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Research Article

Effectiveness of Structured Teaching Programme on Knowledge and Attitude Regarding Prevention and Control of Alcohol Use among Undergraduate College Students

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Abstract

Introduction: Use of alcohol among college students is a worldwide problem. Alcoholism is gradually tearing down the college students irrespective of gender. Incidents of many diseases are preventable through changes in health behavior by adopting health education strategies for educating the students.

Objectives: The objectives of the study were to evaluate the effectiveness of the structured teaching program (STP) on knowledge and attitude regarding prevention and control of alcohol use among undergraduate college students.

Materials and Methods: One group pre-test and post-test design was used on 163 undergraduate college students at Shekhawati P.G. College Kanwat, Sikar (Rajasthan), using Stratified random sampling. STP, structured knowledge questionnaire and attitude scale were used to collect the data.

Results: Study found a statistically significant (t = 41.60, df = 162, P = 0.0153) increase in mean knowledge score (mean difference of 9.57) from mean pre-test knowledge score of 10.14, SD ± 2.09 to post-test knowledge score of 19.71, SD ± 2.18 after administration of the STP. Similarly, post-exposure to the STP a statistically significant (t = 19.47, df = 162, P = 0.0326) improvement in attitude score, from pre-test attitude scores of 68, SD ± 8, to mean post-test attitude score 77.97, SD ± 5.78, was found with mean difference of 9.97. It shows that STP was effective in enhancement of knowledge and attitude of undergraduate college students. The post-test knowledge and attitude score showed statistically significant correlation (r = 0.73, df = 161, P = 0.00001).

Conclusion: Systematically prepared STP on prevention and control of alcohol use was effective in improving the knowledge and attitude of undergraduate college students.

Keywords: Alcohol use, Attitude, Control, Knowledge, Prevention, Structured teaching programme, Undergraduate

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Introduction

Globally, alcohol consumption is a significant public health concern. Alcoholism is one of the most important risk behaviors among young adults, including university students. At present, 26.5% of the global population between the ages of 15 and 19 consumes alcohol.[1] The use of alcohol is present in all age groups. However, the greater concern is the consumption by adolescents and youth. This age group entering the university

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acquires social mobility from specific rules where behaviors are built from the process of social comparison. Thus, the teenager tends to model his actions searching similarities with the reference group, in this case, university students, who overestimate alcohol use. Social remodeling intensifies when the individual is presented with little experience in a new place, which occurs on entry to the university.[2]

Alcoholism has taken their toll on the college student, and this is turning out to be a major social predicament in the state. Many students are trapped into use of alcohol and spoilt their life which affects their career.[3] Underage drinkers are at risk of injury from events such as car crashes, burns, falls, drowning, and alcohol and drug poisoning that can require hospitalization or result in death.[4] One-third of the users began drinking before 20 years of age. About half of the users had strained relations with their family members and neighbors both. Many peoples complain for reasons behind alcohol consumption are stress. India is a developing country, peoples have different type of stress, for example, family stress, occupational, and job related stress. In this condition, when person cannot deal with stress and want to suppress the stress, start alcohol consumption.[5] It is a major life-threatening problem affecting the individual college student, his family and society in numerous adverse ways.[6] Alcohol misuse was reported as a strong predictor of students' mental health. Problematic alcohol use contributes to a significant proportion of students' engagement in risky sexual behavior, poorer executive functions, and poor academic achievement.[7]

Alcohol consumption and related problems have risen substantially in many Asian countries including India over the last several years. Alcohol related disorders are increasingly being reported in India. The Hindustan Times reported that 5% of Indians can be classified as alcoholics which projects that at least 5 million people are addicted to alcohol. Studies conducted by the De-addiction Centre at the All India Institute of Medical Sciences showed that every 5th teenager between 15 and 19 age groups takes alcohol. 300,000 are addicted and another one lakh need medical attention for alcohol related disorders.[8] A significant lowering of age at initiation of drinking was found in Karnataka which also showed a drop from a mean age of 28–20 years between the birth cohorts of 1920–30 and 1980–90. He asserted that alcohol consumption had visibly increased in the nontraditional segments of urban women and young people, with a noticeable upward shift in rates of drinking among urban middle and upper socio-economic sections.[9]

Alcohol is the third leading preventable risk factor for the global burden of disease and responsible for 3.3 million deaths (5.9% of all global deaths). Alcohol misuse is the fifth leading risk factor of premature death globally; among people between the ages of 15 and 49 years, it is the first leading cause. Alcohol misuse was reported as a strong predictor of students' mental health in which, it was attributable for increased depressive symptoms accompanied with drinking to cope, attempted suicide and self-harm behaviors, and aggressive behaviors.[10] Children are the future of the country. It is necessary for us to prevent young to become alcoholic. Lack of knowledge regarding prevention and risk factors of alcohol use are one of the key factors of careless drinking. Awareness about the ill-effects of alcohol will mold the attitude of the young students and help them refrain from activities, injurious to their health and career as well. The importance of adopting health education strategies for educating the undergraduate through various mass media regarding the risk factors of alcohol use and adapting safe health practices. To sensitize the undergraduate students "A study to evaluate the effectiveness of structured teaching programme (STP) on knowledge and attitude regarding prevention and control of alcohol use among undergraduate college students was under taken."

Materials and Methods

A one group pre-test, post-test design, and quasi-experimental study to evaluate the effectiveness of STP on knowledge and attitude regarding prevention and control of alcohol use among undergraduate college students was carried out at Shekhawati P. G. College, Kanwat, district Sikar of Rajasthan, India.

Sample and sampling

A stratified random sampling was used to select 163 samples.

Variables

Knowledge, attitude, STP, and socio-demographic variable.

The tools consisted of three sections

Section I: Included socio-demographic data such as age, sex, stream of study, year of study, type of family, educational status of parents, occupation of parents, monthly family income, living arrangement, domicile, and order of sibling in the family.

Section II: Structured knowledge questionnaire consisted of 30 MCQs on the prevention and control of alcohol use.

Scoring: One point to each correct answer only. The possible range of knowledge score was 0–30. The knowledge score was categorized as Good (21–30) Fair (11–20) and Poor knowledge (1–10).

Section III: Attitude scale -a 5 point Likert scale comprised of 20 statements. Each item had five possible responses, that is, strongly agree (SA), Agree (A), Undecided (UD), Disagree (DA), and strongly disagree (SD). Each item was scored on a scale of 5 (SA) to 1 (SD). The possible range of attitude score was 20-100. Score was categorized as strongly positive (81–100), positive (61–80), neutral (41–60), and negative attitude (20–40).

The STP was developed by reviewing the relevant literature. The content outline of STP covers the following areas-alcohol, its absorption and metabolism, factors associated with alcohol use. alcohol use and its withdrawal symptoms, effect of alcohol, prevention and control of alcohol use and alcohol laws in India. The STP includes Power point presentation on prevention and control of alcohol use Pamphlet, Banners, and Flash cards.

To ensure the content validity of the tools, these were given to nine experts, to judge content based on objective, relevance,

adequacy of content, organization, clarity, and understanding. Expert's suggestions were included to finalize the tools. Reliability of the structured knowledge questionnaire and attitude scale was established at 0.82 and 0.86, using test retest method and Cronbach alpha, respectively.

Table 1: Frequency and percentage distribution of sample characteristics (*n*=163)

Sample characteristics	Frequency	Percentage
Age (in years)		
16–17 years	47	28.83
18–19 years	78	47.85
20–21 years	38	23.32
Sex		
Male	84	51.53
Female	79	48.47
Stream of study		
Science	58	35.58
Arts	50	30.67
Commerce	55	33.75
Second year	48	29.46
Third year	60	36.81
Type of family		
Joint	78	47.85
Nuclear	85	52.15
Educational status of father		
Illiterate	25	15.34
Secondary	45	27.61
Higher secondary	29	17.79
Graduation	38	23.31
Postgraduation and above	26	15.95
Educational status of mother		
Illiterate	85	52.15
Secondary	62	38.03
Higher secondary	10	6.14
Graduation	4	2.45
Post-graduation and above	2	1.23
Occupation of father		
Government job	33	20.25
Private job	44	26.98
Agriculture	57	34.97
Businessman	19	11.66
Contractual job	10	6.14
Occupation of mother		
Government job	3	1.84
Private job	15	9.20
Agriculture	57	34.97
Home maker	88	53.99
Monthly income of family (in rupees)		
Below 10000	33	20.25
10001–20000	37	22.70
20001–30000	39	23.93
Above 30000	54	33.12
Living arrangement - Day scholar		
With parents	74	45.40
With friends	21	12.88
Alone	9	5.52
Living arrangement - Hosteller		
With room mate	37	22.70
Alone	22	13.50
Domicile		
Rural	128	78.53
Urban	35	21.47
Sibling order		
Eldest	54	33.13
Second	59	36.20
Third	36	22.09
Youngest	14	8.58

Ethical approval was taken from the principal of Shekhawati P. G. College, Kanwat, district Sikar of Rajasthan. The purpose of the study was explained and written informed consent was obtained from the participants of the study. Confidentiality and anonymity were maintained throughout the study.

The study was conducted from December 16, 2019, to January 6, 2020. On day 1, the pretest was conducted with structured knowledge questionnaire and Attitude scale followed by administration of the STP. Pre-test took 40–45 min. The STP was administered with the help of power point presentation, flash cards, and banners. Participants were asked to clarify any doubt if they had. It took 45 min to complete.

On day-8, post-test was conducted, which took 40–45 min. A pamphlet prepared by the researcher on prevention and control of alcohol use was distributed after the post-test among participants.

The final study data were entered in master data sheet. There was sample mortality of 17 samples during the study due to COVID-19 (initially 180 samples were selected for the study).

Statistical analysis

The data were analyzed using IBM SPSS version 24. The data were presented in the tables and figures using frequency, percentage, mean, median, standard deviation, t-test to compare the means, Chi-square test to find out association and Karl Pearson co-efficient of correlation to establish relationship among the variable were used to show the results of the study.

Results

Table 1 shows that maximum number (47.8%) of students were of 18–19 years. Majority of students (52.2%) had nuclear family. Majority of the mothers (53.3%) were illiterate whereas 54.5% were home maker and 34.4% were in agriculture activities. Families of 33.6% students had income above rupees 30,000 per month. Majority of students (63.33%) were day scholar whereas 36.66% were hosteller. Maximum of the day scholar (44.4%) were living with their parents. Majority (77.8%) of students were residing in rural area.

Table 2 shows statistically significant (t = 41.60, df = 162, P = 0.0153) increase in mean knowledge score with mean difference of 9.57, from mean pre-test knowledge score of

Table 2: Pre-test and post- test knowledge scores of undergraduate college students (*n*=163)

	Knowledge scores (Maximum score=30)			Attitude scores (Maximum score=100)		
	Mean	SD	Median	Mean	SD	Median
Pre-test	10.14	±2.18	10	68	±8	70
Post-test	19.71	±2.09	19	77.97	±5.78	79
Mean difference	9.57			9.97		
SEM	0.23			0.51		
"t" Value	41.60			19.47		
"*P*" Value	0.0153*			0.0326*		

*Statistically significant at 0.05 level of significance.

10.14, SD ± 2.09 to post-test knowledge score of 19.71, SD ± 2.18 after administration of the STP. Similarly, post-exposure to the STP a statistically significant (t = 19.47, df = 162, *P* = 0.0326) improvement in attitude score was found with mean difference of 9.97, from pre-test attitude scores of 68, SD ± 8, to mean post-test attitude score 77.97, SD ± 5.78. It infers that STP was effective in equal and homogenous enhancement of knowledge and attitude of undergraduate college students regarding prevention and control of alcohol use.

Table 3: Frequency (f) and percentage (%) distribution of undergraduate college students according to their categories of knowledge and attitude score (*n*=163)

Variables	Categories with class interval	Pre-test		Post-test	
		f	%	f	%
Knowledge score (Maximum Possible score=30)	Poor Knowledge (0–10)	99	60.74	0	0.0
	Fair Knowledge (11–20)	64	39.26	96	58.90
	Good Knowledge (21–30)	0	0.0	67	41.10
Attitude score (Maximum possible Score-100)	Negative attitude (21–40)	0	0.0	0	0.0
	Neutral attitude (41–60)	33	20.25	7	4.30
	Positive attitude (61–80)	122	74.85	92	56.44
	Strongly positive attitude (81–100)	8	4.9	64	39.26

Table 3 shows that post-exposure to STP, majority of the undergraduate students' knowledge score was in fair (58.90%) and good (41.10%) category. Similarly post-exposure to STP majority of undergraduate students' attitude was in positive (56.44%) and strongly positive (39.26%) category.

Table 4 shows that post-test knowledge scores of undergraduate students on prevention and control of alcohol use were independent of socio-demographic variables. A significant association was found between post-test attitude scores and

Table 4: Association between post-test knowledge and attitude score of undergraduate college students on prevention and control of alcohol use with selected variables (*n*=163)

Socio-demographic Variables	Knowledge scores		df	χ^2	*P*	Attitude scores		df	χ^2	*P*
	Below median	Above median				Below median	Above median			
Gender										
Male	42	41	1	0.02	0.879	50	34	1	1.37	0.241
Female	41	39				41	38			
Stream of study										
Science	33	25				37	21			
Arts	29	21	2	3.47	0.176	27	23	2	6.71	0.035
Commerce	21	34				27	28			
Year of study in stream										
First year	24	31				30	25			
Second year	28	20	2	1.08		30	18	2	2.96	0.227
Final year	31	29				31	29			
Type of family										
Joint	43	35	1	0.43	0.511	41	37	1	5.47	0.019
Nuclear	40	45				50	35			
Father's qualification										
Illiterate	16	9				14	11			
Secondary	24	21	4	4.82	0.306	26	19	4	5.23	0.264
Higher secondary	9	20				14	15			
Graduation and above	34	30				37	27			
Mother's qualification										
Illiterate	42	43				47	38			
Secondary	34	28	4	1.44	0.837	37	25	4	5.65	0.226
Higher secondary	4	6				4	6			
Graduation and above	3	3				3	3			
Occupation of father										
Government job	16	17				21	12			
Private job	24	30	4	2.93	0.569	28	26	4	4.41	0.353
Agriculture	31	26				32	25			
Businessman	12	7				10	9			
Occupation of mother										
Government job	1	2				1	2			
Private job	5	10	3	1.24	0.743	7	8	3	3.43	0.329
Agriculture	29	28				32	25			
Home maker	48	40				51	37			
Monthly family income										
Below Rs. 10000	17	16				16	17			
Rs. 10001–20000	19	18	3	1.37	0.712	21	16	3	16.7	0.0008
Rs. 20001–30000	18	21				20	19			
Above Rs. 30000	29	25				34	20			

*Statistically significant at 0.05 level of significance.

Table 5: Correlation between post-test knowledge and attitude scores (*n*=163)

Variables	Mean	SD	Pearson's "r"	*P* value
Knowledge scores	19.71	2.59		
Attitude scores	77.97	5.79	0.73*	0.00001

*Statistically significant at 0.05 level of significance.

stream of study ($P = 0.035$), type of family ($P = 0.019$), and economic status of the family ($P = 0.0008$).

Table 5 shows statistically significant positive correlation (r = 0.73, df = 161, $P = 0.00001$) between post-test knowledge and attitude score which indicates that attitude became more positive with enhancement in the knowledge of undergraduate college students regarding prevention and control of alcohol use.

Discussion

The present study reported a statistically significant (t = 41.60, df = 162, $P = 0.0153$) increase in mean knowledge score (mean difference of 9.57) from mean pre-test knowledge score of 10.14, SD ± 2.09 to post-test knowledge score of 19.71, SD ± 2.18 after administration of the STP. Similarly, post-exposure to the STP, a statistically significant (t = 19.47,df = 162, $P = 0.0326$) improvement in attitude score, from pre-test attitude scores of 68, SD ± 8, to mean post-test attitude score 77.97, SD ± 5.78, was found with mean difference of 9.97. It shows that STP was effective in enhancement of knowledge and attitude of undergraduate college students. Statistically significant positive correlation (r = 0.73, df = 161, $P = 0.00001$) between post-test knowledge and attitude score was found which indicates that attitude became more positive with enhancement in the knowledge. The study found that STP was effective in enhancement of knowledge and attitude of undergraduate college students regarding prevention and control of alcohol use. These findings are consistent the study that STP on prevention and control of alcohol use was effective in increasing the knowledge post-test mean score 26.90 was higher than the pre-test 12.93 with mean difference of 13.97 (t = 18.94, $P = 0.0001$) of undergraduate college students.[11] The present study was also supported that after the intervention (STP), there was statistically significant ($P < 0.05$) increase in post-test knowledge score (24.03) from pre-test knowledge of (8.35). Study reveals that proper education (STP) enhances knowledge among students.[12] Similarly, it reported that adolescents had inadequate knowledge as only 3% of adolescents had excellent knowledge regarding alcoholism while 21% had good, 58% had average, and 18% had poor knowledge and with respect to attitude 26% of adolescents had unfavorable attitude, 30% had favorable, and only 44% had very favorable attitudes.[13] It was also reported that STP was effective in improving the knowledge of the pre-university students regarding selected adolescent behavioral problems and its prevention. The study revealed that the mean pre-test knowledge score was 14.40 whereas post-test score was 32.7. This high mean difference 18.3 showed the effectiveness of STP.[14] Similarly a study found that there was significant increase in knowledge score after exposure to STP on substance abuse. There was statistically significant association between the level of knowledge gain and fathers occupation ($P = 0.034$). these finding are similar to the present study that a significant association was found between post-test attitude scores and stream of study ($P = 0.035$), type of family ($P = 0.019$), and economic status of the family ($P = 0.0008$).[15]

Conclusion

It is evident from the present study that systematically prepared STP on prevention and control of alcohol use was effective in improving the knowledge and influencing the attitude of undergraduate college students. Incidents of many diseases are preventable through changes in health behavior. This reveals the importance of adopting health education strategies for educating the students through various mass media regarding the risk factors of alcohol use and adapting safe health practices. Positive correlation between the knowledge and attitude of undergraduate college students emphasizes the importance of education in primary prevention of alcohol use in different levels of professional education to develop positive attitude toward the prevention of alcohol use. Mental health should be encouraged to use them.

Limitation

- The present study was limited to sample size of 163 and restricted to one setting, thus posing restriction to make a broader generalization.
- Long term effect of the intervention was not studied due to time restrictions.
- The information collected from undergraduate students was based on their expressed responses.

Recommendation

- A true experimental study can be carried out.
- Similar studies can be conducted in different settings and with larger sample size to generalize the findings.
- A similar study can be done in the area of drug abuse. A similar study can be conducted in various other groups such as school students, office workers, teachers, other professional groups as well as in families.

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Conflict of Interest

The authors declare no conflicts of interest.

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