



INDO AMERICAN JOURNAL OF PHARMACEUTICAL RESEARCH



ASSESSMENT OF IMPACT OF PHARMACIST'S INTERVENTION REGARDING DETRIMENTAL EFFECTS OF TOBACCO PRODUCTS ON YOUNG ADULTS OF KALBURAGI CITY

¹Ashok Malpani, ²Brahmadi Shankar Reddy, ³Kailash Bhovi, ⁴Shreeshail Kabadagi, ⁵Zubair Patel.

¹Principal, ²Asst. prof, at Rajiv Memorial Education Society's College of Pharmacy, Kalaburagi - 585102, Karnataka

^{3,4,5} Pharm D Interns, at Rajiv Memorial Education Society's College of Pharmacy, Kalaburagi - 585102, Karnataka

ARTICLE INFO

Article history

Received: 25.08.2025

Available online: 12.10.2025

Keywords

Tobacco Use,
Youth Awareness,
KAP Study,
Health Education,
University Students.

ABSTRACT

Tobacco use remains a major contributor to premature mortality, illness, and disability. It is consumed in both smoking forms (such as cigarettes, bidis, hookah, and chilam) and smokeless forms (like pan, galka, zarda, kaini, and dora). Among youth, tobacco use is a pressing public health concern, as early initiation often leads to long-term addiction into adulthood. Enhancing awareness among young people is crucial for prevention. This study aimed to evaluate the knowledge, attitudes, and practices related to the harmful effects of tobacco among students at selected universities in Kalaburagi City. A six-month intervention program was implemented using a structured questionnaire. Two weeks after a baseline assessment, students participated in educational sessions involving presentations, videos, emotive content, and one-on-one discussions, followed by a post-intervention survey. Data analysis was performed using IBM SPSS version 25.0. Of the 516 participants (60.8% male), the majority were aged 17–18 years and enrolled in non-medical courses (52.5%). The average knowledge score significantly increased from 8.14 to 10.28 after the intervention, indicating improved awareness. Despite this positive outcome, the findings also revealed low initial awareness and negative attitudes toward tobacco-related health risks, underlining the ongoing need for targeted educational initiatives focusing on knowledge, attitude, and practice (KAP) development.

Corresponding author

Kailash Bhovi

Pharm D Intern

Rajiv Memorial Education Society's College of Pharmacy

Kalaburagi - 585102, Karnataka

E-mail: kailashbhovi92@gmail.com

Please cite this article in press as **Kailash Bhovi** et al. Assessment of Impact of Pharmacist's Intervention Regarding Detrimental Effects of Tobacco Products on Young Adults of Kalaburagi City. Indo American Journal of Pharmaceutical Research.2025;15(10).

Copy right © 2025 This is an Open Access article distributed under the terms of the Indo American journal of Pharmaceutical Research, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

INTRODUCTION:

The tobacco epidemic is one of the biggest threats to public health, and the world has been exposed to¹ and is the most avoidable cause of important non-communicable disease disorders, early death, risk factors². (NCDs) like smoking's heart diseases, respiratory diseases and cancer attributing to smoking⁴. The tobacco epidemic is affecting mainly developing countries³ and the lower socioeconomic groups⁶, since 84% of world's smokers live in these countries³. The tobacco situation is unique in India because of the availability of vast number of tobacco products both smokeless and smoking⁷. In India tobacco consumption continues to grow at 2-3% per annum³. Majority of people start tobacco use at very young age and adopt it as behavior in their life style⁶. Adolescents, in today's world, are increasingly exposed to changing lifestyles that have very negative impact on health. Addictions developed in adolescence are likely to persist into adult life⁸. Nearly 82,000-99,000 children and young people around the world start smoking daily, according to the World Bank⁷. India has 275 million cigarette consumers, and in China it ranks second in tobacco products². A recent study found that the prevalence of tobacco consumption in India was age, gender, education, wealth status and alcohol consumers associated with tobacco consumption in India⁴. Tobacco consumption is more in rural than in urban areas³. There are grave consequences of tobacco both socially and also on health thus it is of utmost importance to understand the factors leading to its use and to plan strategies to reduce its intake⁷. Number of initiatives has been taken throughout the country in the line of WHO FCTC (framework for convention of tobacco control)⁵. As a considerable aspect of perception contributes to behavioural change and tobacco search practices, a clear overview of this aspect must be thoroughly considered in terms of socioeconomic and regional distribution². A WHO in collaboration with a number of national and international agencies is emphasizing on protecting young population from tobacco use, who are more likely to quit the habit in time before further harm⁵. However, the health implications of the social issue in a rural context have not been explored⁷. As awareness contributes to a more considerable extent to behavior modification and tobacco cessation practices, it needs to be studied in entirety concerning socioeconomic and regional distributions to get a clear view on this aspect².

AIM & OBJECTIVES:

Evaluation of pharmacy interventions related to tobacco side effects in adults at several selected universities in Kalaburagi City.

OBJECTIVES:**General Objectives:**

1. Evaluation and improvement of knowledge regarding the adverse effects of tobacco products in adults at selected universities in Kalaburagi city.
2. Prevent/stop smoking consumption by adults by clarifying the harmful effects of tobacco.

Specific Objectives:

1. Collect demographic data for adult universities.
2. Evaluation of basic knowledge regarding the negative effects of tobacco products through self-development surveys of knowledge assessment.
3. Evaluation of the impact of structured training on knowledge of the negative effects of tobacco products via a self-directed questionnaire for knowledge assessment.

METHODOLOGY:**PLAN OF THE STUDY:**

Study Design: - A community based prospective Study.

Source of Data: - Data was collected from:

1. Personal data collection form (Demographic).
2. Tobacco use assessment questionnaires.
3. Tobacco knowledge assessment questionnaires.
4. Leaflet was prepared

Inclusion Criteria: -

1. All the students of aged between (17-24 years).
2. Students willing to participate in the research.

Exclusion Criteria: Students who are non day scholars.

Sample Size: - 516 subjects.

Duration of Study: - The study was conducted for a period of Six months (March to August 2024)

Study Site: - Selected Colleges of Kalaburagi city.

STUDY PROCEDURE: -

The study was conducted after the ethical clearance from the institutional ethics committee.

Personal data collection form (Annexure II) : This is used to collect the personal data (demographic) of the students like age, gender, and study stream.

Tobacco use assessment questionnaires (Annexure III): It is used to assess the prevalence of tobacco consumption among students, family and friends, and to assess data such as the age at which to start tobacco consumption, factors that influence tobacco consumption, and other relevant data.

Tobacco knowledge assessment questionnaires (Annexure IV) : This is used to assess the tobacco knowledge and its Detrimental effects among the adults this consists of 16 objective type questionnaires with 4 options among 4 options one is the correct answer and others are wrong answers.

Tobacco education leaflet (Annexure V): The tobacco education leaflet consists of all relevant required information regarding tobacco and its detrimental effects and this consists of all the information required to answer all the tobacco knowledge assessment questionnaires.

The above study materials were prepared in English and Kannada language by referring standard text books, journals, internet, and other relevant resources.

Selection of colleges:

The study was carried out by randomly selecting Colleges of Kalaburagi city. With the prior written permission from the Principal's after explaining the importance of the study. From each Selected Colleges the students present on the day of enrollment were enrolled into the study by considering the study criteria after taking their consent (**Annexure VI**) to participate in the study and the study was conducted as mentioned below:

Pre test: All the students enrolled into the study were provided with personal data collection form , tobacco use assessment questionnaires and tobacco knowledge assessment questionnaires and all the students were informed to read the study materials carefully and fill all the required data and to answer all the questionnaires of the study material .Immediately after pre test the students were educated regarding detrimental effects of tobacco products by means of power point presentations, video films, pictograms and other relevant materials and also by one to one interaction. There after students were provided tobacco education leaflet and students were asked to read the educational leaflet carefully.

Post test: After 15 days of the pre test the student were re-assessed by means of tobacco knowledge assessment questionnaires.

Scoring pattern of the tobacco knowledge assessment questionnaires was done by giving score 1 (one) for each correct answer and 0 (zero) for each wrong answer.

The data collected at pre test and post test was analyzed by using student paired T test.

RESULTS

In the present study, 516 subjects were participated all the participants were further subjected to statistical analysis with nil dropouts.

I. Demographics data

Details of age wise distribution of students.

Table No.1: Depicting details of Age wise distribution of students

Age in years	Number of students	Percentage
17—18	253	49.0
19—20	165	32.0
21—22	86	16.7
> 22	12	2.3
Total	516	100.0
Mean $\pm$ SD	18.89 $\pm$ 1.66	

Simple bar diagram represents age wise distribution of students

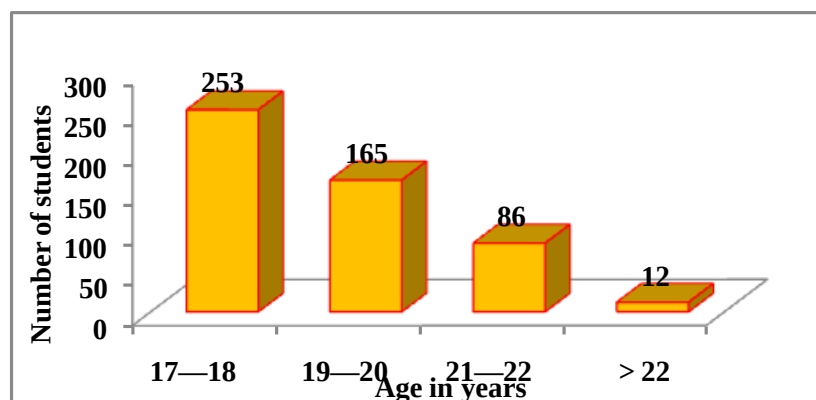


Figure No 1: Bar diagram represents age wise distribution of participants

Details of gender wise distribution of students

Table No.2: Depicting details of Gender wise distribution of students

Gender	Number of students	Percentage
Males	314	60.8
Females	202	39.2
Total	516	100.0

Bar diagram represents gender wise distribution of students

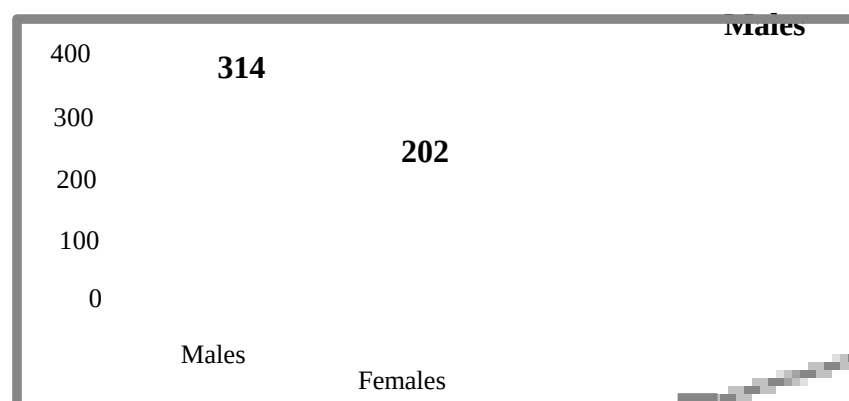


Figure No 2: Bar diagram represents gender wise distribution of participants

Details of distribution of students based on their colleges

Table No.3: Depicting details of students based on their colleges.

Sl. No	Name of the colleges	Number of college students	Percentage
1	MAM college of pharmacy	95	18.5
2	AOSR college	41	7.9
3	GPT college of engineering	191	37.0
4	KCT pharmacy college	68	13.2
5	SB Ayurveda college	41	7.9
6	SS Teganoor college	80	15.5
	Total	516	100.0

Bar diagram represents college wise distribution of college students

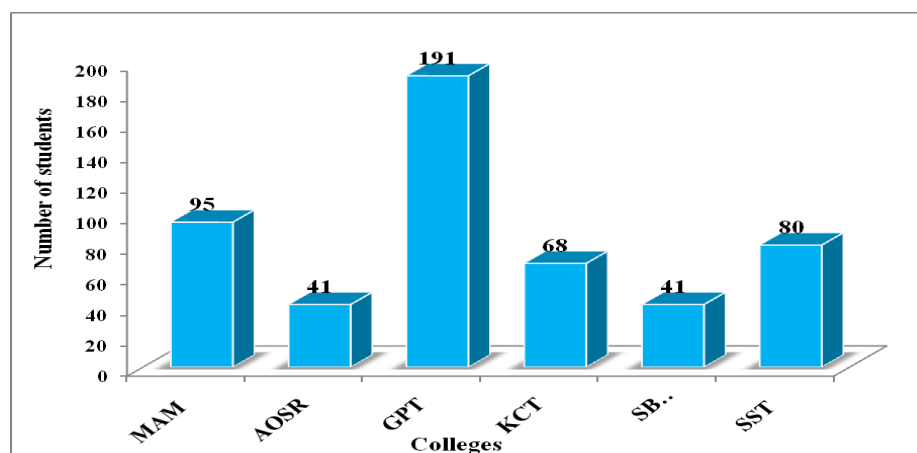


Figure No 3 : Bar diagram represents college wise distribution of college students.

Details of distribution of students according to faculty.

Table No.4: Depicting details of students according to faculty

Faculty	Categories	No. of students	Percentage
Medical faculty (N = 245)	Pharmacy	166	32.3
	Ayurveda	41	7.9
	Nursing	31	6.0
	Paramedical	7	1.3
Non-Medical (N = 271)	Engineering	191	37.0
	Other degrees	80	15.5
Total	---	516	100.0

Bar diagram represent faculty wise distribution of students

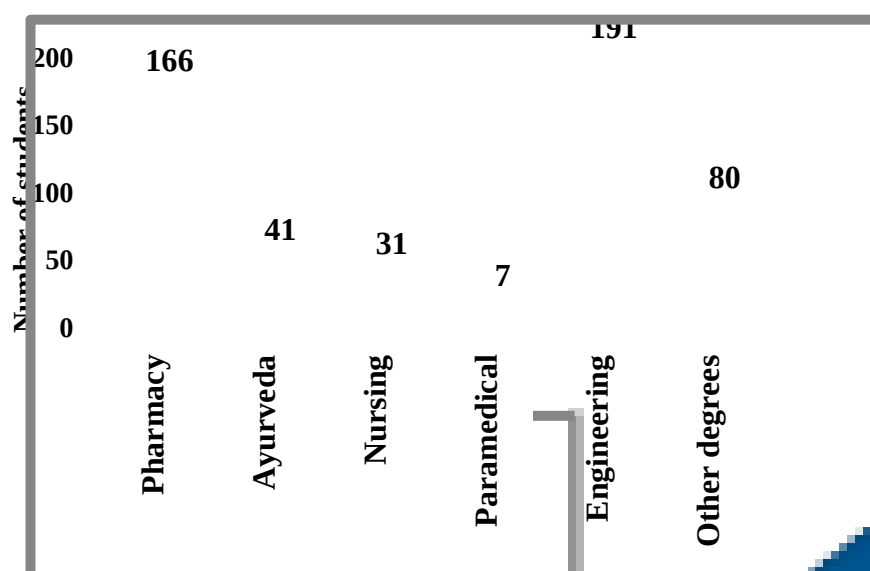


Figure No 4: Bar diagram represent faculty wise distribution of students

Details of College and course wise distribution of students.

Table No.5: Depicting details of college and course wise distribution of students

Colleges	Categories	No. of students	Percentage
MAM college of pharmacy (N=95)	B Pharm	95	18.4
AOSR college (N=41)	GNM	31	6.0
	D Pharm	3	0.6
	DMLT	7	1.4
GPT college of engineering (N=191)	CE	46	8.9
	CS	81	15.7
	EC	37	7.2
	EE	24	4.6
	IS	3	0.6
KCT pharmacy college (N=68)	D Pharm	68	13.2
SB Ayurveda college (N=41)	BAMS	41	7.9
SS Teganoor college (N=80)	B Com	11	2.1
	BCA	64	12.4
	B Sc	5	1.0
Total (N=516)	---	516	100.0

Bar diagram presents college and course wise distribution of students

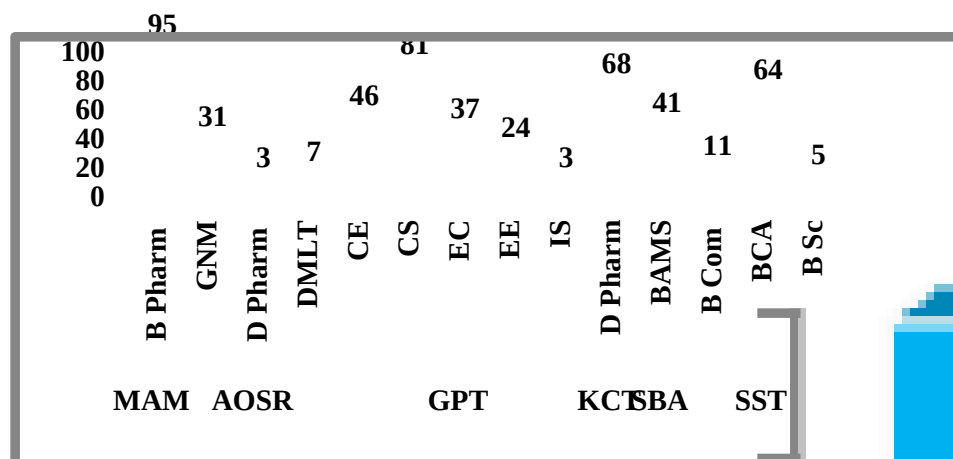


Figure No 5: Bar diagram presents college and course wise distribution of students

Data related to knowledge on detrimental effects of tobacco products.

The following table and figure illustrates the scoring patterns for knowledge in pre-test

Table No.6: Depicting details of Pre-test knowledge score of students

Pre-test knowledge scores	Categories	No. of students	Percentage
<50%	Poor	217	42.0
50%--75%	Moderately Good	198	38.4
75%--100%	Good	101	19.6
Total	---	516	100.0
Mean $\pm$ SD		8.14 $\pm$ 3.47 (50.9%)	

Bar diagram represents pre-test knowledge score of students

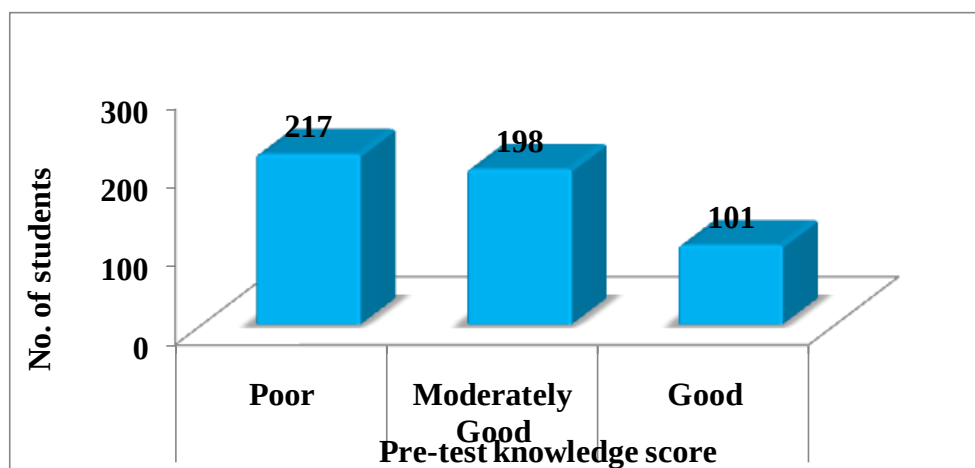


Figure No 6: Bar diagram represents pre-test knowledge score of students

The following table and figure illustrates the scoring patterns for knowledge in post-test

Table No.7: Depicting details of Post-test knowledge score of students

Pre-test knowledge scores	Categories	No. of students	Percentage
<50%	Poor	89	17.2
50%--75%	Moderately Good	193	37.4
75%--100%	Good	234	45.4
Total	---	516	100.0
Mean $\pm$ SD	10.28 $\pm$ 3.31 (64.3%)		

Bar diagram represents pre-test knowledge score of students

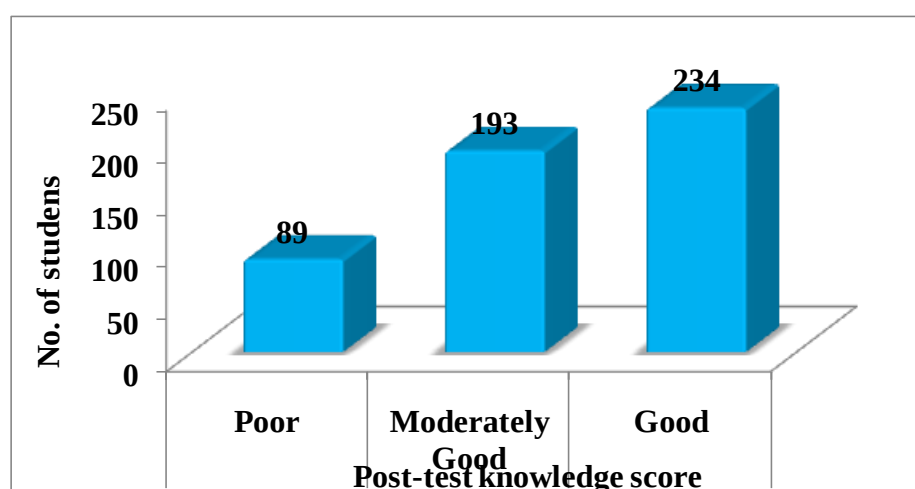


Figure No 7: Bar diagram represents pre-test knowledge score of students

The next table demonstrates comparison of knowledge scores between pre and post test

Table No.8: Depicting details of Comparison of knowledge scores of detrimental effects of tobacco between Pre and Post-test

Knowledge Scores	Categories	Pre-Test		Post-Test	
		No.	%	No	%
<50%	Poor	217	42.0	89	17.2
50%--75%	Moderately Good	198	38.4	193	37.4
75%--100%	Good	101	19.6	234	45.4
Total	---	516	100.0	516	100.0
Mean ± SD	----	8.14 ± 3.47		10.28 ± 3.31	
Diff. of mean	---	2.14 (26.3%)			
Paired t-test and p-value		t = 17.283, P = 0.0001, HS			

NS= not significant, S=significant, **HS=highly significant**

Multiple bar diagram shows the comparison of knowledge score of detrimental effects of tobacco between Pre and Post-test

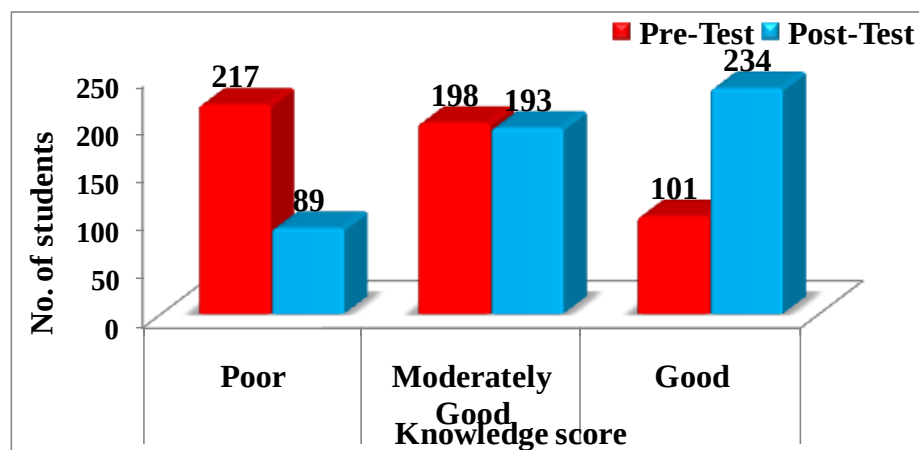


Figure No 8: Multiple bar diagram shows the comparison of knowledge score of detrimental effects of tobacco between Pre and Post-test

The below table illustrates Comparison of knowledge score with demographical profile of students

Table No.9: Depicting details of Comparison of knowledge score with demographical profile of students

Demographical Profile	Categories	Number of women	Pre-Test Mean $\pm$ SD	Mean %	Test- values P-value
Age	17—18	253	7.11 $\pm$ 3.35	44.4%	F = 19.13 P =0.001, HS
	19—20	165	8.01 $\pm$ 3.42	50.0%	
	21—22	86	10.01 $\pm$ 2.68	62.5%	
	> 22	12	9.12 $\pm$ 4.54	57.0%	
Faculty	Medical	245	9.41 $\pm$ 3.12	58.8%	t = 8.396 P =0.001, HS
	Non-medical	271	6.99 $\pm$ 3.38	43.7%	
	Gender				
Gender	Males	48	8.32 $\pm$ 3.37	52.0%	t = 0.960 P =0.337, NS
	Females	18	8.02 $\pm$ 3.54	50.1%	
Colleges	MAM pharmacy	95	10.04 $\pm$ 3.31	62.8%	F = 32.57 P =0.0001 HS
	AOSR college	41	6.21 $\pm$ 4.12	38.8%	
	GPT college	191	7.47 $\pm$ 3.82	46.6%	
	KCT pharmacy	68	9.54 $\pm$ 2.87	59.6%	
	SB Ayurveda	41	10.90 $\pm$ 3.21	68.1%	
	SST college	80	5.85 $\pm$ 3.57	36.7%	

NS= not significant, S=significant, HS=highly significant

II. Data related to Assessment on deter mental effects of tobacco products.

The response of the students related to assessment questionnaires.

Table No.10: Depicting details of Tobacco use assessment

Statements	Options	Number	Percentage
1. Have you ever tried or experimented with any form of tobacco, even once or twice? (eg. Cigarette, bidi, pan with tobacco, gutka, khaini, pan-masala, etc)	a) Yes	53	10.3
	b) No	463	89.7
2. How old were you when you first tried or experimented with any form of tobacco in years	a) 0—15 years	23	4.5
	b) 16—21 years	33	6.4
	c) No	460	89.1
3. Which of the following factors influenced you to take-up or to continue tobacco use? (select as many responses as applicable)	a) Friends	24	4.7
	b) Family member	3	0.6
	c) Relatives	7	1.4
	d) Celebrities	8	1.6
	e) Teachers	6	1.2
	f) TV/ media	11	2.1
	g) Others	6	1.2
	h) NA	465	90.1
4. Do any of your family members smoke or chew tobacco? (select as many responses as applicable)	a) Father	99	19.2
	b) Mother	5	1.0
	c) Brother	10	1.9
	d) Sister	1	0.2
	e) Other family members	15	2.9
	f) None of them	271	52.5
	g) I don't know	129	25.0
5. Do any of your closest friends smoke or chew? (select any one response)	a) None of them	290	56.2
	b) Some of them	159	30.8
	c) Most of them	37	7.2
	d) All of them	30	5.8
6. Has anyone in your family discussed the harmful effects of tobacco with you? (select as many responses as applicable)	a) Father	126	24.4
	b) Mother	76	14.7
	c) Brother	57	11.0
	d) Sister	18	3.5
	e) Others family members	17	3.3
	f) I don't know	268	51.9
7. During the last year, were you taught in any of your classes about the dangers of smoking or chewing tobacco? (select any one response)	a) Yes	128	24.8
	b) No	213	41.3
	c) I am not sure	175	33.9

DISCUSSION

Tobacco consumption is one of the important preventive deaths around the world and one of the major public health issues around the world, with the majority of people beginning to consume cigarettes at very young years and being accepted as a lifestyle behavior.

The study was conducted to promote information regarding detrimental effects of tobacco on young adults of Kalaburagi city.

In Our study we have enrolled 516 participants out of which males were 314 (60.8%) and female were 202 (39.2%), which was identical to the study conducted by Patel J et al.⁴⁸

We divided the participants age into four groups based on 1 year interval of these majority of participants were aged 17-18 Years 253 [49.0%], followed by 19-20 years includes 165 (32.0%) , 21-22 years Include 86 (16.7%) & only 12 (2.3%) belonged age group of more than 22 years which was in concurrence with the study conducted by Sivasubramanian N et al⁴⁹

Most of the students belonged to non-medical faculty 271 (52.5%) like 37.0% of engineering students and 15.5% of other or degrees students & students belongs to medical faculty were 245 [47.5%] which includes 32.3%, of pharmacy students 7.9% of Ayurveda students , 6.0% of Nursing students and 1.3% of paramedical students which were similar study Conducted by Menon GP et al⁵⁰

The consumption of any form of tobacco is 463(89.7%) of the responded to not yet tried or Experimented whereas 53(10.3%) responded to use of tobacco products which is identical to the study conducted by the Nair LM et al⁵¹

The result of the present study showed that the prevalence tobacco use was more in males 39 (73.5%) as Compared with the females 14(26.5%) which is in accordance with the study conducted by Janeswar A et al.⁵²

The age of students that have tried or experimented with any form of tobacco is 16-21 in our study Which is identical study to a study conducted by Bartwal J et al.⁵³

The factors which influence you to take up or continue tobacco use in an important determining factor for initiation tobacco use in that 24 (4.7%), are more influenced by friends. which are similar study conducted by Janeswar A et al ⁵²

In Our most of the students said that in their family members who were smoke or chew tobacco is high in father 99(19.2%), followed by rather mother 5 (1.0%), brother 10(1.9%), sister 1(0.2%) and other family members like grandfather, uncle etc were 15(2.9%) which are similar study conducted Abdul G et al.⁵⁴

As we Analyzed the present study, mean scores of participants in pre-test & Post-test was 8.14 & 10.28 respectively which was identical to the study conducted by Sivasubramanian N et al.⁴⁹

The current study shows that the Comparison of pre & past scorer among younger adults. On detrimental Effects of tobacco products shows that the mean knowledge score was 8.14 (50.9%), while the post test mean Knowledge score was 10.28 (64.3%). A paired t- test reveled a highly significant difference between

pre and post Scores ($t=17.283, P=0.0001$], indicating the intervention of standardized structured Knowledge programmed on detrimental effects tobacco given to the students Was significantly effective.

CONCLUSION

The findings of our study suggest that, the prevalence rate of tobacco use among the adults is lower. The age of initiation was between 16-21 years which is in accordance with the several Indian studies. The lowest age of initiation reported in our study was 17 years. In our study majority of the students were influenced by their friends to take up tobacco use. Among study subjects majority of their family members uses tobacco.

All the adults were having poor knowledge about the tobacco effects the intervention by the pharmacists by means of structured education significantly helped to improve their knowledge regarding tobacco effects.

When knowledge of adults regarding tobacco effects of medical and non-medical stream were compared, the non-medical stream students were having poor knowledge than that of medical stream at pre test. The pharmacist interventions significantly improved the knowledge of both streams.

In nutshell the study concludes that the educational interventions by the pharmacist helped to improve knowledge of adults regarding tobacco effects. Hence the pharmacist and other health professional can play a vital role by conducting such educational programs targeting adults as they are highly vulnerable populations for tobacco use. If such interventions make adults abstain from tobacco use, in their future there is a very less chance of habituating to tobacco use in their life time.

REFERENCES:

1. Subramanian M, Chaitali AG. An Interventional Study on Change in the Knowledge of High School Students Regarding III Effects of Tobacco Use. *Asian Journal of Applied Sciences*. 2013; 1(4):119-22.
2. Ansari ZA, Nafees BS, Zulkifle M . Prevalence of Tobacco Use among Power Loom Workers - A Cross-Sectional Study. *Ind J Comm Med*. 2010; 35(1): 34–9.
3. Aggarwal P, Saurabh V, Kandpal SD, Pratima G. Habits and Beliefs Pertaining to Tobacco among Undergraduates of a Medical College in the State of Uttarakhand. *JIACM* 2012; 13(3): 189-94.
4. Joshi U, Bhavesh M, Sudha Y. A Study on Prevalence of Chewing Form of Tobacco and Existing Quitting Patterns in Urban Population of Jamnagar, Gujarat. *Ind J Comm Med*. 2010; 35(1):105–8.
5. Sharma R, Vijay LG, and Sanjay C . Tobacco Use Among Adolescent Students and the Influence of Role Models. *Ind J Comm Med*. 2010; 35(2): 272–5.
6. Kabir MA, and Kim LG. Determinants of Tobacco use among Students Aged 13–15 years in Nepal and Sri Lanka: Results from the Global Youth Tobacco Survey. *Health Education Journal*. 2013; 213: 1–11.
7. Mukherjee A, Sinha A, Taraphdar P, Basu G, Chakrabarty D. Tobacco abuse among School Going Adolescents in a Rural Area of West Bengal, India. *Ind J Public Health*. 2012; 56:286-9.
8. Chadda RK, Sengupta SN. Tobacco use by Indian adolescents. *Tobacco Induced Diseases*. 2002;1(2):111-9.
9. Linnea H, Anders BB, Matthew P, Sigrid S, Eva R. Factors Related to Tobacco use Among Teenagers, *Respiratory Medicine* .2007; 101: 496–502.

10. Raj N, Sarita S, Sanjay G, Ashok S. Age at initiation & Prevalence of Tobacco use Among school children in Noida, India: A cross-sectional Questionnaire based Survey. *Indian J Med Res.*2011; 300-7.
11. Monika A, Abha T, Poonam D, Gaurang P, Melissa HS, Neeru SJ, Cheryl LP and Srinath RK. Discussions with Adults and Youth to Inform the Development of a Community-based Tobacco Control Programme. *Health Education Research Advance Access.* 2012; 1–14.
12. Glorian S, Prakash CG, Mangesh SP. Social Disparities in Tobacco Use in Mumbai, India: The Roles of Occupation, Education, and Gender. *Am J Public Health* .2005;95(6):1003-8.
13. Kumar M, Poorni S, Ramachandran S. Tobacco use Among School Children in Chennai city, India. *Ind J Cancer.* 2006; 43:127–31.
14. Kinga JK, Tomasz Z, Katarzyna PZ, Katarzyna Z, Magdalena C, Krzysztof P, Andrzej W. An attempt to Assess Knowledge about Tobacco Dependence among Students at the Medical University in Wroclaw. *Annals of Agricultural and Environmental Medicine* .2012; 19(3): 345-9.
15. Harini PM, Sham SB, Sundeeep HK. Prevalence, Knowledge and Attitude of Tobacco Use Among Health Professionals In Mangalore City, Karnataka. *J Oral Health Comm. Dent.* 2008; 2(2):19-24.
16. Roy CS, Roy CG, Sen U. Assessment of Awareness Level on Tobacco and Smoking Habits as Risk Factors for Cancer among Lung and Laryngeal Cancer Patients in Kolkata -A Case Control Study. *Asian Pacific J Cancer Prev.* 2005; 6: 332-6.
17. Preeti S, Raut DK. Tobacco Use among School Students in National Capital Territory of Delhi. *J Alcoholism Drug Depend.* 2013; 1(4):1-5.
18. Savita M, Anil M, Neeraj K, Partha PD, Jasbir S. The Clinical and Demographic Profile of Nicotine Users Among Children and Adolescents. *German Journal of Psychiatry* .2009; 14-8.
19. Bhojani UM, Chander SJ, Devadasan N. Tobacco use and related factors among pre-university students in a college in Bangalore, India. *Nat Med J India.* 2009; 22:294–7.
20. Paul DP and Selvan A. Awareness of Diseases Caused by Passive Smoking among Students Studying at Collegiate Level. *International Journal of Educational Research and Technology.* 2011; 2(2): 12–5.
21. Singh V, Gupta R. Prevalence of Tobacco Use and Awareness of Risks among School Children in Jaipur. *J Assoc Physicians India.* 2006; 54:609-12.
22. Salaudeen A, Musa O, Akande T, Bolarinwa O. Effects of Health Education on Cigarette Smoking Habits of Young Adults in Tertiary Institutions in A Northern Nigerian State. *Health Science Journal* .2011; 5(3): 216-28.
23. Chandrashekhkar TS, Kishore PV, Jagadish P, and Ritesh GM. Prevalence and correlates of Tobacco use Amongst Junior Collegiate in Twin cities of Western Nepal: A cross-sectional, questionnaire-based survey. *BMC Public Health.* 2008; 8: 1-8.
24. Shailee F, Girish MS, Vikas F, Bharat B, Baljeet S, Praveen D, Arun ST. Knowledge of, Attitude Towards, and Prevalence of Tobacco Use Among Dental Students in Himachal Pradesh State India. *OHDM.*2011; 12(2):73-9.
25. Laura MR, Farideh K, Amir S, Shanila F and Mehrdad A. Cigarette Smoking Knowledge, Attitudes, and Practices of Iranian Health Professions Students of Shiraz University of Medical Sciences, Shiraz, Iran. *J Dent Oral Health* .2013; 1(103):1-8.
26. Chatterjee T, Halder D, Mallik S, Sarkar GN, Das S, and Lahir SK . A study on a Study on Habits of Tobacco use Among Medical and Non-medical Students of Kolkata. *Lung India.* 2011; 28(1): 5–10.

27. Sushil BN, Swapnil NP, Seema DK, Mohammed AK. Awareness about Tobacco Habits, Its Hazards and Willingness to Quit the Habit among Patients. *Journal of Dental and Medical Sciences*. 2013; 3(3):27-31.
28. Reddy P, Meyer WA, Yach D. Smoking status, Knowledge of Health Effects and Attitudes Towards Tobacco Control in South Africa. *South African Medical Journal*. 1996; 86(11):1389-93.
29. Surekha K, Garg BS, Khursheed M. Tobacco Addiction Amongst Adolescents in Rural Areas of District Wardha. *JK SCIENCE*. 2007; 9 (2): 79-82.
30. Mohan S, Sankara SP, Thankappan KR. Access to Pocket Money and Low Educational Performance Predict Tobacco use among Adolescent Boys in Kerala, India. *Prev Med*. 2005; 41:685–92.
31. Kowalewska A. The age of Tobacco Initiation and Tobacco Smoking Frequency among 15-year-old Adolescents in Poland. *Przegl Lek*. 2008; 65(10):546-8.
32. Altobelli E, Rapacchietta L, Tiberti S. Association Between Tobacco use in Adolescents and Socio-Familiar Factors .2005;17 (1):57-65.
33. Rahman MM, Ahmad SA, Karim MJ, Chia HA. Determinants of Smoking Behavior among Secondary School Students in Bangladesh. *J Comm Health*. 2008; 36(5):831-8.
34. Seo DC, Torabi MR, Weaver AE. Factors Influencing Openness to Future Smoking among Nonsmoking Adolescents. *J School Health*. 2007; 78(6): 328-36.
35. Gajalakshmi V, Asma S, Warren CW. Tobacco Survey among Youth in South India. *Asian Pac J Cancer Prev*. 2004; 5:273–8.
36. Khuder SA, James HP, Timothy J, Saja SK, Kathi S. Cigarette Smoking among Adolescents in Northwest Ohio: Correlates of Prevalence and Age at Onset. *Int. J. Environ. Res. Public Health*. 2008; 5: 278-89.
37. Gururaj G and Girish N .Tobacco Use Amongst Children in Karnataka *Indian Journal of Pediatrics*.2007;74:41-4.40.
38. Shashidhar A, Harish J, Keshavamurthy SR. Adolescent Smoking - A Study of Knowledge, Attitude and Practice in High School Children. *Paediatric On call*. 2011; 1-5.
39. Gupta PC. Survey of Socio Demographic Characteristics of Tobacco use among 99,598 Individuals in Bombay, India using Handheld Computers. *Tob Control*. 1996; 5: 114-20.
40. Narayan KM, Chadha SL, Hanson RL, Tandon R, Shekhawat S, Fernandes RJ, et al. Prevalence and Patterns of Smoking in Delhi: Cross sectional study.*BMJ*. 1996; 312: 1576-9
41. Yadav JK, Vijaya K, Ravi KE. Prevalence of Use of Tobacco Among Males Aged 15 Years and above In Nellore city, Andhra Pradesh. *Nat J Res Com Med* .2013; 2(1): 53-9.
42. Pal R, Dechenla T. Tobacco use in Indian High-school students. *International Journal of Green Pharmacy*.2009; 319-23.
43. Jindal SK, Aggarwal AN, Chaudhry K, Chhabra SK, Souza GA, Gupta D. A Multicentre study on Epidemiology of Chronic Obstructive Pulmonary Disease and its Relationship with Tobacco Smoking and Environmental Tobacco Smoke Exposure. *Indian J Chest Dis Allied Sci*. 2006; 48: 23-9.
44. Sinha DN. Report on the results of the Global youth tobacco survey in Uttar Pradesh, India 2002. Available from: http://www.searo.who.int/LinkFiles/GYTSRepUttarPradesh_2002.pdf, accessed on July 25, 2005.
45. Kapil U, Goindi G, Singh V, Kaur S, Singh P. Consumption of Tobacco, Alcohol and Betel Leaf amongst School children in Delhi. *Ind J Pediatr* 2005; 72: 993-8.

46. Reddy KS, Arora M. Tobacco use among Children in India: A Burgeoning Epidemic. Indian Pediatr 2005; 42: 757-61.
47. Ahmed NU, Ahmed NS, Semenya KA, Elzey JD, Larson C, Bennett CR, et al. Prevalence and Correlates of Initiation of Smoking behavior among Preteen black and white Children. J Natl Med Assoc 2004; 96: 200-8.
48. Patel J, Angolkar M, Murthy S, et al. Prevalence of tobacco consumption and its contributing factors among A cross section study, Ethiop J Health Sci, 2016; 26(3):209-216.
49. N Sivasubramanian, B.Mhalaxkshmi, Jadav H D, et al. Impact of a structured technique on the ill effects of tobacco chewing among Indian adults, Bio information,2024; 20(7):731-734
50. Menon G P, Georges, Nair SB, et al. Tobacco use among college students across various disciplines in Kerala, India,2020;13:1-7
51. Nair L M, Maddu B, Srinath K M, et al, Magnitude of behavioral risk factor for cardiovascular diseases among collage going young adults (18-25 years) in Mysore, Karnataka, India, Int J Community Med Public Health, 2017 Jan ; 4(1) : 65-72.
52. Janeswar A, Kumar G, Kanungo. Prevalence patterns and profile of adolescent tobacco users' findings from a youth survey. A cross-sectional study, J Family Med Prim Care, 2019; 8(6): PMID: [31334173](#)
53. Bartwal J, Awasthi, Rawat CMS, et al. Awareness and pattern of Tobacco use among the Medical Student of Government Medical Collage, Ind J Comm. Health,2014;26(2): 155-159.
54. Abdul G, Alrowais, Alhaqui, et al. Cigarette smoking among female students in five medical and non-medical collages, Int J of Gen Med ,2013;6:719-727.





Submit your next manuscript to **IAJPR** and take advantage of:

- Convenient online manuscript submission
- Access Online first
- Double blind peer review policy
- International recognition
- No space constraints or color figure charges
- Immediate publication on acceptance
- Inclusion in **Scopus** and other full-text repositories
- Redistributing your research freely

Submit your manuscript at: editorinchief@iajpr.com







