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Research article

Effectiveness of teaching programme on smokeless tobacco use and its prevention among adolescent boys

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Abstract

There has been a raising trend in tobacco use, more in smokeless forms in India; tobacco is the major cause of adolescent's death in the world. Nearly 5 million people die due to tobacco use every year and this figure will increase to 10 million, by 2020 with 70% of them occurring in developing countries. To assess the knowledge and determine the effectiveness of teaching plan regarding prevention of smokeless tobacco use among adolescent boys. One group pre-test- post-test design was adopted to collect data from 60 PU boys using purposive sampling technique who completed sampling criteria. Majority 66.6% of respondents belongs to age 16 yrs, 83.33% studying in 1st PUC, 58% resides in urban areas, and 63.33% of respondents had family history of tobacco use. Respondent's tobacco profile: Majority 58.4% of respondents use tobacco chewing, 65.8% initiated chewing at the of 16-18 yrs, 51.5% uses 2 times a day, 51.5 % chews for pleasure, 34.4% of respondents were influenced by their friends. The result revealed that the overall mean post test score (27.6) is higher than pre test (18.2) with enhancement of 9.4 which is found to be effective. Behaviour change communication should be established between the health workers and the adolescents to break down the habit of the consumption of tobacco/gutka.

Keywords: smokeless tobacco, nursing, boys, teaching programme.

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1. Introduction

Tobacco use is one of the leading preventable causes of morbidity and mortality in the world. Tobacco use usually starts in adolescence and continues into adult life. Adolescents and young adults of colleges are often targeted by tobacco industry for marketing and being influenced by television, cinema, and advertisements. The other most common reasons cited for initiation are peer pressure, parental tobacco habits and pocket money received. Adolescents are increasingly exposed to changing life styles that have a negative impact on health [1].

Smokeless tobacco is consumed without burning the product and can be used orally and through nasal route. Oral smokeless tobacco products are placed in the mouth, cheek or lip and sucked or chewed [2]. Tobacco is used in a number of smokeless forms in India which include betel quid chewing, mishri, khaini, gutka, snuff and as an ingredient of pan masala [2].

The prevalence of tobacco use in India is increasing but there are considerable changes in the methods of its use. Tobacco use was significantly high in adolescent boys, when compared to girls [1]. The most susceptible period for tobacco in India is during adolescence and early adulthood (15-24) yrs. According to global youth in Maharashtra, 12.9% adolescents (13-15) yrs are consuming some tobacco product [3].

Tobacco is estimated to have killed100 million people in the 20th century and continues to kill

5.4 million people every year and this figure is expected to rise to 8 million per year by 2030, 80% of which will occur in the developing countries [4].

Some developed countries enforced smoking bans are a recent influence on the use of smokeless tobacco. In response to these bans tobacco companies are targeting their advertising strategies in the developing countries. There has been a rapid increase in trade and use of smokeless tobacco products in recent years in the country which is a matter of concern [5].

Smokeless tobacco is highly addictive because it contains nicotine, which researchers consider to be more addictive. There is sufficient evidence that the use of smokeless tobacco causes cancer in humans as it contains carcinogens which causes cancers of oral cavity and the risk of other head and neck cancers [6].

More than 90% of the adolescents were aware of the hazards of tobacco use but most of them either have incomplete or incorrect knowledge [7].

A descriptive study was conducted among students to assess the knowledge and attitude and practices regarding chewing tobacco among the students of selected colleges Mangalore with a view to develop self instructional module. The results showed that most 58% PUC students had poor knowledge [8].

The prevention activity needs to focus on behaviour change through group or personal approach, rather than just giving information through mass approach like community education, organizing events, competitions and skill building for adolescents [9].

A cross sectional study conducted on tobacco use and awareness in the adult population of Tunisia showed that there were gaps in the awareness of tobacco use and its hazards [10].

The use of smokeless tobacco is rampant in developed countries. Lack of awareness and incomplete knowledge about the harmful effects of smokeless tobacco are the main obstacles. Benefits of early educational programs have been well reported as effective for students. Hence the investigator felt that there is an urgent need to educate the adolescent boys about the consequences of smokeless tobacco use and its prevention in curbing the problem.

Materials and methods:

An evaluative approach with one group pre-test and post-test experimental design was used. With the objectives i) to assess the knowledge of adolescents regarding prevention of smokeless tobacco use among adolescent boys, ii) to determine the effectiveness of teaching plan on smokeless tobacco use in terms of gain in knowledge scores and iii) to find out the association between pre test knowledge scores of adolescents regarding prevention of tobacco use with their selected demographic variables. The study was delimited to adolescent boys. Purposive sampling technique was used to select the sample. Adolescents between the age group of 16-18 years and who are studying 1st and 2nd year of PU in selected PU college (BLDEA'S KCP science college) Bijapur. The sample size of present study comprises of 60. The independent variable in this study was teaching plan on smokeless tobacco use and dependent variable was knowledge level of adolescent boys on smokeless tobacco.

The content of teaching plan was prepared based on extensive review of literature and organized in various sub topics based on specific objectives. Data was collected by using self administered questionnaire and the tool consists of 2 sub sections: section-A socio demographic variables (17 items on age, educational status, religion, type of family, place of residence, educational status of parents, parental occupation, family income, family history of use of tobacco, previous knowledge of tobacco, and questions on tobacco profile): section-B: self structured on smokeless tobacco use items (general information, causes, effects and prevention). On the first day, pre test was administered after taking consent from the samples. On the same day teaching plan was intervened to the selected samples. After 7 working days, post test was conducted by using same questionnaire. The effectiveness of teaching program was determined by comparing the pre test and post test scores on the level of knowledge of smokeless tobacco use and its prevention.

Results

Table 1 (a): Baseline characteristics of the respondents, N (60).

Variables	Group	Frequency	%
Age in year	16	40	66.6
	17	10	16.7
	18	10	16.7
Educational qualification	PUC I	50	83.33
	PUC II	10	16.67
Religion	Hindu	40	66.66
	Muslim	15	25
	Christian	05	8.34
Type of family	Nuclear family	25	41.66
	Joint family	13	21.67
	Extended family	14	23.33
	Single parent family	08	13.34
Residence	Urban	35	58
	Rural	25	42
Educational status of parent	High school	10	16.66
	Graduation	32	53.34
	Post-graduation	18	30
Occupation of parent	Government job	25	41.66
	Private job	20	33.34
	Self employed	15	25
Family income	< Rs 5000	20	33.4
	Rs 5001-10000	30	50
	Rs 10,001-15,000	05	8.3
	Rs >15,001	05	8.3
Pocket money received	Rs 250-500	35	58.33
	Rs 501-1000	20	33.34
	Rs 1001-1500	05	8.33
Family history of tobacco use	Yes	38	63.33
	No	22	36.67
Previous knowledge on topic	Yes	25	41.7
	No	35	58.3
Specify the source of knowledge	Attend awareness program	00	00
	News paper/ magazine	06	10
	TV, computer	19	31.7
	No source	35	58.3

Majority 66.76% of respondents belongs to age 16 years, 83.33% studying in 1st PUC, 66.66% belongs to Hindu religion, 41.66% from nuclear family, 58% resides in urban areas, 53.34% of respondents parents studied up to graduation, 41.66% of respondents parents does government job, 50% of respondents family income ranges between Rs 5001- 10000, 58.33% of respondents receive pocket money ranges between Rs 250-500, 63.33% of respondents had family history of tobacco use, 58.3% of respondents had no source of previous knowledge.

Table 1(b)-Tobacco Profile, N (35)

Variables	Group	Frequency	%
Do you use tobacco	Yes	35	58.4
	No	25	41.6
Initiation of tobacco use	13-15	12	34.2
	16-18	23	65.8
Frequency of tobacco use	Once a day	05	14.3
	2 times a day	18	51.5
	More than 3 times a day	10	28.5
	weekly	02	5.7
Tobacco products gives	Pleasure	18	51.5
	Shows you grown up	02	5.7
	Relives tension	10	28.5
	Increases friendship	05	14.3
Tobacco use was influenced by	Parents	10	28.5
	Relatives	05	14.3
	Friends	12	34.4
	Advertisements	8	22.8

this table depicts the respondents tobacco use, out 60 samples 35 samples found to use tobacco

and they responded for questionnaire on tobacco profile which helps to implement teaching plan effectively.

Majority 58.4% of respondents use tobacco chewing, 65.8% initiated chewing at the of 16-18 yrs, 51.5% uses 2 times a day, 51.5 % chews for pleasure, 34.4% of respondents were influenced by their friends.

Table 2- pre test and post test level of knowledge about smokeless tobacco use and its prevention among adolescent boys. (n=60)

SN	Level of knowledge	Pre test		Post test	
		Frequency	Percentage	Frequency	Percentage
1	Inadequate	16	26.67	00	00
2	Moderate	34	56.66	11	18.34
3	Adequate	10	16.67	49	81.66
	Total	60	100	60	100

The above table reveals the pre test and post test knowledge about smokeless tobacco use and its prevention among respondents.

Majority 56.66 percent respondents were having moderate knowledge, 26.67 percent having inadequate knowledge and 16.6 percent were having adequate knowledge in pre test where as in post test majority 81.66 percent having adequate knowledge and 18.34 percent having moderate knowledge.

Discussion

The findings of the study have been discussed with reference to the objectives and hypothesis stated and with findings of other studies under the following sections.

I. Findings related to the socio demographic profile of the respondents: the results of the study supported by,
II.

- Surya Wanshi SL showed that tobacco chewing was more prevalent among the age group of 17-19 yrs [11].
- The cross- sectional study conducted on prevalence of smoking and tobacco chewing among adolescents by Sinha DN, et al, revealed that 33.12% of the adolescents were addicted with one or other type of tobacco chewing and majority of addicted adolescents were in the age group of 17-19 years [12].
- A cross- sectional study was conducted in three towns in Karachi: Pakistan to investigate the prevalence of factors associated with use of tobacco among 770 high school adolescents male. Prevalence of smokeless tobacco use (gutka, snuff) was 16.1% on multiple regression analysis, the factors related to family history of tobacco use, use of betel acid and use of arecanut [13].
- The cross- sectional study on tobacco use among adolescents and the influence of role models in Delhi, by Jayant k, Notani PN, Gultani SS, showed that tobacco use was found to be significantly associated with smoking by parents, brothers, best friends and peer group influence, education status, easy availability and belonging to nuclear family [14].
- Similar findings were found in a study conducted by Shukla S, in Mangalore where most of the adoloscents70%belonged to PUC, 92% were Hindus, parents 90% working in private sector, 82% of students belonged to nuclear family, 22% of them had income between Rs 5001-10,000 and 38% got information from mass media [15].
- The above research articles were similar to the findings obtained by the researcher with respect to age, religion, income, family history.

III. Findings related to knowledge of smokeless tobacco use and its prevention: the results supported by,

Majority 56.66 percent respondents were having moderate knowledge, 26.67 percent having inadequate knowledge and 16.6 percent were having adequate knowledge in pre test.

Table 3- Distribution of respondents according to pre test and post test area wise knowledge scores

SN	Aspects of knowledge	No. of items	Pre-test		Post-test		Enhancement	Enhancement %
			Mean	Mean %	Mean	Mean %		
1	General information	9	4.46	49.5	6.95	77.2	2.49	27.6
2	Causes	5	2	40	4.36	87.2	2.36	47.2
3	Signs & symptoms	6	3.65	60.8	4.16	69.33	0.51	8.5
4	Effects	6	2	33.33	3	50	1	16.6
5	Management	5	1.16	23.2	3.75	75	0.46	9.2
6	Prevention	7	3.93	56.14	6.41	91.17	2.48	35.42
	Total	38	18.2	47.8	27.6	72.7	9.4	24.7

The above table reveals the distribution of scores according to area wise in the aspect of pre test and post test.

Majority 60.8% of the respondents scored in the aspect of signs and symptoms followed by 56.14% in the aspect of prevention, 49.5% in general information, 40%in causes and 23.2% in the aspect of management.

Whereas in post test majority 91.57% in the aspect of prevention, 87.2% in the area of causes, 77.2% in general information, 75% in management area, 69.33% in signs and symptoms and 33.33% in the area of effects.

Table 4- Reveals effectiveness of teaching plan on smokeless tobacco use and its prevention.

The overall mean post test score (27.6) is higher than pre test (18.2) with enhancement of 9.4 which is found to be effective at 0.05 level of significance. Hence H_1 accepted. A cross-sectional study was conducted to assess the prevalence of consumption of tobacco among adolescent's school children and low income gap in National Capital territory (NCT) of Delhi, amongst 3.422 children in the age group of 10-18 yrs studying in government schools. The proportion of children who were "current users" of tobacco products was 5.4%. Nearly 80% of the study subject does not know that tobacco consumption is injurious to health [16].

- A survey among 599 students in Andhra Pradesh India, to formulate anti-smoking policy for youth. The sample size consisted of 64.6% boys and 35.4% girls between ages of 15-22 yrs. The survey revealed gap in the knowledge of students about ill effects of smoking which can be rectified by health education program [17].

Table 4- Effectiveness of teaching plan on smokeless tobacco use and its prevention P=0.05

Overall knowledge	Mean	SD	Enhancement	Enhancement%	Df (59)	t -value	Inference
Pre test	18.2	6.93	9.4	24.7	2.001	6.47	S
Post test	27.6	4.06					

Variables		Below Median	Above or equal to Median	Total	Df	Chi-square at 0.05 level	Table value.	Inference
Age in years	16	23	17	40	1	1.896	3.84	NS
	17	3	2	5				
	18	2	3	5				
Educational qualification	PUC I	19	31	50	1	0.499	3.84	NS
	PUC II	5	5	10				
Religion	Hindu	22	18	40	1	1.037	3.84	NS
	Muslim	7	8	15				
	Christian	3	2	5				
Type of family	Nuclear	17	8	25	2	0.817	5.99	NS
	Joint family	7	6	13				
	Extended family	8	6	14				
	Single parent family	5	3	8				
Residence	Urban	17	18	35	1	1.47	3.84	NS
	Rural	18	7	25				
Educational status of parent.	High school	7	3	10	1	1.47	3.84	NS
	Graduation	18	14	32				
	Post graduation	8	10	18				
Occupational of parent	Government job	18	7	25	2	6.01	5.99	S
	Private job	8	12	20				
	Self employed	7	8	15				
Family income	less than Rs.5000	12	8	20	1	0.032	3.84	NS
	Rs.5001-10,000	18	12	30				
	Rs.1001-15000	3	2	5				
	>Rs. 15001	2	3	5				
Pocket money received	Rs.250-500	18	17	35	1	0.431	3.84	NS
	Rs.501-1000	12	8	20				
	Rs.1001-1500	3	2	5				
Family history of tobacco use	Yes	15	7	22	1	0.278	3.84	NS
	No	28	10	38				
Previous knowledge on topic	Yes	12	13	25	1	0.031	3.84	NS
	No	16	19	35				

IV. Findings related to effectiveness of teaching program: the results of the study supported by,

The overall mean post test score (27.6) is higher than pre test (18.2) with enhancement of 9.4 which is found to be effective at 0.05 level of significance. Hence H_1 accepted.

- A study on effectiveness of teaching program regarding ill effects of tobacco use among PUC students in Mangalore. This study revealed that 42% of students having inadequate knowledge and 58% students having moderate knowledge in pre test. After teaching program80% students having adequate knowledge and 20% having moderate knowledge. Hence the teaching plan helped students to gain knowledge on ill effects of tobacco.[18]

Conclusion

Tobacco is most commonly used as a recreational drug and consumed in various forms. Adolescents believe that smokeless tobacco is a safe alternative to cigarette smoking and it is not addictive. They also believe that they can stop using it any time. Ignorance of adolescents regarding health hazards caused by the use of tobacco products led for the causation of dreadful disease.

Teaching program implemented during the study had equipped the adolescent with better knowledge regarding smokeless tobacco use and its prevention .information provided in teaching program will help the students to know the various forms of tobacco products and health hazards by its use and also help the students to adopt preventive strategies. Hence it was instructionally effective, appropriate and feasible.

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