

Effects of Educational Intervention on Awareness about Drug Abuse among School Going Adolescents

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Abstract

Introduction	Prevalence of drug use is high among adolescents as they are keen to experiment the drugs to fulfill their curiosity. If their experimentation could be prevented by making them aware about the drug abuse and its consequences the prevalence of the drug abuse can be reduced.
Objectives	The objective was to determine the effectiveness of an educational intervention in increasing awareness of adolescents regarding the drug abuse.
Methods	The study used a pre-test and post-test nonequivalent groups design. A semi structured, self administered questionnaire was used to measure the research variables in pre-test and post-test. Adolescent students from class eight of two schools were selected as experimental and control groups by using non probability purposive sampling technique. The obtained data was analyzed by using descriptive and inferential statistics.
Results	The experimental and control groups were equitable on pre-test with no significant difference in mean knowledge scores ($p > 0.05$). Comparison of post-test mean knowledge scores between two groups revealed significant difference ($p < 0.05$).
Conclusion	The educational intervention on signs and symptoms along with the consequences of drug abuse plays a significant role in increasing awareness of the adolescents regarding drug abuse.
Key Words	Educational intervention, Awareness, Drug abuse and Adolescents.

Introduction

Drug abuse has become a global phenomenon. It has affected almost every country, although its extent and characteristics differ from region to region. It is estimated that at least 40 million people throughout the world are regular drug abusers. In Nepal, the problems of drug abuse are localized especially in the urban, semi-urban and along the border areas of Nepal and India. These areas included Kathmandu, Lalitpur, Pokhara, Biratnagar, Dharan, Damak, Kakadvitta, Itahari, Birgunj, Nepalgunj and Bhairahawa^{1,2}.

The period of adolescence, is a vulnerable period in the life of an individual. The increased vulnerability in this period related to psychological factors like curiosity, poor impulse control, run away from reality, psychological distress and so forth. The social factors like peer influence, lack of clear identity, and

self/intra-familial conflict also expose the adolescent to drug abuse³.

The problem of drug abuse is a significant problem among adolescents in our societies as the problem is increasing day by day due to various factors like easy availability and rapid socioeconomic and demographic changes⁴. Recent studies have shown that the drug addicts registered for treatment and rehabilitation of various treatment centers are mostly adolescents and youth students⁵. In terms of initiating drug abuse a significant percentage of drug abuser (83%) has started using drug and other substances between 16-20 years followed by under 15 years⁶.

Drug abuse is associated with a variety of negative consequences, including school failure, and poor judgment which may put adolescents at risk for

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accidents, violence, unplanned and unsafe sex. These dangerous consequences of drug abuse on human life intensify the need for the prevention of drug abuse⁷.

In developing countries, 80 percent of young people are enrolled in schools⁸. Children spend their important time period in school. They can learn and develop own belief, value and vision from the information received and the activities they get involved in school. Therefore, the risk behaviors like drug abuse can be prevented by the necessary education at school⁹.

Objectives of the Study

The objective of this study was to find out the awareness of the adolescents regarding signs and symptoms and consequences of drug abuse before and after educational intervention and to determine the difference in the awareness score regarding the drug abuse between the pre-test and post-test among adolescents with and without educational intervention.

Methodology

The study followed pretest and post-test non equivalent group design¹⁰. The population of the study consisted of students who studying in class eight of two purposively selected private schools. Forty students from class eight from each setting were included in the study. The students from Gaurishankar Higher Secondary School were treated as the experimental group and students from Navajyoti Higher Secondary School were included in control group. The two schools were situated about one kilometer apart from each other that facilitated in the prevention of contamination to the control group from experimental group.

A semi-structured questionnaire was developed to measure the adolescents' awareness regarding drug

abuse. The first part of the questionnaire consisted of demographic information of the subjects and second part consisted of knowledge items related to drug abuse. Level of awareness was determined by scoring the responses of the subjects to knowledge items. Questionnaire was translated into Nepali.

The content validity of the instrument was established by seeking the opinion from psychiatric nurse specialist, teacher of nursing research and research advisor. The reliability of the instrument was established by pre-testing it on 8 adolescents studying in Diana Public English School at Koteshwor Kathmandu. Some open ended questions were changed to multiple choice questions based on the feedback from pre-testing.

Permission was obtained from the authorities of the two selected schools. Informed consent was obtained from subjects prior to using them in the study. The information from the subjects was collected using self-administered questionnaire both during pre-test and post-test. In the next day of pre-test, the educational intervention was given to subjects of experimental group while control group did not receive any intervention. Information on drug abuse, its signs and symptoms and consequences were given by the researcher on the basis of educational package. Lecture with active group participation method was used with the use of audio-visual aids like posters, pamphlets etc. After two weeks following intervention, the post test was done using the same tool to the same subjects who had participated in the pre-test.

Both descriptive and inferential statistics were used to analyze the data. The data was analyzed and reported in terms of frequency, percentage, mean and standard deviation. For hypothesis testing, Chi Square test, Z test were used and 'p' values were calculated.

Results

Table 1: Respondents' demographic characteristics

Demographic characteristics	Respondents	
	Experimental Group n = 40 Number (Percentage)	Control Group n = 40 Number (Percentage)
Age	Mean Age 14 years	Mean Age 14 years
Gender	o Male 21 (52.5)	24 (60)
	o Female 19 (47.5)	16 (40)
Ethnicity	o Brahmin 10 (25)	18 (45)
	o Chhetri 17 (42.5)	14 (35)
	o Newar 7 (17.5)	7 (17.5)
	o Tamang 3 (7.5)	1 (2.5)
	o Others (Rai, Tharu) 3 (7.5)	0 (0)
Religion	o Hindu 37 (92.5)	38 (95)
	o Buddhist 3 (7.5)	2 (5)
Family type	o Joint 11 (27.5)	16 (40)
	o Nuclear 29 (72.5)	24 (60)

Table 1 on respondents' characteristics shows that the age of the respondents varied from 13 - 16 years and mean age was 14 years in both the experimental and control group. Gender wise distribution revealed that the number of males were slightly higher than

females in both groups. Regarding ethnicity, both groups had Bramhan, Chhetri and Newar ethnic groups in different proportion and the most of the respondents belonged to Hindu religion. The majority of them belonged to nuclear families.

Table 2: Distribution of respondents' parents' education and occupation

Demographic characteristics	Experimental Group n = 40		Control Group n = 40	
	Number (Percentage)		Number (Percentage)	
Education of the Parents				
Father's Education				
o Illiterate	0 (0.0)		1 (2.5)	
o Primary	14 (35.0)		2 (5.0)	
o Secondary	14 (35.0)		9 (22.5)	
o Intermediate and above	12 (30.0)		28 (70.0)	
Mother's Education				
o Illiterate	12 (30.0)		4 (10.0)	
o Primary	15 (37.5)		8 (20.0)	
o Secondary	8 (20.0)		15 (37.5)	
o Intermediate	5 (12.5)		13 (32.5)	
Occupation of the Parents				
Father's Occupation				
o Service	22 (55.0)		28 (70.0)	
o Business	11 (27.5)		11 (27.5)	
o Farming	2 (5.0)		0 (0.0)	
o Foreign worker	2 (5.0)		0 (0.0)	
o Others	3 (7.5)		1 (2.5)	
Mother's Occupation				
o House wife	28 (70.0)		32 (80.0)	
o Service	4 (10.0)		8 (20.0)	
o Business	4 (10.0)		0 (0.0)	
o Farmer	4 (10.0)		0 (0.0)	

Table 2 reveals that the majority respondents' fathers in experimental group had education at primary or secondary level (35% in each), whereas in control group, majority (70%) of respondents' fathers had intermediate or higher level education. Regarding respondents' mother's education, in experimental group, 37.5 percent had primary level education and in control group, 37.5 percent had secondary level education.

This table also reveals the occupation of the respondents' father and mother. In both groups, majority of respondents' fathers (45% in experimental group and 70% in control group) were service holder. Regarding occupation of the respondents' mother, majority in both groups (70% in experimental group and 80% in control group) were housewives.

Table 3: Respondents' pre-test post-test knowledge about drug abuse signs and symptoms

Sign and Symptoms	Experimental Group n = 40			Control Group n = 40		
	Pre-test	Post test	X ² p	Pre-test	Post test	X ² p
	No (%)	No (%)	Value	No (%)	No (%)	Value
Decrease body weight	32 (80)	34 (85)	0.556	30 (75)	31 (77.5)	0.793
Late getting up in the morning	34 (85)	34 (85)	1.000	32 (80)	33 (82.5)	0.775
Increased irritability and aggressiveness	31(77.5)	36 (90)	0.130	30 (75)	29 (72.5)	0.799
Loss of interest on daily activities	26 (65)	32 (80)	0.084	21 (52.5)	28 (70)	0.108
Avoidance of the family and social gathering	30 (75)	33 (82.5)	0.412	32 (80)	33 (82.5)	0.775
Mean Score	3.82	4.22	0.050*	3.62	3.85	0.378*
Standard Deviation	0.93	0.91		1.05	1.21	

* Z 'p' Value

Respondents' knowledge regarding signs and symptoms of drug abuse (table 3) reveals that the correct responses for different signs and symptoms in experimental group ranged from 65 to 85 percent in the pre-test and it ranged from 82 to 90 percent in the post-test. Similarly, the responses of the control group ranged from 52.5 to 80 percent in the pre-test and 70 to 82.5 percent in the post-test.

In experimental group, respondents' mean knowledge scores were 3.82 and 4.22 and standard deviations were 0.93 and 0.91 in pre-test and post-test respectively. In control group, mean knowledge

scores were 3.62 and 3.85 and standard deviations were 1.05 and 1.21 in pre-test and post-test respectively.

The difference in mean score knowledge between pre-test and post-test as a whole was calculated by using 'Z' test. In experimental group, a significant difference was found ($p < 0.05$). In control group, difference was insignificant ($p = 0.378$). So it can be concluded that educational intervention was effective in increasing the knowledge among the respondents about signs and symptoms of drug abuse.

Table 4: Respondents' pre-test and post-test knowledge about drug abuse: Consequences

Consequences	Experimental Group n = 40			Control Group n = 40		
	Pre-test	Post test	X ² p	Pre-test	Post test	X ² p
	No (%)	No (%)	Value	No (%)	No (%)	Value
Malnutrition and infections	7 (17.5)	20 (50)	0.002	4 (10.5)	10 (25.5)	0.077
Loss of concentration	26 (65)	36 (90)	0.007	16 (40)	29 (72.5)	0.0001
Involve in violence and crime	15 (37.5)	38 (95)	0.0001	23 (57.5)	22 (55)	0.822
Become phobic and anxious	14 (35)	20 (50)	0.175	18 (45)	14 (35)	0.502
High chance of getting HIV with IV drug use	37 (92.5)	39 (97.5)	0.306	37 (92.5)	40 (100)	0.077
Mean Score	2.47	3.82		2.45	2.87	
Standard Deviation	0.96	0.78	0.0001*	0.95	0.96	0.052*

*Z 'p' Value

Respondents' knowledge regarding consequences of drug abuse (table 4) reveals that the correct responses of the experimental group ranged from 17.5 to 92.5 percent in the pre-test and 50 to 97.5 percent in the post-test. Similarly the responses of the control group, ranged from 10.5 to 92.5 percent in the pre-test and 25.5 to 100 percent in the post-test.

In experimental group, the respondents' mean knowledge scores were 2.47 and 3.82 with standard deviations 0.96 and 0.78 in pre-test and post-test respectively. In control group, mean knowledge scores were 2.45 and 2.87 with standard deviations 0.95 and 0.96 in pre-test and post-test respectively.

The difference between pre-test and post-test knowledge scores were calculated by using chi

square test and 'p' values are shown in the table. In experimental group, responses on consequences malnutrition and infections, loss of concentration, and involve in violence and crime were significant as the p values are less than 0.05 (p values 0.002, 0.007, and 0.0001 respectively). In control group, knowledge on consequence as loss of concentration was significant ($p = 0.0001$).

Further more, the difference in mean score on consequences between pre-test and post-test was calculated by using 'Z' test. In experimental group, significant difference was found ($p < 0.01$). In control group, p value was 0.052, so it was also significant. Even though, significant difference was found in both groups, difference in experimental group was more significant.

Table 5: Comparison of experimental and control groups on pre-test and post-test knowledge on drug abuse as a whole

Knowledge Items on Drug Abuse	Pre-test				'Z' p Value	Post-test				
	Expt. Gr. n = 40		Cont. Gr. n = 40			Expt. Gr. n = 40		Cont. Gr. n = 40		
	\bar{X}	S	\bar{X}	S		\bar{X}	S	\bar{X}	S	
Sign/symptoms	3.82	0.93	3.62	1.05	0.371	4.22	0.91	3.85	1.21	0.123
Consequences	2.47	0.96	2.45	0.95	0.908	3.82	0.78	2.87	0.96	0.001
Grand mean	3.14		3.03		>0.05	4.02		3.36		<0.05
G.S.D.	0.89		1.00			0.71		1.19		

 \bar{X} : Mean

S : Standard deviation

G.S.D : Grand Standard Deviation

Comparison of pre-test and post-test knowledge as a whole shows that (table 5) the grand mean of the mean knowledge about signs and symptoms test and consequences of drug abuse in the pre-test were 3.14 in experimental group and 3.03 in control group and grand standard deviation of the standard deviations were 0.89 in the experimental group and 1.00 in the control group ($p > 0.05$) revealing non

significant knowledge difference in the pre-test. In the post-test, grand mean of the mean knowledge on those items were 4.02 in the experimental group and 3.36 in the control group and grand standard deviation of the standard deviations were 0.71 in the experimental group and 1.19 in the control group ($p = <0.05$), showing the significant different in knowledge level in the post-test.

Table 6: Comparison of pre-test and post-test overall knowledge of experimental and control groups on drug abuse

Knowledge Items on Drug Abuse	Experimental Group n = 40				'Z' p Value	Control Group n = 40				
	Pre-test		Post-test			Pre-test		Post-test		
	\bar{X}	S	\bar{X}	S		\bar{X}	S	\bar{X}	S	
Signs and symptoms	3.82	0.93	4.22	0.91	0.057	3.62	1.05	3.85	1.21	0.378
Consequences	2.47	0.96	3.82	0.78	0.001	2.45	0.95	2.87	0.96	0.052
Grand mean	3.14		4.02		>0.05	3.03		3.36		<0.05
G.S.D.	0.89		0.71			1.00		1.19		

 \bar{X} : Mean

S : Standard deviation

G.S.D : Grand Standard Deviation

Comparison of pre-test and post-test knowledge as a whole in the experimental and control groups (table 6) indicates that, the grand mean of the mean knowledge on signs and symptoms, and consequences of drug abuse in the experimental group were 3.14 in the pre-test and 4.02 in the post-test and grand standard deviation of the standard deviation were 0.89 in the pre-test and 0.71 in the post-test ($p < 0.05$). Likewise, in control group, grand mean and standard deviation were 3.03 and 1.00 in the pre-test and 3.36 and 1.19 in the post-test and grand standard deviations of the standard deviations were 1.00 in the pre-test and 1.19 in the post-test ($p > 0.05$).

Therefore, these findings proved the hypothesis that stated "the adolescents who are exposed to educational intervention will score higher in awareness test than adolescents who are not exposed to it".

Discussion

The educational intervention was successful in increasing the knowledge on the signs and symptoms of drug abuse. The knowledge on signs and symptoms are important as the adolescents need to be alert to changes in the peer adolescent's behavior

and appearance related to drug abuse. Recognition of signs and symptoms of drug abuse may help in seeking early treatment¹¹.

Regarding the knowledge of respondents about consequences of drug abuse, 92.5 percent of both groups' respondents had adequate knowledge about intravenous drug abuse and HIV infection in the pre-test. The difference in the mean knowledge scores about consequences of drug abuse between pre-test and post-test was significant in both groups ($p < 0.01$ in experimental group and 0.052 in control group). The increased knowledge level in control group could be the self stimulated learning to know about the consequences of drug abuse.

In comparison of pre-test and post-test grand mean knowledge of two groups, the difference was not significant in the pre-test ($p > 0.05$) and was significant in the post-test ($p < 0.05$). Shope et. al. (1996) conducted classroom drug prevention education among middle school students with control group. The findings of the study also revealed that educational intervention increased the knowledge among students about drug abuse¹².

Conclusion

From the above discussion, it is concluded that educational intervention plays a significant role in increasing awareness about drug abuse among school going adolescents. If they are aware about different preventives measures and consequences of drug abuse, their chance of involvement in drug abuse might be reduced.

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