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Effect of assertiveness program on the drug use tendency, mental health, and quality of life in clinical students of Shahrekord University of Medical Sciences

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Abstract:

BACKGROUND: Students on campus are exposed to drug abuse and mental health disorders due to various challenges and motivating factors. This issue requires attention to interventions based on coping skills training. The present study was conducted with the aim to investigate the effect of an assertiveness program on the drug use tendency, mental health, and quality of life in clinical students of Shahrekord University of Medical Sciences in 2020.

MATERIALS AND METHODS: This is a quasi-experimental study. Seventy clinical students (nursing, midwifery, and intern students) attending Ayatollah Kashani and Hajar teaching hospitals of Shahrekord were included into the study and randomly assigned into an intervention group and a control group. The assertiveness training program was implemented for eight 1-h sessions (one session per week for 2 months) for the intervention group, while the control group received no programs. Both study groups completed drug tendency questionnaire, depression, anxiety and stress scale, and quality of life questionnaire in pretest, posttest, and 2-month follow-up. The data were analyzed using SPSS software (v22), analysis of variance repeated measures, and *t*-test.

RESULTS: The mean scores of drug use tendency ($P = 0.26$), stress ($P = 0.31$), anxiety ($P = 0.29$), depression ($P = 0.43$), and quality of life ($P = 0.33$) showed no statistically significant difference between the intervention and control groups in the pretest, but the scores of the drug use tendency, stress, anxiety, and depression were statistically lower and the score of quality of life was statistically higher than that of the control group in the posttest and 2-month follow-up ($P < 0.05$).

CONCLUSION: The findings of the study showed that assertiveness skill training as a preventive program can reduce the students' tendency to addiction and improve their mental health and quality of life. Considering the effectiveness of the program, planners and policymakers can use it to plan for reducing the youth tendency to drugs.

Keywords:

Assertiveness program, clinical students, drug use tendency, mental health, quality of life, training program

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Introduction

Drug addiction or abuse is considered a multidimensional and dangerous phenomenon and one of the most important health and socioeconomic challenges

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in many countries. Over the last three decades, the world has been confronted with shocking statistics on the prevalence of drug use both at the level of society in general and among adolescents and youth in particular.^[1] Worldwide, about 185 million people are currently using drugs.^[2]

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Although the upward trend of drug use in developed countries has decreased to some extent and has now shown a downward trend, drug abuse in Iran is common, especially among adolescents; and despite the decrease in the age of addiction, its frequency is growing due to geographical location and proximity to Afghanistan and Pakistan known as the Golden Crescent and the young population structure.^[2,3] According to the latest reports by the Head of the Center for Drug Abuse Research, the number of drug users in Iran is estimated to be between 1.2 million and 1.8 million per day, of whom about 16% are under 19 years old and 28% of them become addicted when they are between 20 and 24 years old.^[4] Today, one of the most important concerns and worries of families is the young people's addiction and tendency to drug use.^[5,6] Substance abuse prevention means taking measures that reduce the incidence of addiction. In this regard, the life skill training program is a preventive and promotional program to change and correct people's tendency toward substance abuse.^[7-9] Among factors affecting the drug use tendency are the unfamiliarity of young people with assertiveness skills, decision-making skills, coping with anxiety, lack of emotion control, expulsion from school and academic failure, lack of attention of family members to sensitivities during puberty, lifestyle changes, ease of preparation and access to drugs, and depression and anxiety in a person.^[10-12] Among the life skills that can affect a person's attitude and tendency to drug use is the assertiveness skill and assertive behavior.^[13,14]

Assertiveness training to strengthen the "saying no" skill is a systematic interventional method in which the students are taught the proper social behaviors to express themselves, express feelings, attitudes, wishes, points of view, and interests so that they can express their ideas, beliefs, feelings, and emotions easily and without fear and worry.^[15,16] Today, quality of life is also one of the main concerns of policymakers and public health professionals and is used as an indicator to measure health status in various studies.^[17,18] According to the World Health Organization, quality of life is a multidimensional concept, and it means the perception of each person from life, values, objectives, standards, and individual interests, and it does not mean the absence of disease. Factors affecting each person's personal perception of feeling good include feelings being secure and safe, emotional conflicts, personal beliefs, and the degree of tolerance for failure.^[17,19]

As different types of psychosocial damage are increasingly growing in all societies in a worrying way, and mental disorder, addiction, antisocial behaviors, delinquency, and sexual promiscuity, especially in the young generation, have a rising trend and caused severe socioeconomic and moral damage to the body of societies, and considering that several research studies

have shown the association between the shortage of social skills and the incidence of high-risk behaviors, mental and behavioral disorders, and noncompromise in interpersonal relationships, the young people are thus required to receive the needed training. This study was designed to investigate the effect of an assertiveness program on the tendency to drug use and mental health in clinical students of Shahrekord University of Medical Sciences to teach one of the required social skills, i.e., "saying no" to risky suggestions to youth.

The specialists and experts are hoped to take a step toward boosting the mental, physical, and social health of students based on the results of this study and equip them with preventive behaviors.

Materials and Methods

Study design and setting

This is a quasi-experimental study.

Study participants and sampling

The research sample was selected using a simple random sampling method consisting of 70 clinical students (nursing, midwifery, and intern students attending Ayatollah Kashani and Hajar teaching hospitals of Shahrekord) who were then randomly assigned into an intervention group and a control group. The sample size was calculated using the following sample size formula:

$$n = \left(\frac{t_{n-1, \alpha/2} + t_{n-1, \beta}}{d} \right)^2 \sigma^2$$

Data collection tool and technique

Data collection tools include Addiction and Drug Tendency Questionnaire, and the Standardized Depression, Anxiety, and Stress Scale-21 Items (DASS-21), and WHOQOL-BREF scale.

Addiction and drug tendency questionnaire

This questionnaire consists of 16 items and its general objective was to assess the extent of the clinical students' tendency to addiction from three perspectives: social, individual, and environmental in different persons. The participants had to just rate the answers on Likert scale as shown in the following scale. In addition, the reliability of the questionnaire was calculated to be 0.79 using Cronbach's alpha measurement method.^[20]

The standardized Depression, Anxiety and Stress Scale-21 Items

Items are rated on a Likert four points (0, 1, 2, and 3) ranging from 0 (never) to 3 (almost always). The lowest and highest scores attainable in each item are 0 and 3. The higher score in this scale indicates the higher anxiety,

depression, and stress in the subject. The reliability of this scale was calculated 0.95 using Cronbach's alpha measurement method.^[21]

After the research design was approved, and the research permit and the letter of introduction were obtained from the Ethics Committee and University Vice Chancellor for Research, the researcher referred to Ayatollah Kashani and Hajar teaching hospitals to get the permit to begin the study. Sampling was done after the study objectives were explained to the hospitals' officials and their consent was obtained to start the study, and the research participants were provided with the required explanations, as well as the objectives of the study and the informed consent was obtained from them. Using a convenience sampling method, the research sample was selected from the eligible participants who met the inclusion criteria.

The inclusion criteria were clinical students (nursing, midwifery, and intern students) attending Ayatollah Kashani and Hajar teaching hospitals of Shahrekord in 2020, having the desire and ability to participate in training sessions, and having no history of taking sedatives. Exclusion criteria were unwillingness to continue participating in the project, not answering the questionnaires in full, being absent from more than one training session, being transferred to another hospital, occurrence of any incident that causes students to get stressed, disrupting the training process, and attending other training sessions simultaneously.

Both intervention and control groups completed Drug Tendency Questionnaire, Mental Health, and Quality of Life Questionnaire in pretest. Then, the assertiveness training program was implemented in the form of eight 1-h sessions (one session per week for 2 months) for each intervention group ($n = 8$) by attending one of the training classes of Ayatollah Kashani hospital [Table 1]. The training package was prepared and developed by the trustees (2008). This intervention package has been used many times by other researchers.^[20] Skills were taught in each session through role model provision, role playing, feedback, practice and repetition, and other cognitive and behavioral tasks. Homework assignments outside the sessions were given at the end of each session proportional to the debates discussed. The homework assignments were investigated at the beginning of each session and feedback was provided. After the training sessions, both groups were immediately given posttest (completed again the three questionnaires mentioned above) to compare the effect of this intervention, and the results of pretest and posttest in both groups were compared. Moreover, 2 months after completion of the training intervention, a final evaluation was carried out for both groups to follow-up

and to investigate the stability of the effect of training intervention.

WHOQOL-BREF scale

This scale is a 26-item instrument consisting of four domains: physical health, psychological health, environmental health, and social relationships and measures the general health. The items are scored from 1 to 5 on a five-point ordinal scale.^[22] Analysis of variance (ANOVA) repeated measures and *t*-test were used to analyze the data using SPSS software (v22) ((SPSS Inc, Chicago, Illinois)). Significance level was considered 0.05.

Ethical consideration

The research permit and the letter of introduction were obtained from the Ethics Committee and University Vice Chancellor for Research.

After the study, the assertiveness training program booklet was provided to the control group.

Results

Findings of the study show that the mean scores of the tendency to drug use were not significantly different between the two groups before the intervention ($P = 0.26$). This difference was also significant in posttest ($P = 0.034$) and 2-month follow-up test ($P = 0.044$) based on independent *t*-test. ANOVA repeated measures showed a significant difference in the change trend of mean scores in the three stages of evaluation (before intervention, after intervention, and 2 months after intervention) ($P = 0.014$) [Table 2].

The other finding of the study was that the mean scores of stress, anxiety, and depression were not significantly different between the two groups before the intervention. This difference was significant in posttest and 2-month follow-up test based on independent *t*-test ($P < 0.05$). The ANOVA repeated measures showed a significant difference in the trend of changes in the mean scores of the three stages of evaluation (before intervention, after intervention, and 2 months after intervention) ($P < 0.05$) [Table 3].

The research findings also showed that the mean scores of quality of life were not significantly different between the two groups before the intervention. This difference was also significant in posttest and 2-month follow-up test based on independent *t*-test ($P < 0.05$). The ANOVA repeated measures showed a significant difference in the trend of changes in the mean scores of the three stages of evaluation (before intervention, after intervention, and 2 months after intervention) ($P < 0.05$) [Table 4].

Table 1: Content of the assertiveness training program sessions

Session number training content	Content of sessions
1 st session	Introduction session, expressing the research objectives, describing the assertiveness program and its importance in the daily life; giving homework assignments for remembering the situations in which the individual faced a challenge with regard to assertiveness and the reaction he showed in that situation
2 nd session	Reporting on the assignment of the previous session and giving feedback, discussing about the individuals' rights and making the students familiar with their rights (e.g., the right of self-assertion, the right to express one's opinion, the right to have information, etc.), and giving homework assignments about facing new situations and reacting to those situations
3 rd session	Reporting on the assignment of the previous session and giving feedback, discussing about the self-assertion behaviors and the alternative behaviors (e.g., discussing about different behaviors and particular methods to deal with change), and giving homework assignments about detecting the assertive behavior and nonassertive behavior (aggressive and passive behavior)
4 th session	Reporting on the assignment of the previous session and giving feedback, discussing about anger, its negative and inhibitory consequences, describing some of the symptoms of latent anger, and giving homework assignment about keeping calm and controlling anger in different situations
5 th session	Reporting on the homework assignment of the previous session and giving feedback, discussing about the advantages of anger (e.g., relieving mental stress, releasing emotions, and attaining goals), proposing techniques to deal with anger and guidelines to express anger, and giving assignments about dealing with anger
6 th session	Reporting on the assignment of the previous session and giving feedback, discussing about making request, saying yes or no, and discussing about the reasons for being unable to say yes or no, and giving assignments for discussing in the next session
7 th session	Reporting on the assignment of the previous session and giving feedback, discussing about criticism, dealing appropriately and effectively with criticism, coping with criticism, the advantages and disadvantages of criticism, and giving assignment about dealing with criticism
8 th session	Reporting on the homework assignment of the previous session and giving feedback, reviewing the material presented throughout the previous seven sessions, putting emphasis on expressing one's opinion, making request, saying yes and no, dealing with anger, and dealing with criticism

Table 2: Comparison of mean drug use tendency scores in experimental and control groups in three stages of evaluation

Drug use tendency	Control group (n=35)		Experimental group (n=35)		Independent t-test
	Mean	SD	Mean	SD	
Before intervention	36.22	4.55	34.68	6.61	$t=1.13, P=0.26$
After intervention	36.28	4.05	33.11	7.68	$t=2.16, P=0.034$
2 months after intervention	36.62	4.36	33.62	6.52	$t=2.05, P=0.044$
ANOVA repeated measure	$F=2.21, P=0.014$				

SD=Standard deviation, ANOVA=Analysis of variance

Table 3: Comparison of mean stress, anxiety, and depression scores in experimental and control groups in three stages of evaluation

Variable	Before intervention		Immediately after intervention		2 months after intervention		ANOVA, Repeated measure
	Mean	SD	Mean	SD	Mean	SD	
Stress							
Control group (n=35)	4.60	2.95	4.71	2.11	4.94	2.55	$F=8.37, P=0.006$
Experimental group (n=35)	5.22	3.64	3.51	2.02	3.82	2.86	
Anxiety							
Control group (n=35)	1.34	1.14	1.45	1.51	1.12	2.15	$F=7.36, P=0.008$
Experimental group (n=35)	1.60	2.01	0.77	1.08	0.74	1.65	
Depression							
Control group (n=35)	2.67	2.18	2.85	1.86	2.74	1.72	$F=6.68, P=0.012$
Experimental group (n=35)	3.17	3.86	2.02	1.96	1.77	1.73	

SD=Standard deviation, ANOVA=Analysis of variance

Discussion

The present study was conducted with the aim to investigate the effect of assertiveness program on the tendency to drug use, mental health, and quality of life

in clinical students of Shahrekord University of Medical Sciences.

According to the results of the present study, the mean score of the drug use tendency questionnaire in control

Table 4: Comparison of mean quality of life scores in experimental and control groups in three stages of evaluation

Quality of life	Control group (n=35)		Experimental group (n=35)		Independent t-test
	Mean	SD	Mean	SD	
Before intervention	96.57	11.06	93.65	13.31	$t=0.99, P=0.33$
After intervention	95.51	9.84	100.42	10.39	$t=2.13, P=0.037$
2 months after intervention	96.45	10.58	101.17	9.59	$t=2.28, P=0.026$
ANOVA repeated measure	$F=9.17, P=0.012$				

SD=Standard deviation, ANOVA=Analysis of variance

and intervention groups was 36.22 and 34.68 (score range of 16–80), respectively, before the intervention, which is moderate. In a study by Ghoreishi *et al.* (2017) on students of Allameh Tabatabaie University, 12.4% of students had a negative and completely negative attitude, 50.4% had a positive and completely positive attitude, and 37.2% had a moderate attitude toward drug abuse.^[23] The results of the present study showed that before the training program starts, the mean drug use tendency score was not significantly different between the intervention and control groups and both groups were equal in the score, but after the assertiveness training course held in eight sessions of 1 h, the drug use tendency score was significantly lower immediately after the training course and in the 2-month follow-up in intervention group than the control, indicating the positive efficiency of the assertiveness program in reducing the drug use tendency. In line with the results of this study, the study by Barati *et al.* in 2011 on the students of Hamadan University of Medical Sciences found that holding training sessions about assertiveness skills for 2 months reduced significantly the intervention group's scores of persuasive subjective norms components against substance abuse, including moral, injunctive, and descriptive norms, while no significant change was observed in the control group.^[24] The results of the study by Mahigir and Kumar (2011) on the effect of assertiveness program training on the feeling of academic self-efficacy and psychological well-being of students showed that the intervention caused an increase in the level of the academic self-efficacy and psychological well-being of students.^[25]

In 2019, Omura *et al.* conducted a study to design and implement an assertiveness training workshop for Japanese nursing students. The results of their study are in agreement with those obtained by this study, supporting the investment in assertiveness training programs for nursing students.^[16]

The results of the present study showed that before the training program starts, the mean stress, anxiety, and depression scores were not statistically different between the intervention and control groups, but after the assertiveness training course held during eight 1-h sessions, the stress, anxiety, and depression scores were significantly lower immediately after the training course

and in the 2-month follow-up in intervention group than the control, indicating the positive efficiency of the assertiveness program in reducing the stress, anxiety, and depression. In line with the present results, the study by Mahmoudi *et al.* (2004) on nurses of Sari showed that the assertiveness training held in six sessions of 1.5 h caused a significant reduction in the overt and covert anxiety based on Spielberger Questionnaire and a significant increase in assertiveness level based on Gambler and Richie's assertiveness assertion questionnaire.^[26] In the study by Shahsavari *et al.*, the effect of group assertiveness training on the Tehran Islamic Azad University students' depression and anxiety was investigated. The results of their study showed that assertiveness training in eight 90-min sessions leads to a significant reduction in the students' anxiety and depression based on Beck Depression Inventory-13 and DASS.^[27]

The results of the present study showed that before the training program starts, the mean quality of life score was not statistically different between the intervention and control groups, but after the assertiveness training course held in eight 1-h sessions, the quality of life score was significantly higher immediately after the training course and in the 2-month follow-up in intervention group than the control, indicating the positive efficiency of the assertiveness program in improving the quality of life. In line with the results of the present study, the study by Naderi *et al.* (2015) on high school girl students showed that assertiveness training for eight sessions significantly improves the quality of life based on Anderson and Brook's life quality in school questionnaire compared to the control group.^[28] In the study by Mahmoodi *et al.*, the life skill training program was also found to be able to significantly improve the mental and physical health, and in general, the quality of life of Islamic Azad University students.^[29] The results of the study by Karbasian *et al.* on the effectiveness of group assertiveness training on Khatam Al-Anbia Hospital employees' work-life quality also were found to be in agreement with the results of this study.^[30] The innovation of the present study was the implementation of an assertiveness program for clinical students in difficult conditions of the coronavirus epidemic. The findings of the study show the effectiveness of the program in reducing drug use tendency and improving mental health and quality of life among students.

Limitations and recommendations

Among the limitations of the present research, we can refer to the training intervention design and the provision of programs by trainers in conditions of coronavirus epidemic such that the training was provided to groups composed of 10 members each. Considering the difficult conditions of the epidemic and the high cost of education, designing the printed and electronic self-study programs will thus be cost-effective and effective on a larger scale.

Conclusion

Coping and assertiveness skill training in this study positively affected the reduction of drug use tendency and improvement of the mental health and quality of life in students, indicating the efficiency of assertiveness training program in modification of beliefs and the youth's subjective norms. Considering the effectiveness of the program, it can play a significant role in the design and implementation of drug abuse prevention training programs, especially in universities. At the end, it is suggested that some steps should be taken toward enhancing the awareness of students and reducing their drug use tendency by holding assertiveness skills training workshop for students.

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Conflicts of interest

There are no conflicts of interest.

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