

Effects of Storytelling-Based Education in the Prevention of Drug Abuse among Adolescents in Iran Based on a Readiness to Addiction Index

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ABSTRACT

Introduction: One of the most effective strategies in the prevention of addiction is increasing awareness among young people, towards the tendency for taking drugs their physical, mental and social side effects. Storytelling is effective for increasing characteristics of happiness and resilience. This study uses storytelling, a common and popular method to increase awareness among adolescents.

Aim: To examine the effect of storytelling-based education on the prevention of drug abuse, based on a readiness to addiction index.

Materials and Methods: This quasi-experimental study was conducted on 136 high school students (grade one), selected by a cluster sampling procedure from May 2014 to February 2015 in Zabol, Iran. The instrument for gathering data was a readiness to addiction questionnaire. This questionnaire included 41 items for which the scoring of each item followed the Likerts format.

The data gathered was analysed using SPSS version 21 with descriptive statistics and inferential statistics.

Results: The results revealed that the mean of the readiness to addiction index in the case group fell from 75.66±19.99 to 69.57±21.83 (paired t-test; p =0.02); in the control group the same index changed from 103.01±21.88 to 93.98±27.70 (paired t-test, p = 0.775). That is, the index decreased for both groups, but the reduction was statistically significant only for the case group (p =0.02).

Conclusion: This suggests that the narrative method is effective in reducing adolescents readiness to addiction. Storytelling is an effective way to raise awareness among young people about addiction and its detrimental impacts on health. Therefore, such a technique can be taken into consideration in teaching principles of prevention.

Keywords: Addictive behaviour, Narrative method, Substance-related disorders

INTRODUCTION

Addiction, as a social disorder, is often referred to as a world-destroying disaster among students [1]. Addiction, as a hygienic-social [2], economic and cultural problem with its own complexities, has seriously affected the security, independence and national sovereignty of Iran [3]. The World Health Organization (WHO), in a report in 2013, stated that the rate of smoking and tobacco use among Iranian youths was 3% and 26.6%, respectively [4]. Iran shares almost 2000 kilometers of border with Afghanistan and Pakistan, which produce more than 3500 metric tons of drugs annually [5]. Moreover, Iran has a young population and the rate of smoking and drug consumption is increasing daily [6]. However, over the years, it has been shown that even the latest and most effective treatment methods have problems and side effects in which drugs are easily accessible [7]. The treatment of addiction is challenging and costly and requires a comprehensive treatment system with different drug, mental and rehabilitation approaches [8-10]. Hence, prevention is a reasonable solution for the mental and physical safety of those using drugs. The main premise of preventive strategies is that prevention is remarkably easier, cheaper and more effective than inappropriate drug consumption. The issue of drug prevention among adolescents has attracted the attention of experts and scholars [11,12].

Generally, there are three strategies to restrict the consumption of drugs in most countries of the world: legal strategies, educational-training strategies and treatment strategies [13]. Chief among educational-training activities is the raising of awareness among young people about the reasons for the tendency to use drugs and the physical, mental and social dangers of drug use. At present,

the best place for carrying out these strategies is educational centers, such as schools [14].

Using story and storytelling as a therapeutic tool has been explored by storytellers, psychologists and social workers. The effectiveness of story and storytelling in substance abuse prevention programs has been well documented and researched. The effectiveness of story and storytelling is not well studied in treatment programs [15].

This study proposes an approach to prevention based on storytelling.

The development of mass media and the growth of urbanization have weakened the importance and popularity of storytelling, especially in educational centers. Additionally, storytelling is not regarded as a method and thus has no firm position in the educational system [16]. However, stories occupy a very important position in children's literature. Stories can improve different facets of children's and adolescents' lives, prepare them to encounter different individual and social problems and issues and help them to better understand their problems [17]. Storytelling is usually taken as an indirect way of presenting a framework for education, self-understanding and efficiency and uniting experiences that might significantly affect the health of adolescents and children [18]. These stories were about addiction definition, types of addiction, and prevention ways of addiction and treatment of addiction.

Given the fact that principles of prevention of addiction could significantly decrease the addiction rate, education using storytelling offers a different approach to ordinary methods of prevention education. Storytelling-based education is relatively

little used and there are no studies examining its importance among adolescents. The present study was carried out with the purpose of examining the effect of storytelling-based education on students' readiness to addiction index.

MATERIALS AND METHODS

Design and Participants

The present study was quasi-experimental and was conducted on case and control groups with pre and post-intervention design. The population consisted of male and female high school students in Zabol, a city in Eastern Iran, from a pool of 250 students, 136 students from grade-one high school, based on cluster sampling procedure, and divided into two groups case group (intervention) and control group. Exclusion criteria of study were lack of consent to take part in the story-telling based education session, lack of consent to fill addiction questionnaire, or any incompletely filled questionnaire.

Instruments

The data-gathering instrument used in this study was Weed and Butcher's readiness to addiction questionnaire [19] whose validity in Iran was tested by Zargar [20]. Reliability was calculated using Cronbach's alpha and turned out to be 0.90, which is desirable [20]. This questionnaire includes 41 items for which the scoring of each item followed the Likerts format, from zero ("absolutely disagree") to 3 ("absolutely agree"). The scoring was reversed for items 6, 12, 15 and 21. The total range of scores was from 0 to 108, with higher scores indicating higher propensity for addiction, and vice versa.

Study Procedures

About addiction definition, types of addiction, preventive ways of addiction and treatment of addiction, they only filled questionnaire without any intervention. Before gathering the data, a suitable time was determined by consulting with the relevant officials, so that there would be no interference with school pedagogical programs. The purpose and procedure of the study were explained to the participating students. The intended storytelling education was offered by distributing a number of predetermined booklets. In this stage, booklets by researchers were divided among students. The booklets were different for male and female students and the content was in line with their gender needs and due to views, opinions and the physical and physiological differences among two genders. Booklets were about addiction definition, addiction prevention and addict's stories and their experiences. The control group received no education and teaching. The objects were determined by an expert panel in addiction and psychology fields, booklets were prepared from books in addiction field, which published in Persian language in Iran (family and addiction [21], sociology of addiction in Iran today [22] booklets was prepared in Persian language. They had 25 pages and 6 chapters: First chapter: Addiction definition (3 pages), Second chapter: Types of addiction (8 pages), Third chapter: Prevention ways of addiction (5 pages), Fourth chapter: Treatment of addiction (4 pages) and Fifth chapter was about addict persons experience about addiction duration (5 pages).

The storytelling approach followed five stages in 7 sessions in 7 days, 30 mins each session:

- **Stage one (goal-setting):** Different skills, perspectives and cognitive goals were fully considered and stories (as booklets contents) in line with these were selected.
- **Stage two (selecting the type of story):** One or more stories were selected based on the students needs and the lesson content.
- **Stage three (story making):** The story content was developed based on goals and methods.

- **Stage four (achievement of the approach):** This stage involved storytelling process using different strategies, such as body language, word choice, etc., to attract the students attention. Sometimes the story would be stopped and, through instantaneous questions, the students were made to take part in the process.
- **Stage five (conclusion):** After telling the story, the students views were sought and their feedback was examined to determine whether the purpose of the session had been achieved.

The purpose of this program was to convince adolescents not to use drugs and to make them aware of the bad effects of drugs, as well as to improve their spirits, guide them to select a healthy lifestyle, and offer special support to those with a propensity to addiction. In the next stage of the study, after 60 days [23], Weed and Butcher's readiness to addiction questionnaire was given to both groups of students (male and female).

STATISTICAL ANALYSIS

SPSS Version 21.0 for Windows (SPSS Inc., Chicago, IL, USA) was used to analyse the data in general and descriptive statistics (mean and SD) and inferential statistics in particular. Data gathered were first checked for normality by Smirnov-Kolmogorov test. Data were also checked in terms of homogeneity. The comparison of mean scores of readiness to addiction before and after intervention, as well as the comparison of mean difference in the two groups, was done by paired and independent t-tests and chi-square test, with $p < 0.05$ considered significant.

Ethical Consideration

This study was approved by Ethics Committee of Zabol University of Medical Science. Consent form was obtained from all the participants.

RESULTS

Students were divided into two groups which include case group (intervention) and control group. The study findings revealed that the mean age of the adolescents studied was 12.10 ± 0.52 years for the control group and 12.05 ± 0.51 years for the case group. In the two groups, the highest age frequency belonged to 12-year-old students (73.5% in the case group and 72.1% in the control group) and the lowest was 11-year-old (10.3% in the case group and 8.8% in the control group). Furthermore, 34 of the participants (50%) were male and 34 (50%) were female, and comparison of gender in the control and case groups by chi-square indicated a homogeneous distribution of participants in the two groups ($p = 0.775$, chi-square).

In the case group, the mean score of readiness to addiction before intervention was 75.66 ± 19.99 and reached 69.57 ± 21.83 , which was significant based on paired 't'-test ($p = 0.020$). Likewise, the same index for the control group was 103.01 ± 21.88 before intervention and 93.98 ± 27.70 after intervention ($p = 0.775$, paired 't'-test) [Table/Fig-1].

In addition, the readiness to addiction difference was 21.08 ± 6.08 in the case group and 32.01 ± 8.58 in the control group, which was not significant based on independent t-test results ($p = 0.537$) [Table/Fig-2].

Additionally, comparison of the mean difference of readiness to addiction between the two groups of the study, based on individual variables, was not statistically significant.

Stage Group	Before Intervention	After Intervention	paired 't'-test
	SD±Mean	SD±Mean	
Case Group	75.66±19.99	69.57±21.83	$p=0.02$, 't'=2.38 df = 67
Control Group	103.01±21.88	93.98±27.70	$p=0.775$, 't'=2.21 df = 67

[Table/Fig-1]: Comparison of mean readiness to addiction in control and case group.

Group	Case Group	Control Group	Independent 't'-test
Readiness to Addiction Difference	21.08±6.08	32.01±8.58	$p = 0.537$, 't' = 0.621 $df = 1$

[Table/Fig-2]: Comparison of readiness to addiction difference in case and control groups.

DISCUSSION

The present study is an attempt to examine the impact of storytelling-based education, based on principles of prevention from addiction, on the readiness to addiction index of adolescents in Zabol. Among the strategies used worldwide to limit drug abuse, is prevention [24], and one of the main elements of preventive programs is motivating adolescents not to get involved in drug abuse [25]. This is in accordance with the findings of this study. This study showed that readiness to addiction among adolescents in the two groups was reduced after intervention. However, this reduction was significant in the case group ($p = 0.020$), indicating that storytelling-based education was effective in convincing them not to abuse drugs. Therefore, given these findings, raising adolescents' awareness of addiction is of great importance. Students need to understand about being involved or not being involved in drug abuse and about what measures should be taken to avoid drug abuse. This finding is also in line with that of Bahaini et al., in which participation in life skills education classes and education via films and observation significantly affected students perspectives. As the grade and age of students is lower, their perspectives about addiction might change easier and faster [26]. The impact of teaching principles of prevention of addiction on students' readiness to addiction is consistent with that described in different studies [27-29], which indicated that such teaching is effective.

The important point that distinguishes this study from other pertinent studies is the use of storytelling-based education. The results of the study support those of Nikmanesh and Kazemi [17], Butcher [30] and Goral et al., [31], in which storytelling was offered as an effective method of educating children. The present study looked at grade-one high school students and the design and development offered important topics in the form of stories and scenarios favored by students of this age. Kheradmand et al., likewise, made use of the educational experiences of developed countries, through constant reinforcement, to prevent addiction during elementary school. These educational experiences were included in the curriculum so that students were aware of different types of drugs and their detrimental consequences [32].

The findings of the present study indicate that before intervention, students had little information about addiction. Because readiness to addiction in adolescence was higher than at any other age group period, it might be stated that lack of information could be one of the reasons for this tendency and that an increase in awareness could be effective in preventing addiction and decreasing the tendency for addiction. In line with this, the study by Rajaei and Bayazi on the effect of teaching principles of prevention of addiction on self-esteem, perspective and tendency to drug abuse, uncovered that addiction prevention programs significantly affect adolescents' self-esteem, perspectives, and tendency to drug abuse [33].

Given the results obtained, programs of prevention of addiction should be taken into consideration from childhood and throughout the education system, especially in the secondary phases, which are more vulnerable to drug abuse.

LIMITATION

All participants in this study were students and it was very difficult to coordinate them. Secondly, there were too many resources to develop the content of handbooks and it was not possible to use all of them in the present study.

CONCLUSION

Based on our findings, it was observed that the use of storytelling to teach young people about different types of addictive drugs, reasons for the tendency to use drugs, and the effects of drugs on human health is influential in decreasing readiness to addiction. Additionally, because storytelling develops the minds of children and deeply affects their thoughts and spirits, it might be taken as a framework for raising awareness among young people and in reducing their readiness to addiction. Therefore, such an approach can be used in addiction prevention programs.

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