts studied were in the young age group, and from the perspective of addicts, associating with addicted and deviant friends was the most important factor in reusing drugs. Living expenses, excessive and

In this study, associating with deviant friends was identified as the main factor in returning to addiction. Essentially, being in polluted environments, associating with consuming and deviant friends, joining former friends' groups, and easy access to

substances are among the social factors affecting addiction and relapse into addiction that have been mentioned in various studies and are consistent with the present study (Fouladiyan & Mohammadi, 2023; Ahmadpanah et al., 2018 and Kabisa et al., 2021). The role of associating with consuming friends after quitting is so important that in the study of Mohammadpoorasl et al. (2012), it was the second most influential factor in relapse into addiction from the participants' perspective. Essentially, associating with friends and having access to substances and seeing objects and consumption tools creates a strong motivation for re-consumption (Fouladiyan & Mohammadi, 2023). Therefore, avoiding travel in former environments and avoiding associating with addicted friends has been mentioned as effective strategies for not returning to addiction in Nastizayi et al.'s study (2010).

According to the differential association theory, if an individual returns to their former group of friends after quitting addiction and does not associate with a new social network free of consuming individuals, a platform is provided that increases the likelihood of returning to consumption. Interacting with former friends can make the individual lack agency and shape their desire for consumption within the framework of stimuli. This can excite the individual and make associating with consuming friends after quitting play a role in providing a platform for returning to addiction. The result is placing the individual in the cycle of quitting and relapsing (Fouladiyan & Mohammadi, 2023). Additionally, living

expenses after quitting can cause individuals to return to drugs again (Khammarnia & Peyvand, 2017). In the field of addiction, most addicts in any society are individuals with very high living expenses. This could be due to poverty-related deprivations and drug producers and smugglers targeting these individuals as distributors because their numbers are higher than other economic-social classes (Amini et al., 2004).

In relation to other factors associated with addiction relapse, there is a close proximity between observed scores. It seems that individuals with substance abuse disorders have only chosen the factor of addicted and deviant friends. Officials and experts often mention this factor in educational and health issues, emphasizing the importance of having healthy friends. This option is usually the first thing people refer to justify their actions (especially addiction), resulting in other factors being marginalized (Namati Sougoli Tapeh and Khalidian, 1400). When explaining their research, researchers should consider this study's limitations. One limitation is relying solely on a questionnaire, which may have biased participants' responses. Using direct tools like interviews and clinical observation is recommended. The study only included men, so gender comparisons were not possible. Future studies should include both genders and have a larger sample size for comparison.

This study found that interpersonal factors play an important role in substance relapse. Associating with friends and deviant and addicted individuals is the main factor. Addiction specialists in camps or addiction treatment centers should set up ways of

assertiveness. They should teach skills of saying no and self-control to substance-dependent individuals. This should be one of the most important goals of educational programs and prevention of relapse.

5. Conclusion

The findings showed that the interpersonal factor (associating with addicted and deviant individuals) was the most important cause of relapse among the participants in the study. Based on the findings of this study, it can be said that training and intervention for assertiveness (the skill of saying no) in front of friends and changing the lifestyle of clients, as well as teaching interpersonal relationships and teaching moderation to family members after quitting drug use, seems necessary.

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Conflicts of Interest

The Authors declare that there is no conflict of interest with any organization. Also, this research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

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Research Paper: Examining the Mediating Role of Emotional Self-Awareness in the Relationship between Moral Identity and Self-Defeating Behavior and Cognition



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Abstract

The present study was conducted with the aim of investigating the mediating role of emotional self-awareness in the relationship between moral identity and self-defeating behavior and cognition. This research was descriptive-correlation based on structural equation modeling. 200 female students of the first secondary school in the villages of Roudbane city in the academic year 2022-2023 were selected using convenience sampling method and the research tools included the moral identity questionnaire (MIQ), self-defeating behaviors & cognitions scale (SDBCS) and self-awareness outcomes questionnaire (SAOQ). Data analysis was done using Pearson correlation and structural equations with the help of SPSS-26 and AMOS-24 software. The obtained findings showed that moral identity and emotional self-awareness have a direct effect on self-defeating behavior and cognition ($p > 0.001$). Also, moral identity had an indirect effect on self-defeating behavior and cognition with the mediating role of emotional self-awareness ($p > 0.001$). According to the results of the present research, more attention should be paid to the role of moral identity and emotional self-awareness in reducing students' self-defeating behaviors and cognitions.

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1. Introduction

Among the important topics in the evaluation of psychological and educational problems of people in educational environments is academic self-defeating behavior. Academic self-defeating behaviors are a type of behavior that people do intentionally and by their own will, the results of which are usually failure and destruction in the academic field. The reason for people's tendency towards these behaviors is usually receiving reinforcement for themselves and extreme attention to the positive results that such behaviors bring to the individual (Baumiester, 1997). Different types of academic self-defeating behaviors have been identified to date, including procrastination, self-handicapping, intensifying commitment, invalid and inaccurate self-evaluations, inability to delay reinforcement sources or rewards, and delaying decision-making (Cunningham, 2007).

People with self-defeating behaviors usually try to solve any responsibility on their part with various behaviors such as making excuses due to their worry and fear of failure (Usman et al., 2023). Such behaviors have been seen in more than half of the students. Self-defeating behaviors are often a means to deal with or cope with stressful and frustrating academic conditions. Based on the anxiety-avoidance evaluation model, when dealing with a situation, people first evaluate it, if they do not have enough resources to effectively deal with it, they react with anxiety and try to escape from the situation or show behaviors let their anxiety decrease (Koscheka, 2021).

Students with self-defeating behaviors often doubt their abilities to do things. Researchers believe that self-defeating behaviors as a set of negative characteristics have a negative impact on student performance. They state that examples of common self-defeating behavioral characteristics include poor time management, lack of motivation, and a tendency to settle for average performance (Curtis, 2013).

One of the variables that can be effective in the emergence of academic self-defeating behaviors is adherence to ethics and specifically moral identity, which has been shown to have a negative relationship with self-defeating behaviors in previous researches (Shadjoo et al., 2022). Moral identity has been defined as thinking about self-knowledge and perception, which is focused on a number of moral traits such as kindness, justice and generosity (Patrik et al., 2018).

Moral identity, which involves moral behavior in different situations, evolves over time and during developmental stages. Although the development of the early stages of moral behavior is subject to external and social factors, at older ages it seems that the control of a person's behavior is increasingly dependent on internalized standards of behavior, which leads to self-restraint in the absence of external skills. The centrality of one's moral tendencies to self-perception (i.e., moral identity) best predicts commitment to ethical behavior. A person's moral identity includes his commitment to belonging to moral goals. Moral identity defines two things: the action that is

considered right and moral by the person and why the person decides that “I should do this action”. For example, many people believe that ignoring the suffering of human hunger is unethical, but only a few people come to the conclusion that they should do something to solve this problem (Wang et al., 2017).

People with moral identity behave in accordance with their personal and social values and are not willing to engage in selfish behaviors such as procrastination. When a person fails, he tries to remove responsibility from himself through self-defeating behaviors with excuses and vague handshakes. In other words, students who have rooted honesty as a special behavior deep in their soul, do not delay their work and assignments without any logical reason, and are always orderly and honest in their words and actions (Wu and He, 2022).

Another important factor in avoiding self-defeating behaviors is emotional self-awareness. The first step in controlling emotions such as anger, sadness, and anger is to become aware of that state. In order to be aware of one's feelings, it is necessary to

know emotions when facing unpleasant situations, to know thoughts and beliefs, to know how to interpret events and to be aware of one's desires and expectations (Mahdian and Sheikholeslami, 2022).

Emotional self-awareness improves the ability to control and deal with unfavorable life conditions in a person. The ability to cope with life's obstacles and find a solution for them provides health and well-being conditions for people. When students enter school, if they cannot use these psychological resources in the right way, they may engage in academic maladaptive behaviors such as dishonesty (Mohammadi et al., 2021).

According to the stated content and considering the importance of the role of moral identity and emotional self-awareness in reducing the occurrence of self-defeating behaviors, the present study seeks to investigate the mediating role of emotional self-awareness in the relationship between moral identity and self-defeating behavior and cognition. Figure 1 shows the conceptual model of the research.

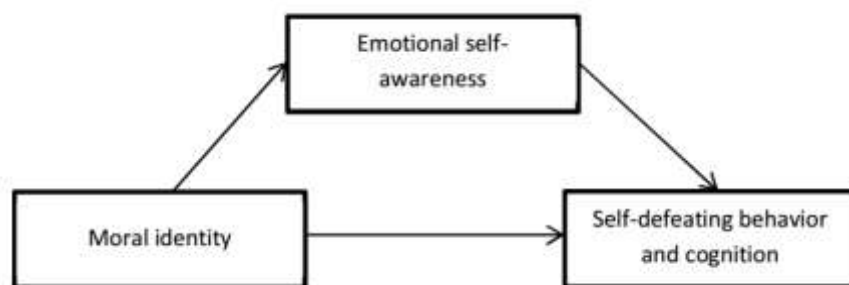


Figure 1. Relational model of the mediating role of emotional self-awareness in the relationship between emotional self-awareness and self-defeating behavior and cognition.

2. Method

The present research was carried out by descriptive-correlation and structural equation modeling method. The statistical population of this research includes first secondary school girls in the villages of Roudbane city in the academic year 2022-2023. Although there is no general agreement about the required sample size for factor analysis and structural models, according to many researchers, the minimum required sample size is 200 (Musil et al., 1998). Therefore, in this research, a minimum sample size of 200 people was considered, who were selected by convenience sampling method.

2.1. Instruments

Moral Identity Questionnaire (MIQ): This 20-item questionnaire was designed and developed by Black & Reynolds (2016) and has two dimensions: moral self with 8 items (1 to 8) and moral integrity with 12 items (9 to 20), and the participants answer the items on a 6-point Likert scale from strongly disagree (1) to completely agree (6). therefore the minimum score is 20 and the maximum score is 120. A higher score indicates a stronger moral identity. The scoring of all the items of the moral self dimension is direct and the scoring of all the items of the moral integrity dimension is reversed. Black and Reynolds (2016) created the moral identity questionnaire with two sample groups of 561 and 324 people and during two stages. Using the results obtained from the first study, they reported favorable convergent validity and divergent validity of the questionnaire. The obtained Cronbach's alpha coefficients were 0.84 for the

dimension of moral self, 0.87 for the dimension of moral integrity, and 0.90 for the whole scale. In the second study, Black and Reynolds (2016) obtained a test-retest reliability of 0.87, which indicated the strong stability of the scale. In the research of Abbasi-Asl et al. (2020), the validity and reliability of this questionnaire in the Iranian society has been investigated. The results of their research have confirmed the two-factor structure of this questionnaire. However, in their research, the number of questionnaire items was reduced to 15 items and questions 1, 11, 17, 18 and 20 were removed in the final analysis. In their research, Cronbach's alpha coefficients for the dimensions of moral self and moral integrity were equal to 0.82 and 0.80, and for the total score of the scale was 0.85.

Self-Defeating Behaviors & Cognitions Scale (SDBCS):

Self-defeating behavior and cognition scale was designed by Cunningham (2007). This scale has 21 items and is designed in the form of a 5-point Likert scale to evaluate 6 types of self-defeating behavior: procrastination (items 1-3), self-handicapping (items 4-6), increased commitment (items 7-10), irrational evaluation (items 11-14), impulsive behavior (inability to delay reward) (items 15-18), delay and inability to make decisions (items 19-21). A higher score indicates a higher level of self-defeating behavior and cognition. Cunningham (2007) reported the Cronbach's alpha of the questionnaire as 0.87. Convergent validity with self-handicapping questionnaire is reported to be 0.54. In the research of Hadadranjbar (2018), Cronbach's alpha was obtained in the three stages of pre-

test, post-test and follow-up, respectively 0.84 and 0.92. In the study of [Rashidi \(2021\)](#), Cronbach's alpha was reported as 0.71. In the present study, Cronbach's alpha was 0.85.

Self-Awareness Outcomes Questionnaire (SAOQ): This questionnaire has 33 items and was created by [Grant et al. \(2002\)](#). Its subscales include recognition (with 6 items from 1 to 6), identification (with 5 items from 7 to 11), conversion (with 7 items from 12 to 18), environmentalism (with 10 items from 19 to 28) and problem solving (with 5 items from 29 to 33) were measured with a five-point Likert scale (from never to very much).

A higher score indicates higher emotional self-awareness. In [Mohanna & Talepasand \(2016\)](#), the validity of the emotional self-awareness scale based on Cronbach's alpha was 0.79. In his research, [Sutton \(2016\)](#) examined the construct validity of this scale and showed that 4 factors of self-reflection, insight, rumination, and mindfulness explain 44.4% of the data variance.

3. Results

The frequency and percentage of students' age are presented in [Table 1](#).

Table 1

Demographic data of the subjects

Variable	Level	Number	Percentage
Age (year)	12	120	60
	13	35	17.5
	14	45	22.5
Total		200	100

Most of the studied students were in the age range of 12 years (60 percent), and the least of them were in the age range of 13 years (17.5 percent). [Table 2](#) shows the

descriptive information (mean, standard deviation, skewness and kurtosis) related to the research variables.

Table 2

Descriptive indices of research variables

Variable	Mean	Standard deviation	skewness	kurtosis
Moral identity	89.93	23.19	-1.05	0.71
Self-defeating behavior and cognition	55.95	13.42	-0.65	0.11
Emotional self-awareness	61.65	11.09	-0.54	0.12

As can be seen, the mean and standard deviation of moral identity variable are 89.93 and 23.19, self-defeating behavior and cognition is 55.35 and 13.42, and emotional self-awareness is 61.65 and 11.09

respectively. [Table 3](#) shows the information related to Pearson's correlation between moral identity, self-defeating behavior and cognition, and emotional self-awareness.

Table 3
Correlation matrix of research variables

Variable	1	2	3
Moral identity	1		
Self-defeating behavior and cognition	-0.68**	1	
Emotional self-awareness	0.45**	-0.43**	1

P < 0.001

According to the results of the correlation matrix, there is a negative and significant relationship between moral identity and emotional self-awareness with self-defeating

behavior and cognition. Also, a positive and significant relationship is observed between moral identity and emotional self-awareness. Path coefficients are presented in Figure 2.

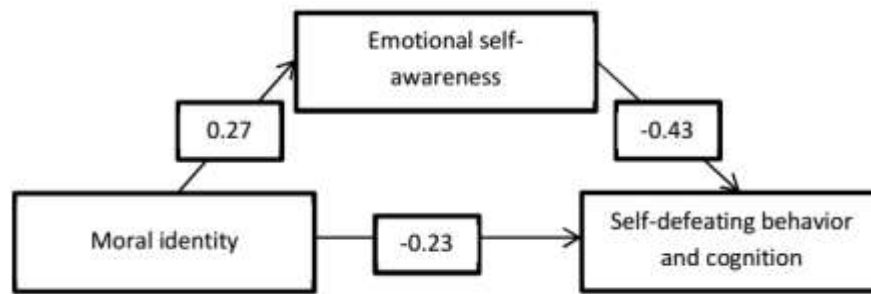


Figure 2. Path coefficients of the relational model of the mediating role of emotional self-awareness in the relationship between moral identity and self-defeating behavior and cognition.

In Table 4, can see the standard coefficients of all paths and critical values in the proposed model.

Table 4
Standard coefficients of the paths of the proposed model

Path	Standard coefficients	Standard error	Critical ratio	P
Moral identity → Self-defeating behavior and cognition	-0.23	0.41	9.41	0.00
Emotional self-awareness → Self-defeating behavior and cognition	-0.43	0.32	3.21	0.00

The results of the direct relationships of research variables in the proposed model show that in the entire sample, all path coefficients were statistically significant. In the proposed model of the current research, there is an indirect or intermediate path. The bootstrap method was used to determine the

significance of the mediating relationship and the indirect effect of the exogenous variable on the endogenous variable through mediators. The bootstrap results for the intermediate paths of the proposed model of the current research can be seen in Table 5.

Table 5
Bootstrap results for the indirect path of the proposed model

Path	Data	Boot	Bias	Error	Lower limit	upper limit	p
Moral identity to Self-defeating behavior and cognition through emotional self-awareness	0.24	0.17	0.00	0.03	0.24	0.23	0.00

Based on the results listed in [Table 4](#), the coefficient of the path of moral identity and self-defeating behavior and cognition has a negative and significant effect ($p < 0.001$, $\beta = -0.23$). Therefore, moral identity has a direct effect on self-defeating behavior and cognition. Also, the path coefficient of emotional self-awareness and self-defeating behavior and cognition has a negative and significant effect ($p < 0.001$, $\beta = -0.430$). Therefore, emotional self-awareness has a direct effect on self-defeating behavior and cognition. As can be seen in [Table 5](#), the lower limit of the confidence interval for emotional self-awareness as a mediating variable between moral identity is 0.24 and its upper limit is 0.23. The confidence level for this confidence interval is 95% and the bootstrap resampling number is 5000. Considering that zero is outside this confidence interval and is statistically significant. Therefore, moral identity has an indirect effect on self-defeating behavior and cognition through emotional self-awareness.

4. Discussion

This research was conducted with the aim of investigating the mediating role of emotional self-awareness in the relationship between moral identity and self-defeating behavior and cognition. The findings showed that

moral identity and emotional self-awareness have a direct effect on self-defeating behavior and cognition. Also, moral identity had an indirect effect on self-defeating behavior and cognition with the mediating role of emotional self-awareness. This finding is in line with domestic and foreign research conducted in this field ([Shadjoo et al., 2022](#); [Zeng et al., 2020](#); [Kaur et al., 2019](#); [Gotowiec, 2019](#); [Wowra, 2007](#)).

[Shadjoo et al. \(2022\)](#) showed in their research that there is a negative and significant relationship between moral identity and self-defeating behaviors. In their research on 790 university students, [Zeng et al. \(2020\)](#) showed that moral identity is related to perfectionism (as one of the forms of self-defeating behaviors) and after controlling for gender, age and daily use of the Internet, moral identity is partially mediated the link between perfectionism and online social behavior. [Kaur et al. \(2019\)](#) in their research on 33 adolescents with a history of suicide (as one form of self-defeating behavior) showed that moral identity was a significant predictor of suicide prevention and peer support. It was also observed that moral identity can help people to participate in social and voluntary actions. In his research, [Gotowiec \(2019\)](#) investigated individual differences in moral self-

regulation and perceived differences in moral-political values as predictors of helpful and harmful behavior. The findings showed that the perceived differences in moral values predicted the increase of harmful behaviors and the decrease of helping behavior. Perceived differences in moral values interacted with moral identity to strengthen the relationship between moral disengagement and harmful behaviors. [Wowra \(2007\)](#) also investigated the relationship between students' academic cheating and their moral identity and sensitivity to social evaluation. 70 university students completed a series of surveys. The findings showed that compared to the students who gave less importance to their moral identity, the students who gave more importance to their moral identity remembered fewer cases of cheating. Also, the findings show that when students emphasize more on their moral identity and they are less sensitive to social evaluation, they cheat less on their education.

In explaining these findings, it should be said that adherence to moral principles and moral identity is one of the obstacles to the emergence of self-defeating and self-harming behaviors. In fact, a person who is committed to a series of moral dos and don'ts, when tempted or committing behaviors that can harm him, restrains himself and does not engage in such behaviors through self-control. On the other hand, conscience is a special type of self-regulation that indicates the centrality of ethics in human experience ([Mikulincer et al., 2012](#)). Therefore, moral dos and don'ts cause guilt and shame in people when they commit harmful behaviors

and these emotions as moral emotions prevent a person from doing such behaviors.

Another way is that negative emotions cause negative and distorted thoughts ([Zibrínová et al., 2014](#)). A person may turn to catastrophizing, personalizing, or seeing things in black and white, and as a result, these distorted and negative thoughts lead to self-defeating behaviors. For example, an anxious student who catastrophizes failing an exam may turn to self-handicapping behaviors as one of the self-defeating behaviors and not prepare himself for the exam.

In explaining the mediating role of emotional self-awareness in the relationship between moral identity and self-defeating behavior and cognition, it can be said that one of the possibilities that moral identity affects self-defeating behaviors and cognitions through emotional self-awareness is the experience of moral or self-conscious emotions such as shame and guilt. . When people go beyond their mental do's and don'ts, experiencing these emotions helps them to think about what they have done and the harm they have done to themselves and others. Therefore, prevent harm or correct and compensate for selfish behavior. Another path that is possible is that a person with a moral identity, by overcoming moral challenges and adopting a moral principle, can probably manage and regulate his emotions, especially negative emotions, better and has a higher emotional self-awareness. Therefore, these people will be less likely to engage in self-defeating behaviors to avoid experiencing intense negative emotions.

The limitations of this research included the lack of similar domestic and foreign researches in the field of the research subject, the use of self-report tools, the use of convenience sampling method, and the use of correlation design, which does not show the causal relationship between the research variables. Therefore, it is suggested that other research projects such as experiments be used to understand the causal relationship between variables. Also, considering the direct effect of moral identity on self-defeating behaviors and cognitions, it is suggested to pay attention to the issue of moral education and strengthening the moral principles and beliefs of students. In addition, due to the indirect effect of moral identity on self-defeating behaviors and cognitions through emotional self-awareness, it is suggested that more attention be paid to the process of acquiring moral identity and educating and informing students in this field, so that by strengthening moral identity prepare the context for more correct management of negative emotions and as a result reducing self-defeating behaviors.

5. Conclusion

In this research, it was observed that moral identity and emotional self-awareness had a direct effect on self-defeating behavior and cognition, and moral identity had an indirect effect on self-defeating behavior and cognition through emotional self-awareness. Therefore, it can be concluded that by cultivating moral standards and consolidating moral identity, as well as training and giving awareness in the field of emotional self-awareness skills, can be reduced the

occurrence of self-defeating behaviors and cognitions.

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Conflict of interest

The Authors declare that there is no conflict of interest with any organization. Also, this research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

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Research Paper: Comparison of Male and Female Students in Personality Traits and Psychological Symptoms



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Abstract

Identifying some differences between men and women can be useful in guiding people in different areas of life. The present study was conducted with the aim of comparing male and female students in personality traits and psychological symptoms. This research is causal-comparative type. The research population was the students of Islamic Azadi University of Shiraz Branch, who were selected 250 girls and 250 boys by convenience sampling method and completed NEO Five-Factor Inventory-3 (NEO-FFI-3) and Symptom Checklist-90-R (SCL-90-R). The data of the two groups were analyzed using multivariate analysis of variance and SPSS-24 software. The findings showed that the score of male students is significantly higher than girls in the personality trait of openness to experience ($P < 0.001$). In the personality traits of conscientiousness, extroversion and agreeableness, the score of female students was significantly higher than male students ($P < 0.05$). Among the psychological symptoms, somatization, depression and anxiety among female students and hostility among male students were significantly higher ($P < 0.001$). According to the results, it can be concluded that there are psychological and personality differences between men and women, which paying attention to them and guiding people based on them can help the future life of people in different fields.

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1. Introduction

Despite their similarities, men and women have many differences. For example, women are more emotional than men and men are more interested in challenging and physical work (Givon et al., 2023). The conducted research considers biological and environmental differences as the reason for this (Farhane-Medina et al., 2022).

The existing differences between men and women, instead of showing the superiority of one group over the other, can act as an important factor in guiding or selecting people for different jobs and sports (Artazcoz et al., 2004). In fact, identifying talents can be an important step to guide a person in his future life.

Two categories of factors that can be useful to identify the difference between men and women are differences in personality traits and differences in psychological symptoms. Personality means relatively stable mental, emotional and behavioral patterns that are formed gradually and throughout life and differentiate each person from another or the coherence of a person's behavior in different situations (Kernberg, 2016). So far, various models of personality traits have been proposed that one of the personality models that has gained a lot of popularity in psychology in the last few decades is the big 5 model of personality traits (Costa & McCrae, 1992). This model assumes that 5 characteristics of openness to experience, conscientiousness, extroversion, agreeableness, and neuroticism as comprehensive personality characteristics have great explanatory power regarding

individual differences between different people. Today, this model is used in various fields such as education (Shaninah et al., 2023), job (Angelini, 2023), psychotherapy (Rodriguez & Anestis, 2023) and health (Furnham & Cheng, 2024). Below is a brief description of each personality trait. Openness to experience describes people who are open and receptive to new experiences. Conscientiousness implies a desire to do a task well, and to take obligations to others seriously. Extroversion describes the tendency to socialize with others and verbal and emotional expressions. Agreeableness refers to the spirit of adaptability of people to different situations and neuroticism also refers to the tendency of people to experience negative emotions and lack of emotional stability (Coleman et al., 2023).

Apart from the personality traits, examining the psychological symptoms of people is also important in different ways. Identifying people in these areas can be effective in career choices, education, marriage and family and social choices. Today, a large percentage of the world's people are struggling with various psychological symptoms (Steel et al., 2014) and this growing number has also been reported in Iran (Noorbala & Akhondzadeh, 2015). Suffering from mental disorders can cause many problems in people in different areas of their lives. Also, countries spend a lot of money on mental disorders (Touburg & Veenhoven, 2015).

Mental disorders show themselves in different emotional, mood, intellectual, physiological and behavioral dimensions and

different types of psychotherapy and drug therapy are used to deal with them. Also, the prevalence of mental disorders is different between men and women. For example, mood problems are more common in women and behavioral problems are more common in men (Klose & Jacobi, 2004).

So far, few researches have investigated the personality traits and psychological symptoms of women and men, especially in Iran, so this research was conducted with the aim of comparing male and female students in personality traits and psychological symptoms.

2. Methods

2.1. Statistical Population, Sample, and Sampling Method

This research is causal-comparative type. The research population was the students of Islamic Azadi University of Shiraz Branch, who were selected 250 girls and 250 boys by convenience sampling method and completed NEO Five-Factor Inventory-3 (NEO-FFI-3) and Symptom Checklist-90-R (SCL-90-R). All the participants expressed their consent to participate in the research, and incompletely filled questionnaires were excluded from the analysis process. The data of the two groups were analyzed using multivariate analysis of variance and SPSS-24 software

2.2. Instrument

NEO Five-Factor Inventory-3 (NEO-FFI-3): This questionnaire was created by Costa and McCree (1989). It has 60 items and measures five personality traits of openness to

experience, conscientiousness, extroversion, agreeableness and neuroticism. 12 items are provided to measure each characteristic. It is scored from completely disagree (0) to completely successful (4) and a higher score indicates having more of each feature. McCrae & Costa (2007) confirmed the factor structure of the scale and reported internal consistency of its components above 0.80. Haqshenas (1999) confirmed the factor structure of this scale in Iran and reported its internal consistency from 0.77 to 0.86.

Symptom Checklist-90-R (SCL-90-R): This questionnaire was developed by Derogatis & Unger (2010). The SCL-90-R is a list of 90 different psychopathological symptoms and its scores vary between 0 and 4 according to symptom severity during the last week by the time of assessment. It consists of 9 different subscales, corresponding to 9 different categories of psychopathology. The principal symptom dimensions are labeled Somatization (SOM), Obsessive-Compulsive (OBS), Interpersonal Sensitivity (INT), Depression (DEP), Anxiety (ANX), Hostility (HOS), Phobic Anxiety (PHOB), Paranoid Ideation (PAR), and Psychoticism (PSY). The factor structure of this scale has been confirmed in the study of Derogatis & Unger (2010). The internal consistency of its subscales is reported to be above 0.80. Anisi et al. (2016) confirmed the factorial validity of the scale in Iran and showed that the internal consistency showed a high Cronbach's alpha coefficient both for the subscales of the test (0.75 to 0.92) and for the overall index of symptoms (0.98). The correlation coefficients of the subscales of the SCL-90-R test with the subscales of the MMPI questionnaire were statistically significant.

3. Results

The mean and standard deviation of the age of female students were 24.15 and 3.89 and male students were 23.75 and 4.11. 75% of female students were in bachelor's degree,

21% in master's degree and 4% in doctoral degree. Among male students, 78% were in bachelor's degree, 19% in master's degree and 3% in doctoral degree. The mean and standard deviation of the research variables are presented in [Table 1](#).

Table 1

The mean and standard deviation of the research variables

Variables	M±SD	M±SD
	Girl students	Male students
Openness to experience	26.18±3.95	41.11±3.09
Conscientiousness	31.27±2.39	27.92±3.46
Extroversion	46.37±3.94	32.44±3.10
Agreeableness	34.71±3.98	25.87±3.62
Neuroticism	18.63±3.20	19.52±3.71
Somatization	16.57±0.96	11.83±0.17
Obsessive-Compulsive	11.56±0.61	12.76±0.43
Interpersonal Sensitivity	16.14±0.78	15.44±0.93
Depression	17.22±0.64	13.37±0.76
Anxiety	18.85±0.67	15.17±0.73
Hostility	12.44±0.83	16.84±0.67
Phobic Anxiety	16.13±0.89	15.08±0.63
Paranoid Ideation	9.77±0.67	10.23±0.55
Psychoticism	6.37±0.88	7.31±0.74

As can be seen in [Table 1](#), in the personality traits of conscientiousness, extroversion and agreeableness, the score of female students is higher than male students. But the score of male students is higher than girls in the personality trait of openness to experience and neuroticism. Among the psychological symptoms, somatization,

interpersonal sensitivity, depression, anxiety and phobic anxiety among female students and obsessive-compulsive, hostility, paranoid ideation and psychoticism among male students is higher. The results of the Kolmogorov-Smirnov test to check the normality of the data distribution are presented in [Table 2](#).

Table 2
Kolmogorov-Smirnov test to check the normality of the data distribution

Variables	F	P
Openness to experience	0.51	0.44
Conscientiousness	0.67	0.38
Extroversion	0.23	0.84
Agreeableness	0.52	0.44
Neuroticism	0.35	0.72
Somatization	0.17	0.87
Obsessive-Compulsive	0.56	0.43
Interpersonal Sensitivity	0.22	0.78
Depression	0.44	0.61
Anxiety	0.28	0.74
Hostility	0.40	0.63
Phobic Anxiety	0.28	0.74
Paranoid Ideation	0.23	0.77
Psychoticism	0.35	0.68

As seen in [Table 2](#), the non-significance of the Kolmogorov-Smirnov statistic shows that the data distribution is normal. The results of

Levene's test to check the homogeneity of variances are presented in [Table 3](#).

Table 3
Checking the homogeneity of variances

Variables	F	df ₁	df ₂	P
Openness to experience	1.18	1	498	0.67
Conscientiousness	1.24	1	498	0.66
Extroversion	1.09	1	498	0.73
Agreeableness	1.36	1	498	0.62
Neuroticism	1.46	1	498	0.57
Somatization	1.34	1	498	0.59
Obsessive-Compulsive	1.75	1	498	0.42
Interpersonal Sensitivity	1.33	1	498	0.63
Depression	1.47	1	498	0.57
Anxiety	1.52	1	498	0.54
Hostility	1.75	1	498	0.42
Phobic Anxiety	1.23	1	498	0.66
Paranoid Ideation	1.15	1	498	0.69
Psychoticism	1.47	1	498	0.57

The non-significance of Levene's test shows that the assumption of homogeneity of

variances is valid. The results of multivariate analysis of variance are presented in [Table 4](#).

Table 4

The results of multivariate analysis of variance

Variables	Sum of squares	Df	Mean squares	F	P
Openness to experience	895.34	1	895.34	7.21	0.001
Conscientiousness	767.22	1	767.22	6.83	0.001
Extroversion	864.57	1	864.57	7.11	0.001
Agreeableness	871.17	1	871.17	7.01	0.001
Neuroticism	172.82	1	633.82	3.76	0.06
Somatization	1125.11	1	1125.11	4.32	0.001
Obsessive-Compulsive	873.41	1	1074.41	1.19	0.11
Interpersonal Sensitivity	938.55	1	1168.55	2.01	0.09
Depression	1243.74	1	937.74	5.67	0.001
Anxiety	1251.67	1	1245.67	4.88	0.001
Hostility	1162.09	1	1162.09	4.38	0.001
Phobic Anxiety	831.55	1	1086.48	1.12	0.13
Paranoid Ideation	413.27	1	1249.27	1.64	0.27
Psychoticism	219.73	1	1069.73	0.95	0.42

As can be seen in [Table 4](#), the personality traits of openness to experience, agreeableness, conscientiousness and extroversion and the psychological symptoms of depression, anxiety, somatization and hostility have a significant difference between the two groups.

4. Discussion

The present study was conducted with the aim of comparing male and female students in personality traits and psychological symptoms. The findings showed that the score of male students is significantly higher than girls in the personality trait of openness

to experience. In the personality traits of conscientiousness, extroversion and agreeableness, the score of female students was significantly higher than male students. Among the psychological symptoms, somatization, depression and anxiety among female students and hostility among male students were significantly higher.

This finding is consistent with previous researches ([Lengua & Stormshak, 2000](#); [Otten et al., 2021](#); [Priadi et al., 2023](#); [Rubinstein, 2005](#); [Wichman et al., 2011](#)). For example, in [Lengua & Stormshak \(2000\)](#), male gender predicted less depression but more antisocial problems and substance use,

while female gender predicted less antisocial problems and substance use. Also, [Otten et al. \(2021\)](#) in a systematic review reported higher prevalence rates of internalizing disorders for women and more externalizing disorders for men.

Regarding the higher score of openness to experience in male students and higher extroversion, conscientiousness and agreeableness in female students, the reason can be attributed to the biological and educational characteristics of girls and boys. First, one of the reasons can be the difference in gender hormones. Testosterone hormone in men is related to aggressive ([Batrinos, 2012](#)) and sensation-seeking ([Campbell et al., 2010](#)) behaviors. In contrast, progesterone and estrogen hormones in women are more related to behaviors related to caring for others ([Toffoletto et al., 2014](#)). Second, the environment and way of dealing with girls and boys are different. Boys are more inclined towards curious and exploratory behaviors. In contrast, girls are more driven to interpersonal and communication behaviors. Boys are expected to be bold and not timid, but girls are expected to be more supportive and caring of others ([Doey et al., 2014](#)). This causes women to ask for support and help from others more than men when they face challenges. Men try to solve their problems by themselves. This difference in the educational environments of girls and boys can be associated with brain changes and activation of different brain areas in them. For example, areas related to aggression and spatial reasoning in the right hemisphere are more active in men, but brain areas related to language and empathy are

more active in women ([Christov-Moore et al., 2014](#); [Zaidi, 2010](#)).

Regarding the differences observed in the field of psychological symptoms, it is always reported that the rate of diseases such as depression and anxiety in women is several times higher than in men, but behavioral problems are more common in boys than in girls ([Otten et al., 2021](#)). The same biological and educational differences stated for the previous finding can play a role in these differences. Hormonal changes in women due to menstruation and pregnancy have been clearly confirmed ([Farage et al., 2009](#)). The relationship between testosterone hormone secretion and aggression is also well confirmed ([Batrinos, 2012](#)). On the other hand, women's coping style is more emotion-oriented and men's coping style is more problem-oriented ([Howerton & Van Gundy, 2009](#)). This difference in coping styles can cause women to experience more mood changes in dealing with life problems, but men to change their behavior more.

This research also had limitations. Some of these limitations are the use of self-report tools, the convenience sampling method, and cross-sectional nature of the research. It is suggested that future researches can clarify the role of mediating variables in this relationship by using causal models. It is also suggested to relevant institutions and organizations to take advantage of these gender differences in planning and directing people to appropriate career, sports, academic, artistic and social fields.

5. Conclusion

The findings of this research showed that men and women have differences in terms of personality traits and psychological symptoms and it is important to pay attention to these differences in planning in different areas of life.

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Conflicts of Interest

The author of this article have no conflict of interest with each other.

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Research Paper: The Effectiveness of the Life Skills Training on the Personal and Social Happiness of Adolescents



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Abstract

Increasing the happiness of teenagers can provide a proper upbringing for the future generation of the country, and one of the ways to achieve this goal is to teach them life skills. This research was conducted with the aim of the effectiveness of the life skills training on the personal and social happiness of adolescents. This research is a quasi-experimental type with a pre-test-post-test design and a control group. 40 students from the second secondary level of Zanzan city were selected by convenience sampling method and were randomly divided into two experimental ($n = 20$) and control groups ($n = 20$), and the Oxford Happiness Questionnaire (OHQ) and the Social Happiness Questionnaire (SHQ) were administered to them as a pre-test and post-test. The life skills training course were conducted for eight sessions (180 minutes each session) on the experimental group, but no intervention was done on the control group during this period. Data were analyzed using covariance analysis and SPSS-23 software. The finding showed that the life skills training course has led to an increase in the personal and social happiness of adolescents ($P < 0.001$). According to these findings, it can be concluded that life skills training as one of the important trainings can be effective in increasing the happiness of teenagers and determine the dynamics of the future generation of the country.

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1. Introduction

Adolescents as future builders of society need serious attention. On the one hand, they are in an age period where they experience important physical and mental changes. Maturity and the resulting changes lead to important changes in the adolescent's body and thoughts (Zuhri, 2023). While their body image is affected by maturity (Voelker et al., 2015), they also experience certain emotional and intellectual changes (Yurgelun-Todd, 2007). A large percentage of adolescents experience aggression and awakening of sexual desires due to the secretion of sex hormones (Arain, 2013). Therefore, they are one of the groups that experience high rates of depression (Shorey et al., 2022) and anger (Kerr & Schneider, 2008). On the other hand, adolescents in this period follow cognitive changes such as criticism (Gilbert & Irons, 2009) and search for a stable identity (De Lise et al., 2023), which increases the amount of their intellectual concerns compared to before.

Therefore, in order for adolescents to become a dynamic generation in society in the future, it is necessary to increase their individual and social happiness. Happiness as a positive emotion refers to a person's inner positive feeling (Li et al., 2022), which can lead to increased life satisfaction (Handa et al., 2023), hope (Torales et al., 2023) and optimism (Blasco-Belled et al., 2022). Research shows that happy adolescents perform better in school (Kennes et al., 2023) and family (Guo et al., 2023) and their life satisfaction is higher (Büyükçolpan & Ozdemir, 2023).

One of the most important methods that can be used to answer the intellectual concerns of adolescents and increase their happiness is to teach them life skills (Baghaei-Moghadam, 2012; Mohamed & Shehata, 2023; Talebi Amrei & Farahani, 2016). Life skills are a set of skills that help people to act correctly in dealing with different life challenges. Life skills include different types of skills, some of the most important and common ones are: self-knowledge and self-awareness skills, problem-solving and decision-making skills, stress and emotion management skills, assertiveness skills, goal setting skills, critical and creative thinking skills and interpersonal and social skills (Camiré, 2023). In fact, the training of life skills is done with the aim that a person can perform better in his daily life by learning them. Research findings have also pointed to the positive effects of life skills training and have shown that it can improve quality of life (Javadi et al., 2013), life satisfaction (Wheeler et al., 2007), reduce stress (Yankey & Biswas, 2012), anger management (Poursalman & Farid 2020), increase resilience (Jenaabadi et al., 2015), hope (Safaralizadeh et al., 2022), optimism (Tabassum et al., 2020), psychological well-being (Sodani et al., 2019) and happiness (Baghaei-Moghadam, 2012; Mohamed & Shehata, 2023; Sadati et al., 2018; Talebi Amrei & Farahani, 2016).

According to the stated contents, this research also intends to examine the effectiveness of life skills training on the personal and social happiness of adolescents.

2. Methods

2.1. Statistical Population, Sample, and Sampling Method

This research is a semi-experimental type with a pre-test-post-test design and a control group. The research population was the students of the second secondary level of Zanjan city in the academic year 2021-2022 that forty of them were selected by convenience sampling method and were randomly divided into two experimental ($n = 20$) and control ($n = 20$) groups. Written consent was obtained from the students and their parents to participate in the research, and the students did not have any medical or psychiatric records. All students in the experimental group participated in eight training sessions. Data were analyzed using covariance analysis and SPSS-23 software.

2.2. Instrument

Oxford Happiness Questionnaire (OHQ): This questionnaire was developed by [Argyle et al. \(1989\)](#). OHQ has 29 items and is scored on a 4-point Likert scale from A (0) to D (3). A higher score indicates greater happiness. The validity structure of this scale was confirmed in [Argyle et al. \(1989\)](#) and its internal consistency was 0.90. [Mirzaee et al. \(2021\)](#) investigated the validity and reliability of this scale in Iran. The results showed that the Persian version of the Oxford Happiness Questionnaire has a 4-factor structure (life satisfaction, well-being, sociability, control and self-efficacy). Together, these four factors explained 41% of the variance of happiness. The surface validity of the test was also confirmed. The convergent validity results showed that all the sub-components and the total score of the

OHQ, the Life Satisfaction Questionnaire and the NEO Personality Inventory had positive and significant correlations. Divergent validity was also confirmed through a significant negative correlation between the OHQ and the Neo Personality Inventory (neuroticism subscale). The reliability results of the questionnaire with the test-retest method during two weeks (0.79-0.82) and the internal consistency with the Cronbach's alpha method (0.84) showed the reliability and good internal consistency of this tool.

Social Happiness Questionnaire (SHQ): This questionnaire was created by [Tamizifar & Azizimehr \(2017\)](#) and has 12 items and is scored on a 5-point Likert scale from very low (1) to very high (5). A better score indicates greater social happiness. In the research of [Tamizifar & Azizimehr \(2017\)](#) using the opinions of several professors and experts, the surface validity of this scale was confirmed and its reliability was obtained using Cronbach's alpha method of 0.90.

Life skills training: This course included the eight skills of self-awareness, stress management, assertiveness, decision-making and problem-solving, goal setting, critical thinking, creative thinking, and communication skills, which were conducted weekly and in groups during 8 sessions (180 minutes each session). In all sessions were done role playing and presentation of home works. Previously, this course has been used with slight differences in other studies ([Botvin & Griffin, 2004](#); [Mahmoodi et al., 2013](#); [Poursalman & Farid, 2020](#)). Table 1 shows the sessions and the content of each session.

Table 1

Life skills training sessions

Sessions	Content of each session
First session	self-awareness (awareness of physical and mental dimensions)
Second session	stress management (learning short-term and long-term stress management techniques such as relaxation)
Third session	Assertiveness (learning the skill of saying no and unhealthy forms of expressing anger)
Fourth session	decision-making and problem-solving (learning problem solving steps)
Fifth session	goal setting (evaluation of goals according to obstacles and limitations)
Sixth session	critical thinking (getting to know the definition of critical thinking and its components)
Seventh session	creative thinking (getting to know the components of creative thinking)
Eighth session	communication skills (familiarity with the principles of interpersonal communication)

3. Results

All students were boys. In the experimental group, there were 4 students in the 10th grade, 11 students in the 11th grade, and 4 students in the 12th grade. In the control group, there were 7 students in the 10th grade, 8 students in the 12th grade, and 5

students in the 12th grade. The mean and standard deviation of the age of the experimental group is 16.87 and 1.09, and the mean age of the control group is 17.38 and 1.22. The mean and standard deviation of the personal and social happiness are presented in [Table 2](#) for the two experimental and control groups.

Table 2

The mean and standard deviation of the personal and social happiness for the two experimental and control groups

		Personal happiness	Social happiness
Experimental group	Pre-test	24.81±2.47	21.55±2.15
	Post-test	55.71±1.73	42.01±2.43
Control group	Pre-test	22.10±1.44	18.47±2.84
	Post-test	21.98±1.38	17.62±1.52

As can be seen in [Table 2](#), the mean of personal and social happiness increased in the experimental group in post-test, but decreased in the control group. The non-significance of the Kolmogorov-Smirnov test

in individual (pre-test: $F = 0.23$, $P = 1.12$; post-test: $F = 0.18$, $P = 1.33$) and social (pre-test: $F = 0.42$, $P = 0.76$; post-test: $F = 0.54$, $P = 0.67$) happiness variables shows that the data distribution is normal. The results of the

Levene's test for homogeneity of variances are presented in Table 3.

Table 3

The results of Levene's test to check the homogeneity of variances

Variables	F	df ₁	df ₂	p
Personal happiness	1.48	1	38	0.17
Social happiness	1.07	1	38	0.26

The non-significance of Levene's test shows that the assumption of homogeneity of

variances is valid. The results of covariance analysis are presented in Table 4.

Table 4

Results of covariance analysis of life skills training on the personal and social happiness

variable	Source of changes	Sum of squares	df	Mean squares	F	P
Personal happiness	Pre-test	824.66	1	824.66	25.02	0.001
	group	162.53	1	162.53	14.70	0.001
	error	80.98	38	80.98		
	total	1068.17	40			
Social happiness	Pre-test	619.42	1	619.42	22.48	0.001
	group	301.76	1	301.76	13.69	0.001
	error	135.90	38	135.90		
	total	1057.08	40			

As can be seen in Table 4, life skills training has been able to significantly affect individual and social happiness in the experimental group ($P < 0.001$). According to Table 3, it can be said that the life skills training course has been able to significantly increase the individual and social happiness of the experimental group compared to the control group.

4. Discussion

This research was conducted with the aim of investigating the effectiveness of the life skills training course on the personal and

social happiness of adolescents. The findings showed that the life skills training course led to an increase in the happiness of the experimental group compared to the control group. This finding is consistent with previous researches (Baghaei-Moghadam, 2012; Mohamed & Shehata, 2023; Sadati et al., 2018; Talebi Amrei & Farahani, 2016).

In the explanation of the obtained findings, it can be said that the life skills training course consists of different and varied skills, mastering each of them can provide the basis for a better and easier life (Javadi et al., 2013; Wheeler et al., 2007). As

a result, when a person's overall quality of life improves, he will experience more happiness both personally and socially. On the other hand, the ability to manage stress, negative emotions such as anger, and learning relaxation techniques helps a person to maintain positive emotions such as happiness (Bostani et al., 2020). In this training course, adolescents learned how to show appropriate reactions in different areas, both through training and through group discussion and role playing. They learned to recognize most of their appearance, identify their goals, know problem solving methods, learned the right ways of thinking such as critical thinking and creative thinking, learned how to communicate with others and found out how to manage their stress and anger. All these skills will help the adolescent become more emotionally efficient and effective and his self-esteem will increase. As a result, give him a pleasant feeling of this efficiency. It has already been shown that life skills training causes people to increase their self-efficacy (Rezayat & Nayeri, 2013) and experience higher self-esteem (Kazemi et al., 2014).

Although this research was associated with useful results, there were also limitations in it. The people participating in the research were all male students, and therefore, examining female students can help to provide more complete findings in this field. The sampling method was convenience, and therefore all members of the society did not have the same chance to enter the research sample. Finally, considering the usefulness of the life skills training course in increasing the happiness of

students, it is suggested that different organizations, especially education, pay special attention to the life skills training course in schools.

5. Conclusion

The findings showed that teaching life skills can lead to an increase in happiness in adolescents. Considering the importance of adolescence and the fact that adolescents are the future builders of society, it is suggested to pay special attention to the discussion of life skills education in schools.

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Conflicts of Interest

The researcher of this study do not has any conflict of interest with each other

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Research Paper: The Relationship between Depression with Cognitive Fusion and Defense Mechanisms



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Abstract

Depression is one of the most common mental illnesses in the world, so it is important to know it as well as possible to design interventions to reduce it in society. The present study was conducted with the aim of investigating the relationship between depression with cognitive fusion and defense mechanisms. This research is descriptive-correlation type. The research population was the students of Kashan University in the academic year of 2023-2024, and 350 of them were selected by convenience sampling method. Research tools included Beck Depression Inventory-II (BDI-II), Cognitive Fusion Questionnaire (CFQ) and Defense Mechanisms Questionnaire-40 (DSQ-40). Data analysis was done using SPSS-26 software and Pearson correlation coefficient. The obtained findings showed that depression is positively correlated with cognitive fusion and immature and neurotic defense mechanisms ($P < 0.01$). But the relationship between depression and mature defense mechanisms such as humor and sublimation was negative and significant ($P < 0.01$). These findings show that depression is related to unhealthy thought processes such as cognitive fusion and immature and neurotic defense mechanisms, and therefore attention should be paid to this issue in the field of treatment.

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1. Introduction

Depression is one of the most common mental disorders in the world and is known as the common cold of mental disorders (Kandhakatla et al., 2018). Cai et al. (2023) reported the prevalence of depression as 35.1% in a systematic review and its rate is increasing in young people and every year (Thapar et al., 2022). Depression includes symptoms such as low mood, lack of pleasure, lack of motivation, self-blame, negative thoughts, sleep problems, appetite and weight, and in severe cases, suicidal thoughts (American Psychiatric Association, 2023). The treatment costs of depression are very high (König, 2020) and it causes severe functional decline in affected patients (Kikuchi et al., 2013). One of the fields that play an important role in depression is the cognitive field and the cognitive changes that these patients experience. Therefore, cognitive and cognitive behavioral therapies are proposed as the first line of treatment for depression (Lorenzo-Luaces et al., 2015; Mathiasen et al., 2022). Aaron Beck, as the founder of cognitive therapy and one of the main theorizers in the field of depression, identified negative automatic thoughts and numerous cognitive distortions in depressed patients and showed that these patients have negative thoughts about themselves, others and the future (Beck & Weishaar, 1989).

On the other hand, one of the other fields that emerge with the spread of this disorder is cognitive fusion. Cognitive fusion is a term that comes up especially in Acceptance and Commitment Therapy (Zare, 2017) and the meaning of cognitive fusion is that the person

is influenced by his thoughts as if they are completely real and causes the person's behavior and experience to dominate other sources of behavioral regulation and the person becomes less sensitive to the achievements that he gets (Gillanders et al., 2014). This new concept in the field of psychology was first proposed in relation to obsessive-compulsive disorder and then it was used in the context of other mental disorders. Research has shown that there is a relationship between depression and cognitive fusion (Cookson et al., 2020; Fernández Rodríguez et al., 2022; Noureen & Malik, 2021).

Another issue that has been discussed for a long time, especially in the field of psychoanalysis, is to pay attention to the quality of the defense mechanisms that people use. Defense mechanisms are intellectual and sometimes behavioral strategies that people use to reduce anxiety caused by desires, memories and events (Cramer, 2015). So far, hundreds of defense mechanisms have been proposed and various categories have been presented. But one of these categories is the division of defense mechanisms into mature, immature and neurotic mechanisms (Cramer, 2008; Vaillant, 1994). The less defense mechanisms distort reality, the more mature defense mechanisms are considered (Cramer, 2015). For example, denial and projection are among the most immature defense mechanisms, and humor and suppression are among the most mature defense mechanisms. Due to the fact that depression is very prevalent among different populations, especially among students (Ibrahim et al.,

2013), gaining better knowledge about it can provide the possibility of designing more beneficial interventions. Therefore, this research was conducted with the aim of investigating the relationship between depression with cognitive fusion and defense mechanisms.

2. Methods

2.1. Statistical Population, Sample, and Sampling Method

This research is applied in terms of purpose and is descriptive-correlation in terms of method. The research population was the students of Kashan University in the academic year of 2023-2024, and 350 of them were selected by convenience sampling method. First, the consent of the participants was obtained to participate in the research. Then, the questionnaires were administered face-to-face without first and last name and in groups in classes. Questionnaires that were incomplete were excluded from the analysis process. Data analysis was done using SPSS-26 software and Pearson correlation coefficient.

2.2. Instrument

Beck Depression Inventory-II (BDI-II) :BDI-II was developed by Beck et al. (1996). BDI-II is a type of self-report measure and can be completed in five to ten minutes. The inventory items consist of a total of 21 items related to different symptoms, which the subjects must answer on a four-point scale from zero to three. These substances are in areas such as sadness, pessimism, feelings of helplessness and failure, guilt, sleep disturbances, loss of appetite, self-loathing,

etc. Its scores range from a minimum of zero to a maximum of 63 (0 to 13: no or minimal depression, 14 to 19: mild depression, 20 to 28: moderate depression, and 29 to 63: severe depression). Beck et al. (1996) have confirmed the construct validity of this inventory and its internal consistency was reported to be 0.90 in the research of Dozois et al. (1998). Stefan-Dabson et al. (2007) examined the psychometric properties of this inventory in Iran and confirmed its validity and reliability (Cronbach's alpha = 0.87) and showed that it was reliably used to diagnose and measure the severity of depression before and after treatment.

Cognitive Fusion Questionnaire (CFQ): This questionnaire was created by Gillanders et al. (2014). It has 12 items and measures the two factors of cognitive fusion (items 3-8 and 10-12) and defusion (items 1, 2, 9). The scoring of this questionnaire is from never (1) to always (6) and a higher score indicates more cognitive fusion. In the study of Gillanders et al. (2014), its two-factor validity was confirmed and its internal consistency was 0.90. Zare (2014) investigated the psychometric characteristics of this questionnaire in Iran. Exploratory factor analysis led to the discovery of two subscales of cognitive fusion and disfusion. Item 13 was removed from the questionnaire due to having a factor load of less than 0.50 and the number of items was reduced from 13 to 12 items. In the confirmatory factor analysis stage, 9 questions were placed under the structure of cognitive fusion and 3 questions under the structure of cognitive dissonance. The internal consistency of the questionnaire was reported to be 0.76.

Defense Mechanisms Questionnaire-40 (DSQ-40): This questionnaire was created by Andrews et al., (1993). It has 40 items and includes three factors of immature, mature and neurotic defense mechanisms. A total of 20 defense mechanisms are placed in these three classes. The scoring method of this questionnaire is from completely disagree (1) to completely agree (9). A higher score indicates more use of that defense mechanism. Ruuttu et al. (2006) confirmed the factor structure of this scale and reported its internal consistency to be 0.90. Heydari Nesab & Shairi (2012) were investigated the psychometric properties of DSQ-40 in Iran

and were confirmed its three-factor structure. The internal consistency of the 20 defense mechanisms was also reported between 0.32 and 0.91.

3. Results

200 of the sample members were women and 150 were men. The mean of age of the sample members was 25.39 with a standard deviation of 3.46. 271 students were in bachelor's degree, 59 were in master's degree and 20 were in doctoral degree. The mean and standard deviation of the research variables are presented in Table 1.

Table 1
The mean and standard deviation of the research variable

Variables	Mean	Standard deviation
Depression	21.45	4.58
Cognitive fusion	38.11	5.06
Mature defense mechanisms	28.17	4.12
Immature defense mechanisms	22.31	3.40
Neurotic defense mechanisms	29.57	4.62

Kolmogorov-Smirnov test was used to check the normal distribution of the data. The non-significance of the Kolmogorov-Smirnov test (depression: $F = 0.48$, $P = 0.33$; cognitive fusion: $F = 0.62$, $P = 0.21$ and defense mechanisms: $F = 0.37$, $P = 0.28$) showed that the data distribution is normal. The correlation matrix of research variables is presented in Table 2.

Table 2

The correlation matrix of research variables

Variables	1	2	3	4	5
Depression	1				
Cognitive fusion	0.31**	1			
Mature defense mechanisms	-0.24**	-0.21**	1		
Immature defense mechanisms	0.27**	0.37**	-0.22**	1	
Neurotic defense mechanisms	0.33**	0.24**	-0.41**	0.46**	1

As can be seen in Table 4, the obtained findings showed that depression is positively correlated with cognitive fusion and immature and neurotic defense mechanisms ($P < 0.01$). But the relationship between depression and mature defense mechanisms was negative ($P < 0.01$).

4. Discussion

The present study was conducted with the aim of investigating the relationship between depression with cognitive fusion and defense mechanisms. Findings showed that depression is positively correlated with cognitive fusion and immature and neurotic defense mechanisms. But the relationship between depression and mature defense mechanisms was negative and significant.

This finding is in line with the research done in this field (Cookson et al., 2020; Fernández Rodríguez et al., 2022; Kwon & Lemon, 2000; Mullen et al., 1999; Noureen & Malik, 2021). Regarding the obtained findings, it can be said that one of the metacognitive symptoms of depressed patients is cognitive fusion (Noureen &

Malik, 2021). The depressed person does not consider himself as an independent human being who has developed a state of depression (cognitive dissonance), but rather he thinks that he is depressed and believes that "I am depressed". His identity is mixed with his thoughts and he cannot experience an identity independent of his thoughts and feelings. Therefore, in Acceptance and Commitment Therapy, it is tried to reduce the fusion of the patient with his thoughts with exercises based on mindfulness (Bolderston, 2013). On the other hand, patients with depression may show a range of defense mechanisms depending on the severity of their illness. But some mature defense mechanisms such as humor, sublimation, and superstition are seen in people with high mental health (Bowins, 2004). Therefore, it is not surprising that depression is related to immature and neurotic defense mechanisms. In fact, the use of denial, projection, devolution, displacement and rationalization are common defenses in depressed patients (Kwon & Lemon, 2000). In more severe cases of depression where psychotic streaks are observed can also be seen defense

mechanisms of autistic fantasy and omnipotence.

This research was of the correlation type and does not show the causal relationship between the variables. The sampling method was accessible and the research population was students. The measurement tools were self-report questionnaires. All these things can create limitations for the obtained results.

Considering the increasing state of depression, especially in young people, it is recommended that therapists, when dealing with depressed patients, try to reduce their fusion with their thoughts, as well as reduce the use of immature and neurotic defense mechanisms and increase mature defense mechanisms in them.

5. Conclusion

The findings obtained in the present study showed a positive relationship between depression and cognitive fusion and immature and neurotic defense mechanisms and a negative relationship with mature defense mechanisms. It is recommended to use these findings in therapeutic fields.

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Conflicts of Interest

The author of this article reports no conflict of interest.

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Research Paper: The Relationship between Social Capital with Environmental Protection Behaviors



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Abstract

Protecting the environment is one of the ways that the people of every society take to support the next generations. This research was conducted with the aim of investigating the relationship between social capital with environmental protection behaviors. This research is correlational. Among the students of Hamedan University in the academic year of 2020-2021, 150 of them were selected by convenience sampling method and completed the research questionnaires including Social Capital Questionnaire (SCQ) and Environmental Behavior Questionnaire (EBQ). Data were analyzed using Pearson's correlation coefficient and SPSS-22 software. The findings showed that there is a positive and significant relationship between social capital and its components with environmental protection behaviors ($P < 0.01$). According to these findings, it can be concluded that by strengthening social capital, it can be expected that pro-environmental behaviors will increase and better conditions will be provided for the future generations of the country.

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1. Introduction

Social capital is the effective functioning of social groups through interpersonal relationships, sense of identity, perception, norms and customer values. This capital will eventually lead to trust, coordination and constructive interaction against destructive conflict (Mishchuk et al., 2023). Coleman (1988; cited by Colclough & Sitaraman, 2005) believes that social capital is a part of the social structure that allows the individual to achieve his interests. If physical capital is completely tangible and is cast in visible material form and if human capital is less tangible and is present in the skills and knowledge acquired by the individual, then social capital is far more intangible because it is in the relationships that are established between individuals. Just as physical capital and human capital facilitate productive activity, social capital does the same (Field, 2016).

One of the important social actions of every person in the society is his role to support the life of future generations. When the values of a society are oriented in such a way that people think about preserving environmental resources, this will make the conditions of the country suitable in the present and future, and all people, both current and future generations of the country, will benefit from the capacities of the environment (Emina, 2021).

One of the things that can increase the commitment of people to preserve the environment is the social capital prevailing in the society (Macias & Williams, 2016). The relationships and trust that the people of the

society have in each other can help all people feel connected with each other and take steps towards preserving the environment in which they live by forming an alliance between them. On the other hand, if the social capital of society decreases, people will no longer see the need to support each other, and values based on consumption will increasingly replace environmental protection (Yildirim et al., 2021).

In this regard, researchers believe that social capital levels have a significant impact on environmental behaviors and environmental protection, and people's environmental behaviors and their desire to preserve the environment depend on their personality, status and social capacities in society. Studies have also shown that the higher the social capital in a society, the higher the desire to protect the environment (Savari & Khaleghi, 2023; Xu et al., 2024). Therefore, paying attention to social capital is one of the important axes in preserving the environment. The current research also seeks to investigate the relationship between social capital and environmental protection behaviors.

2. Methods

2.1. Statistical Population, Sample, and Sampling Method

This research is correlational. Among the students of Hamedan University in the academic year of 2020-2021, 150 of them were selected by convenience sampling method and completed the research questionnaires including Social Capital Questionnaire (SCQ) and Environmental Behavior Questionnaire (EBQ). Incomplete questionnaires were excluded from the data

analysis process. Data were analyzed using Pearson's correlation coefficient and SPSS-22 software.

2.2. Instrument

Social Capital Questionnaire (SCQ): Social Capital Questionnaire created by **Onyx and Bullen (2000)** and has 36 items. It classified into eight dimensions, encompassing value of life (3 items), tolerance of diversity (3 items), neighborhood connections (5 items), family and friends connections (3 items), work connections (4 items), community participation (7 items), feelings of trust and safety (5 items) and proactivity (6 items). All 36 SCQ items were provided with a 4-point Likert-type scale ranging from 1 (no, not much or no, not at all) to 4 (yes, definitely or yes, frequently). Its validity and reliability have been confirmed in the research of **Onyx and Bullen (2000)**. **Yari et al (2014)** investigated its validity and reliability in Iran. Exploratory Factor Analysis (EFA) was conducted to evaluate factor structure of the Persian SCQ, which showed a moderate replicability, validity, and reliability (Cronbach alpha= .79) to those found in previous studies. Twelve factors extracted with eight values greater than 1 which altogether accounted for 76.23% of the total variance. Applying Cattell's scree test, it was indicated that between seven and eight factor extracted. The correlations between factors

were detected in the low (at the lowest 0.002) to modest (at the highest 0.614) range.

Environmental Behavior Questionnaire (EBQ): This questionnaire was developed by **Kamal et al. (2021)**. It has 32 items and is scored in the form of five options from 1 (always) to 5 (never). Items 1 to 8 and 25 are classified in the field of energy consumption such as electricity and gas, Items 9 to 12 are water consumption, Items 13 are wastewater production, Items 14 to 24, 29, 30 and 32 are classified as waste and recycling, and Items 26 to 28 are classified as air pollution. In the study of **Kamal et al. (2021)** the results showed that the questionnaire with 36 items had CVI and CVR of 0.896 and 0.726, respectively, and 4 items should be excluded from the questionnaire due to non-compliance with content validity indices. The questionnaire exhibited high internal consistency and hence was acceptable owing to the Cronbach's alpha coefficient of 0.85.

3. Results

The mean and standard deviation of the age of the students were 21.17 and 3.06, respectively. 91 were female students and 59 were male students. The mean and standard deviation of the social capital and environmental behavior are presented in **Table 1**.

Table 1

The mean and standard deviation of social capital and environmental behavior

Variables	subscale	Mean	Standard deviation
Social capital	value of life	4.81	1.82
	tolerance of diversity	5.36	1.46
	neighborhood connections	3.57	1.37
	family and friends connections	8.74	2.92
	work connections	6.32	1.44
	community participation	11.68	2.17
	feelings of trust and safety	7.96	1.34
	proactivity	10.08	2.69
	total score of social capital	65.87	3.50
Environmental behavior		81.36	5.27

The Kolmogorov-Smirnov test was not significant to check the data distribution (social capital: $F = 0.11$, $P = 0.47$; environmental behavior: $F = 0.84$, $P = 0.20$), which indicates

that the data have a normal distribution. The correlation matrix of the relationship between social capital and environmental behavior is presented in [Table 2](#).

Table 2

The correlation matrix of the relationship between social capital and environmental Behavior

Variables	1	2	3	4	5	6	7	8	9	10
Value of life	1									
Tolerance of diversity	0.53**	1								
Neighborhood connections	0.67**	0.43**	1							
Family and friends connections	0.50**	0.35**	0.30**	1						
Work connections	0.43**	0.41**	0.44**	0.60**	1					
Community participation	0.61**	0.54**	0.59**	0.54**	0.42**	1				
Feelings of trust and safety	0.47**	0.32**	0.41**	0.56**	0.50**	0.31**	1			
Proactivity	0.59**	0.36**	0.63**	0.40**	0.37**	0.29**	0.47**	1		
Total score of social capital	0.48**	0.42**	0.36**	0.64**	0.60**	0.37**	0.54**	0.46**	1	
Environmental Behavior	0.37**	0.34**	0.40**	0.41**	0.48**	0.33**	0.51**	0.30**	0.39**	1

As can be seen in Table 2, there is a positive and significant relationship between social capital and its components with environmental behavior ($P < 0.01$).

4. Discussion

This research was conducted with the aim of investigating the relationship between environmental protection behavior and social capital. The findings showed that there is a positive and significant relationship between social capital and its components with environmental protection behavior.

This finding is in line with the research done in this field (Savari & Khaleghi, 2023; Xu et al., 2024; Yildirim et al., 2021). For example, Savari & Khaleghi (2023) showed that the components of social capital (social trust, social networks and social engagement) can facilitate forest conservation measures and were able to explain 46.3 % of its variance. In addition, the findings of their study indicated that these components affect protective measures through a specific mechanism, which means that they can affect protective behaviors by influencing the cognition of policies and increasing the awareness of rural communities. Xu et al. (2024) showed that social network expansion has a significantly positive effect on all three types of environmentally friendly behaviors.

When the members of the society have trusting relationships with each other, then with the formation of unity among them, they take steps towards improving their society. They support the resources available in their country and will use those resources properly. It has been previously shown that social commitment can be associated with

greater environmental protection (Michel-Guillou & Moser, 2006). In fact, people are motivated to consider the environment as their own and preserve it instead of destroying resources. In this research, it was also observed that components such as bonding with colleagues, neighbors, family and friends, and a sense of security, trust, and participation in society have a positive and meaningful relationship with environmental protection behaviors.

This research had some limitations. The research method was correlation type, which is not able to show the cause and effect relationship between the research variables. The sampling method was accessible, which did not give all students the opportunity to participate in the research sample. In general, according to the findings obtained and according to the current conditions of our country, it is suggested that the authorities should think about strengthening the social capital among the members of the society in order to provide environment protection for the future generations of the country.

5. Conclusion

The findings of the research showed that there is a positive and significant relationship between social capital and its scales with pro-environmental behaviors, and by strengthening social capital in society, it can be expected that people will better use the resources and capacities of the environment.

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Conflicts of Interest

No conflict of interest has been reported.

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