Studying the Effectiveness of Prevention Training Program of Drug Abuse on Reducing Risk Factors in Soldiers and Staffs

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Abstract: *Background and objective:* Drug abuse is one of the diseases that are highly dependent on individual behaviors and social interactions. This disease can be created in places like military garrisons due to their relationship with such behaviors. Therefore, soldiers and staffs are at risk of drug abuse. The aim of this study was to determine the effect of prevention training program of drug abuse on reducing risk factors in soldiers and staffs in Iran. **Methods:** In this quasi-experimental interventional study, 392 soldiers and staffs in two military garrisons in Khorasan Razavi (Intervention group 242 and control group 150) were randomly conducted to training program. The data collection tools were questionnaire of identifying people in risk of addiction, life skills questionnaire and demographic variables. The questionnaires were completed as self-report. Educational content was consisted of seven training sessions (60-minute) that only applied in the intervention group. 45 days after the last training session, educational software was distributed as a reminder in the intervention group. The two groups were followed up three months after the intervention. Finally, the data were analyzed using SPSS version 16. **Results:** The findings showed that there was no significant difference between the two groups in demographic variables ($Pvalue > 0.05$). The mean scores for risk factors on drug abuse after training program (Depression and feeling of inability, Positive attitude toward drug abuse and Anxiety and fearing of others) were significantly improved in the intervention group ($Pvalue < 0.05$). Also, life skills variables except the problem solving skill ($Pvalue > 0.05$) had a significant change after intervention in the intervention group ($Pvalue < 0.05$). **Conclusion:** The findings indicated that the prevention training program of drug abuse based on life skills training could reduce the risk factors of drug abuse for soldiers and staffs in military garrisons.

Keywords: Prevention; Drug abuse; Risk factors; Military personnel.

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1-Introduction

Drug abuse is a disorder with biological, mental, social, and spiritual causes and effects which threatens the people's vividness, the workforce and people's motives and interests and it spends all the material and social potentialities of the people and communities on given service to such people (Lak, Moazedian, Hosseini, Sedaghat, & Ameri, 2013). Drug abuse brings about many of the social damages to families and individuals (Moeini et al., 2018). In the light of its mental, behavioral and social impacts, this phenomenon, particularly, rise in its abusing and dependency on traditional and industrial drugs threat family and society (Bond et al., 2007). According to report of the United Nations Office on Drugs and Crime in 2017, drug abusers will involve a number between 351 to 815 millions from the population ranging 15–64 years old that at least have consumed narcotic and psychedelic materials once in life (United Nations Office on Drugs and Crime, 2017). Drug abuse statistics in Iran has been reported two millions which demonstrate approximately 10 to 15 million people in country, compared with drug abusers, struggle with drug abuse, amount of planning, awarning and advertising against it, unfortunately does not equal to such topic dimensions (Sarrami, Ghorbani, & Minooei, 2013).

Because of the risk factors for drug abuse such as temptation (Nidecker, DiClemente, Bennett, & Bellack, 2008), access (Joveini et al., 2016), lack of life skills (Moeini, Hazavehei, Shahrabadi, Faradmal, & Dashti, 2015; Shahrabadi, Garmaroudi, Shojaeizadeh, & Yaseri, 2017) and group tensions (Joveyni, Dehdari, & Gohari, 2013), collective environments such as military garrisons (Bochniak & Korzeniewski, 2010) are vulnerable to drug abuse. So that Iran population pyramid represents that middle-aged people constitute a great number of the country population (Men's average age is 30.9 years) (Statistical Center of Islamic Republic of Iran, 2018). Men in Iran (After 18 years) should come to pass military service in military garrisons and serve two years (Imani & Ghasemi, 2015).

In military garrisons, soldiers and staffs are vulnerable because of group life and their interaction with the community due to the nature of risk factors for substance abuse (Ahmadi, Karambakhsh, Mehrazmay, Salesi, & Najafi Manesh, 2014).

Military training is considered a life stressful event for plenty of soldiers at the outset of their entrance into the garrison. Such training has seriously been planned to prepare the militants for the stressful setting in war (Ahmadi, Mehrazma, Karambakhsh, & Salesi, 2013). For soldiers and staffs, military life is with special conditions such as being apart from family

and friends, cold, heat, hunger, insomnia, and too much noise. Soldiers from different provinces, with varied cultures and of diverse families get together and beginning a new stage of their life and responsibility (Ahmani et al., 2014). Thus, entering the military service period will lead to major changes in soldiers' personal, family and social life (Ahmani et al., 2013) and for staffs; military training and workplace stress are considered as risk factors (Mirahmadizadeh, Naghshvarian, Moghaddami, Hemmati, & Parsapour, 2010).

The history of drug abuse in military forces related to the past centuries (Jacobson et al., 2008). To the military forces of many countries, drug abuse is seen a challenge (Najarzadegan, Tavalae, & Karaminia, 2012). In Iran, study of Ramezankhani, Heidarnia, Ghofranipour, and Babaei (2000) on Tehran garrisons reveals that 20.8% soldiers in the beginning of their entering military service constantly consume cigarettes and 72.4% soldiers have an experience of smoking. Drug abuse background is among the causes which raise the military staff hospitalization time and naturally its spent costs. Besides, drug abuse also causes a variety of mental disorders in the militants (Najarzadegan et al., 2012).

The role of the soldiers and staffs in the garrisons is important in the sensitive posts that should be weapon in hand. Lack of attention to drug abuse of soldiers and staffs lead to consequences like suicide, selfbeating and murdering others (Shekary, Yosefi, & Ahmadi, 2017). Mental consequences of drug abuse like disturbing mental balance, disobeying the principles and rules of community, weakness of will, losing a sense of responsibility, creating hostile feelings, impatience, rebellion, permanent anxiety, sense of incapability and loneliness and sleeping disturbance (Vazirian, 2003) can be more harmful and destructive than the others for a soldier or staff that holds a sensitive post.

Factors that increase the risk of drug abuse include depression and feeling of inability, positive attitude toward drug abuse, anxiety and fearing of others and sensation seeking (Anisi, Bahadori, & Jahanbakhsh, 2013). In addition to these risk factors, unawareness of life skills might serve a main role in drug abuse. In study of Fisun, Shamrei, Marchenko, Sinenchenko, and Pastushenkov (2013) is discussed the importance of a healthy lifestyle to reduce the anxiety and fear of others and considers it necessary to training of healthy lifestyle to prevention of drug abuse in army forces. Also in study of Rosellini et al (2017) that conducted on American army soldiers' self-regulation, depression has been highlighted as one of drug abuse risk factors. With regard to what has been studied in prevention and decrease of risk factors in soldiers and staff of garrisons, the study was conducted with the

aim of determination the effectiveness of prevention training program of drug abuse on reducing risk factors in soldiers and staffs in Iran.

2-Material and Methods

2-1) Research Design and Selection Criteria

This research was an interventional study (Quasi-experimental) that conducted in 2018 in two garrisons in Khorasan Razavi, a province in east of Iran. With maximum variance 35, confidence interval 95% and test power 80%, 150 samples were estimated for each intervention and control group and 250 samples with taking the probability of falling samples. Garrison A as intervention group, and garrison B as control group were selected in the study. Respecting the list of soldiers and staffs, samples were randomly conducted to study. Criteria for participating in the study included: 1) those who were doing the military service as soldiers, 2) those who are working in the garrison as staffs and 3) having soldiers and staffs' written consent and their collaboration during the steps of conducting the study and exclusion criteria of study included 1) soldiers whose less than three months had been left to their service termination at the time of pretest (Because of three-month follow up period), 2) staffs who were getting retired during the pretest time in less than three months, 3) Soldiers and staffs who did not like to participation in the post-test, and 4) their absence in more than half of sessions.

2-2) Instruments

The questionnaire of identifying people in risk of addiction (IPRA) (Anisi et al., 2013) and life skills questionnaire (Saatchi, Kamkari, & Askarian, 2015) were used in this study. Questionnaire of IPRA was included 75 items with four option Likert scale. Questionnaire of IPRA measures four dimensions including depression and feeling of inability including 29 items (Such as: I feel that others do not value me) (Cronbach's alpha =96%), positive attitude toward drug abuse including 18 items (Such as: Using drugs for recreation does not make anybody addicted) (Cronbach's alpha = 93%), anxiety and fearing of others including 17 items (Such as: I feel like something bad will happen for me) (Cronbach's alpha=95%) and high sensation seeking including 11 items (Such as: I would like to participate in noisy gatherings) (Cronbach's alpha =90%). Scale scoring is from 0 (Completely disagreed/never) to 3 (Agreed/always). Questionnaire scores range is from 0 to 225. The questionnaire validity and reliability were measured by Anisi et al (Anisi et al., 2013) and it was obtained 97%. In

current study cronbach alpha was totally %95. Life skills questionnaire was designed by Saatchi et al (Saatchi et al., 2015). The questionnaire was included 40 items with five option Likert scale from very much to very little. The questionnaire measures ten dimensions (Each dimension contains four items) including: 1) self-awareness skill (Cronbach's alpha=84%), 2) having a goal in life (Cronbach's alpha=81%) , 3) skill on human communication (Cronbach's alpha =80%), 4) interpersonal relationships skill (Cronbach's alpha=82%), 5) skill of decision-making (Cronbach's alpha=79%), 6) mental health (Cronbach's alpha=78%), 7) skill in problem solving (Cronbach's alpha=77%), 8) skill of participation and cooperation (Cronbach's alpha=77%), 9) creative thinking skill (Cronbach's alpha=80%) and 10) critical thinking skill (Cronbach's alpha=81%). Scale of scores for each dimension of the questionnaire is from 4 to 20. Life skills questionnaire has been adapted many times in Iran and has been used in various research and dissertations (Saatchi et al., 2015). In this study cronbach alpha was totally 98%. Also in this study age and soldier/staff variables were demographic variables.

2-3) Educational content

Educations content was prepared based on educational needs identified in the pretest, toward promoting the attitude and raising life skills. This content included definition of drugs and drug abuse, typs of drugs, effects of drug abuse on body and mind and personal and social life and prevention of drug abuse (Vazirian, 2003). Also teaching ten life skills included self-awareness skill, having a goal in life, skill on human communication, interpersonal relationships skill, skill of decision-making, mental health, skill in problem solving, skill of participation and cooperation, creative thinking skill and critical thinking skill (Arabian, 2015).

For intervention group, six one-hour training sessions were held in two weeks. Also there was a session conducted with educational authorities of the garrisons to coordinate and clarify purposes of study. Educational content of each session is shown in the table 1.

Table 1. Sessions and educations content

sessions	Educations content
First	Definition of drugs, drug abuse and typs of drugs
Second	Consequences of drug abuse on body and mind and personal and social life and preventive strategies of drug abuse
Third	Skills of decision-making and problem solving
Fourth	Interpersonal relationships skill and effective communication

Fifth	Skills of creative thinking and critical thinking
Sixth	Skills of participation and cooperation, human communication, self-awareness skill, having goal in life and mental health

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2-4) Intervention

250 participants in each garrison conducted in pre-test. 242 and 150 samples in garrisons A and B respectively participated in post-test as intervention and control groups. Garrison A was provided with 7 training sessions in total during two weeks (Two sessions for drug abuse and prevention, four sessions for training life skills and one session to train the educational authorities of garrison. Control group was not trained. Sessions were conducted using lecture method, face to face question/answer, educational videos and pamphlets. 45 days after the last training session, educational android software designed to remind the content and was provided to the intervention group. Post-test was performed three months after the last training session

2-5) Statistical Analysis

Data of the drug abuse risk factors and life skills were presented in form of mean, standard deviation, number and percentage. For data analysis, analyze of covariance (ANCOVA), paired t-test, independent two sample t-test, man whitney u test, wilcoxon signed-rank test and Multi-modal logistic regression were used. Data were analyzed using SPSS-16.

2-6) Ethics of Research

This study has been proved by Aja University of Medical Sciences. Participants voluntarily completed the questionnaires and participated in training sessions. Informed consent was obtained from all participants.

3-Results

In general 264 solidiers and 128 staffs were participated in this study. Soldiers in intervention and control groups were 155 and 109 respectively and staffs were 87 in intervention and 41 in control group. Result of Chi square test showed that two groups do not have a significant difference in age ($\chi^2=3/12$, $P=0.07$). In intervention group the mean age of soldiers were 18.9 ± 0.5 and staffs were 39 ± 10 . Also in control group, mean age of soldiers and staffs were 19 ± 0.5 and 38 ± 9.5 respectively. In general, total mean age of all soldiers and staffs were 18.95 ± 0.5 and 38 ± 9.5 respectively. Mann

Whitney U test result revealed that there is no significant difference on age between intervention and control groups ($p > 0.05$). The state of variables of drug abuse risk factors has been presented in Table 2. Wilcoxon test results showed a significant change in variables of include depression and feeling of inability, positive attitude toward drug abuse and anxiety and fearing of others in intervention group three months after the training program. ($p < 0.05$). Table 3 provides the state of ten life skills variables. Paired t-test results indicated three months after the intervention, variables of self-awareness, having a goal in life, human communication, interpersonal relationships, decision-making, mental health, participation and cooperation, creative thinking and critical thinking have significantly increased ($p < 0.05$).

Table 2. Comparing the state of variables of drug abuse risk factors before and after intervention in two groups of intervention and control

Groups	Variables	Step								Wilcoxon Test <i>p</i>
		Before				After				
		Value of being at risk				Value of being at risk				
		Absenc N(P)	Low N(P)	Medium N(P)	High N(P)	Absenc N(P)	Low N(P)	Medium N(P)	High N(P)	
Intervention	Depression and feeling of inability	36(14.9)	58(24)	91(37.6)	57(23.6)	59(24.4)	90(37.2)	48(19.8)	45(18.7)	<0.05
	Positive attitude toward drug abuse	28(11.6)	69(28.5)	91(37.6)	54(22.3)	79(32.4)	97(40.1)	34(14.5)	31(13)	<0.05
	Anxiety and fearing of others	57(23.6)	98(40.5)	49(20.2)	38(15.7)	128(52.9)	54(22.3)	32(13.2)	28(11.6)	<0.05
	High sensation seeking	122(50)	76(31.4)	20(8.3)	24(9.9)	113(46.7)	89(36.8)	26(10.7)	14(5.8)	>0.05
Control	Depression and feeling of inability	42(28.2)	63(42.1)	27(18)	18(11.7)	55(36.7)	61(40.7)	25(16.7)	9(6)	>0.05
	Positive attitude toward drug abuse	31(20.7)	83(55.3)	24(16)	12(8)	25(18.85)	69(43.15)	36(24)	20(14)	>0.05
	Anxiety and fearing of others	59(39.3)	29(19.3)	10(6.7)	52(34.7)	40(26.92)	35(23.3)	12(8)	63(41.7)	>0.05
	High sensation seeking	57(38.0)	37(24.7)	10(6.7)	46(30.7)	60(40)	24(16)	4(2.7)	62(41.3)	>0.05

Table 3: Comparing the state of variables of life skills before and after intervention in two intervention and control groups.

Groups		Variables									
		Self-awareness	Goal*	Human*	Interpersonal***	Decision-making	Mental health	Problem solving	Participation****	Creative thinking	Critical thinking
Intervention	Before	12.12	12.29	11.80	12.11	12.49	11.92	12.10	11.71	12.24	12.32
	Mean (SD)	(4.20)	(3.8)	(4.15)	(3.95)	(3.78)	(4.05)	(2.99)	(3.79)	(3.76)	(3.97)
	After	14.14	13.97	14.49	14.47	14.25	13.46	12.28	13.27	13.69	14.80
	Mean (SD)	(2.68)	(3.22)	(3.28)	(3.28)	(2.67)	(2.79)	(3.91)	(2.94)	(2.80)	(2.56)
Paired-Samples T Test P		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	>0.05	<0.05	<0.05	<0.05
Control	Before	14.18	13.70	13.94	14.26	13.80	12.92	12.18	12.89	13.16	14.60
	Mean (SD)	(2.44)	(2.62)	(2.31)	(2.58)	(2.41)	(1.88)	(2.61)	(2.57)	(2.48)	(2.69)
	After	13.67	13.68	14.20	14.25	13.53	12.23	11.70	13.20	14.00	14.08
	Mean (SD)	(2.81)	(3.03)	(2.67)	(2.47)	(2.41)	(2.50)	(2.79)	(2.44)	(2.49)	(2.52)
Paired-Samples T Test p		>0.05	>0.05	>0.05	<0.05	>0.05	>0.05	>0.05	>0.05	<0.05	>0.05

SD: Standard deviation.

* Having a goal in life ** Human communication *** Interpersonal relationships **** Participation and cooperation

4-Discussion

Military garrisons due to discipline in working system and high sensitivity of workplaces (Ahmadi et al., 2014) creating an environment that managing individual and social behaviors is a priority. Therefore illnesses associated with personal and social behaviors can be harmful in such places. Drug abuse is among diseases which is dependent on men's high-risk behaviors.

The results of the study were indicative of similar demographical characteristics between intervention and control groups in age and number of soldier/staff, so that there was no significant difference between intervention and control groups. This shows the selected groups were homogenous for study. Results indicated the soldiers' age mean was 18.95 years (SD = 0.5) and staffs' was 38 years (SD=9.5) thus target groups for training can be appropriate because people of youth and middle age are more vulnerable against high-risk behaviors (Moeini et al., 2018) and their educational needs are more than the other adults in community.

In this study results showed that the positive attitude toward drug abuse had a significant change in the intervention group after training intervention, which was similar to study of Hajebe, Faridnia, and Zarif (2009). Before the intervention, most of the samples were exposed to medium risk in intervention group (37.6%) and after the intervention, most samples were exposed to low risk (40.1%). A decrease in the positive attitude toward drug abuse can be as an enabling factor in the prevention of drug abuse that seems results of this study confirm it.

Results revealed that depression and feeling of inability in intervention group had significantly raised after the intervention. This was similar to study of Ahmadi, Asgari, and Toghiri (2013). According to the results of this study in intervention group, before the intervention most of the samples were exposed to medium risk (37.6%) and after the intervention, most samples were exposed to low risk (37.2%). Therefore, reducing depression and feeling of inability as a factor of mental for substance abuse prevention among soldiers and staffs can be considered in approaches of prevention.

Also in this study, the anxiety and fearing of others variable in the intervention group significantly changed after intervention, which was consistent with the study by Hesar, Nikdel, and Kharamin (2015). Samples were more exposed to low risk in intervention group, before the intervention (40.5%) and after the intervention were more exposed to absence of risk (52.9%). Increasing anxiety and fear can lead people to quick

solutions to relax such as drug abuse, so training this skill to prevention of drug abuse seems is necessary in military garrisons.

No significant change was made in high sensation seeking after intervention in intervention group. Results of studies – Mirzei and Hasani (2015) and Ramezanzadeh, Moradi, and Mohammadkhani (2014) - did not conform the present study. In regard for studies conducted on sensation seeking (Mirzei & Hasani, 2015; Ramezanzadeh et al., 2014)) seems that more training sessions are needed exclusively to change this variable.

The results confirmed that all variables of life skills in intervention group, except for problem solving, including self-awareness, having a goal in life, human communication, interpersonal relationships, decision-making, mental health, participation and cooperation, creative thinking and critical thinking after training intervention there has been a significant increase. The results of this study are similar to study of Heidari, Shahbazi, and Derris (2014) on the decision-making, Zare, Pirkhaefi, and Mobini (2010) and Hemmati, Orujlu, and Khalkhali (2014) on the creative and critical thinking, Motaghed Larijani, Vakili, Gofranipour, and Mirmohammadkhani (2015) on the interpersonal relationships, Sahraian, Solhi, and Haghan (2012) on the self-awareness, Naseri, Azizpour, Saiedy, Rahmani, and Syaehmiri (2015) on the mental health and human communication and Khoshhal and Hossein (2015) on the having a goal in life and participation and cooperation.

The training of decision-making skill for the at-risk group, such as the soldiers and staffs because of stressful situations, are required to make appropriate decisions for the release and management of these stresses. Also creative and critical thinking skills (Ask questions and ability to deduce) make persons focus on correct behaviors and avoid precarious behaviors (Hemmati et al., 2014; Zare et. al., 2010). Training such skills may consequently be effective on prevention of drug abuse. With regard to the importance the interpersonal relationships have in making positive reactions emerge in normal conditions especially stressful settings (Motaghed Larijani et. al., 2015) in garrisons and staffs , can be used to reduce the adventures behaviors toward dropping narcotics misuse. Also, self-awareness skills that emphasize their ability to recognize themselves and knowledge of their characteristics, strengths and weaknesses and their desires (Sahraian et al., 2012) can play a role in decision-making and thus in preventing drug abuse. No significance was seen with problem solving variable in intervention group and it was dissimilar to Shahbazi and Heidari (2012). Target group was trained during five sessions in Shahbazi and Heidari (2012) . Therefore, it seems that the reason for not changing this skills in the present study was due to lack of specialized training in the sessions.

Having mental health along with perceived beliefs (Hashemian et al., 2013) and the role of verbal and non-verbal communication with self-control (Human communication) (Hashemian et al., 2014; Naseri et al., 2015) can make people aware of the high-risk behaviors of others and protect themselves from these risky behaviors. Also increasing participation and cooperation skill potentially improves self-expression and possession. Therefore, it seems that these skills can be used in preventive drug abuse programs as a preventive measure.

The limitations of this study include the self-reporting of questionnaires and the limited time for specialized life skills training.

5-Conclusions

In general, the results of the present study indicate a significant difference in the risk factors for drug abuse and life skills after of training program conducted in the intervention group. This study states that drug abuse prevention program based on life skills training reduce the risk factors for drug abuse among soldiers and staffs. Therefore, the drug abuse prevention program can be used to prevention of drug abuse among soldiers and staffs in military garrisons.

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