



## Original Research Article

# Knowledge attitude and perception on ill effects of tobacco usage among college students

Sushmitha SM<sup>1\*</sup>, Kumarswamy M<sup>1</sup>, Shashank D Gowda<sup>1</sup>, Jayanth Krishna<sup>1</sup>

Dept. of Pharmacy Practice, Sri Adichunchnagiri College of Pharmacy, Karnataka, India.

## Abstract

**Background:** Tobacco use is responsible for around six million fatalities globally each year. Younger people suffer more pronounced consequences, including impaired physical performance, dependency, and a gateway to other substances. Almost every organ in the body, including the lungs, head and neck, bladder, kidney, liver, stomach, pancreas, colon, and rectum, might develop cancer as a result of tobacco smoking. Smoking is responsible for about nine out of every ten instances of lung cancer. Globally, lung cancer claims the lives of over a million people each year.

**Objectives:** The study's goals to evaluate college students' perceptions, attitudes, and understanding about the harmful effects of tobacco.

**Materials and Methods:** This study is an interventional cross-sectional community-based study. The students of pharmacy, nursing, and engineering from various colleges belonging to 18-24 years were chosen based on the interests of the students. The information was gathered through the use of self-administered questionnaire. The (SPSS) version 25.0 was used to examine the data.

**Results:** 453 students participated in the study; 74.39% of them knew the ill effects of tobacco use. 58.5% had a positive attitude towards the ill effects of tobacco, and 58.8% had a positive perception of the ill effects of tobacco. A chi square analysis displays a statistically significant association between smoking behaviour and knowledge, attitude, and perception.

**Conclusion:** The study highlights the necessity of educational initiatives to acquire more knowledge, attitude, and perception of tobacco and its ill effects by removing all the barriers. Awareness needs to be increased among the students.

Keywords: Tobacco, Students, Knowledge, Attitude, Perceptinos

Received: 10-02-2025; Accepted: 15-03-2025; Available Online:

This is an Open Access (OA) journal, and articles are distributed under the terms of the [Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License](https://creativecommons.org/licenses/by-nc-sa/4.0/), which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: [reprint@ipinnovative.com](mailto:reprint@ipinnovative.com)

## 1. Introduction

Tobacco use leads to about six million global deaths annually linked to diseases of heart, respiratory and cancers. Due to impaired physical performance, dependency approach younger to suffer from smoking and its consequences.<sup>1-2</sup> The prevalence of smoking in Karnataka found to be 28.2% varying based on gender and location, with higher rates in rural males.<sup>3-4</sup> Nicotine is the major carcinogen in tobacco, creates strong physical and psychological dependence. Tobacco products in lower-income countries tend to have higher nicotine levels and less filtration, increasing health risks.<sup>4</sup> Almost every organ in the body develop cancer as a result of tobacco.<sup>5</sup> Nondaily smokers often don't consider themselves smokers, making difficult for detection and intervention.<sup>6</sup> Smoking alters the immunity, inflammation

and body's response to foreign agents.<sup>7-8</sup> The study aimed to evaluate the college students' perceptions, attitudes, and understanding about the harmful effects of tobacco.

## 2. Materials and Methods

A cross-sectional questionnaire study was conducted among college students, age 18 to 24, who were enrolled in various institutions. Only after being properly informed of the purpose of the study and providing their informed consent were all participants current smokers and non-smokers added to the study. Consequently, 453 students participated in the study. A 28-item self-administered questionnaire was used for the investigation.

\*Corresponding author: Sushmitha SM  
Email: [sushmithasm99@gmail.com](mailto:sushmithasm99@gmail.com)

Each item was a closed-ended question with yes no and don't know. Several self-report measures that have been developed and used in numerous studies, as well as several that have been used by other researchers in other studies to measure knowledge, attitude, and perception regarding tobacco use and its detrimental effects on oral and general health, these were included in the questionnaire items. The questionnaire was pretested on five respondents to determine its validity, and any necessary adjustments were made before it was distributed in the field. The questionnaire evaluated smoking and tobacco use, which causes lung disease, heart disease, throat and oral cancer, and other issues. It also suggested that public places and other areas should be smoke-free and that selling tobacco products to minors should be prohibited.

Other psychosocial factors linked to teen smoking, such as whether smoking makes you more beautiful or helps you lose weight, and the various NRTs that are available. before the study was conducted prior permissions were obtained from the head of the respective institutions. The institutional review board granted ethical approval. Following an explanation of the study's objectives and a reminder that participants needed to finish the entire questionnaire.

This was done in an effort to decrease dropouts brought on by incomplete questionnaires. The questionnaire was not required to be filled out by any study participants. The survey was performed in front of the researcher, and study participants were not allowed to talk among themselves while responding to the questions. Regarding the questionnaire, the researcher addressed students' questions and cleared up any confusion. Software called SPSS Version 25.0 was used to examine the data. To identify significant differences, descriptive statistics such as frequencies, percentages, and chi square tests were employed.

### 3. Results

The study population consisted of a total of 453 various college students, among them 213(47%), 126(27.8%), and 114(25.2%) were pharmacy, engineering, nursing students of which 314(69.2%) were male and 139 (30.7%) were female, respectively. Participants based on academic year were 1<sup>st</sup> year 119 (46.3%), 2<sup>nd</sup> year 120 (26.5%), 3<sup>rd</sup> year 106 (23.4%), 4<sup>th</sup> year 87(19.2%), 5<sup>th</sup> year 21 (4.6%) respectively. Based on close friend smoker. Among 225 (49.7%) who have close friend smoker, 228 (50.3%) have no smoker friend. based on smoking behaviour of participants. Among 202

(44.6%) smokers, 251(55.4%) were non- smokers, respectively.

The study population had good knowledge regarding the ill effects of smoking. The majority of the study population, 395(87.2%) know that smoking causes heart disease, of which 68.1% (269), 31.89% (126) were male and female, respectively, and 4.4% (20) were not knew that smoking leads to heart disease. Almost 87.6% (397) know that the primary cause of cancers of the throat and mouth is from smoking. Among 400(88.3%) know that smoking causes lung disease. 232(51.2%) know that pregnant women who exposed to passive smoke may give birth to kids that weigh less. Among 245(54.1%) in that 140(57.1%) were male 105 (42.8%) were female, know that males who use tobacco products may experience decreased sexual importance and fertility. 338(74.6%) of study population said that smoking discolours the teeth and tongue. 402(88.7%) of the students agreed that smoking leads to breathing disorder. 287(63.5%) know that smoking leads to paralysis.

When participants were being questioned about their attitudes related to the ill effects of tobacco use. 198(43.7%) of students believe that smoking is effective to solve problems. 225(55.6%) students will not smoke if their best friend offers a cigarette. 395(87.2%) students aware that smoking is harmful to health. 83(18.3%) of study population aware that smoke from other people cigarette is harmful to your health. 264(58.3%) students agreed that smoking should be prevented in means of transportation. 334(55%) have opinion that selling tobacco products to people under 18 years should be prohibited. 249(55%) public places should be smoke free areas. 210(46.4%) believe that Banning of cigarette advertisement can reduce tobacco use. 181(40%) said that Raising taxes on cigarettes and other tobacco products cannot reduce tobacco use. 202 (59.6%) have attitude that Smoke lessness tobacco is good for health.

When the study participants were asked about the perception toward quitting smoking habit will be difficult when once they have started the habit, most of them had a negative attitude 319(70%). 247(54.2%) participants think that their number of friends increases/decreases for those who have the smoking habit. 228(50%) participants believe that this smoking habit enhances their appearance. 169(37.1%) members agree that smoking habits do not make them lose weight.

**Table 1:** Smoking-related knowledge among gender

| Variables                                                                                                                               | Male                                  | Female                               | Total                                 | P     |
|-----------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|--------------------------------------|---------------------------------------|-------|
| 1. Do you know that smoking leads to heart disease?<br>Yes<br>No<br>Don't know                                                          | 269(68.1%)<br>30(7.9%)<br>15(7.5%)    | 126(31.8%)<br>8(21%)<br>5(25%)       | 395(87.2%)<br>38(8.4%)<br>20(4.4%)    | 0.327 |
| Do you know that the primary cause of cancers of throat and mouth is smoking?<br>Yes<br>No<br>Don't know                                | 265(66.7%)<br>34(87.7%)<br>15(88%)    | 132(0.33%)<br>5(12.8%)<br>2(!%)      | 397(87.6%)<br>39(8.6%)<br>17(3.8%)    | 0.007 |
| 2. Do you know that smoking causes lung disease?<br>Yes<br>No<br>Don't know                                                             | 269(67.2%)<br>31(86.1%)<br>14(82.5%)  | 131(32.7%)<br>5(13.8%)<br>3(17.6%)   | 400(88.3%)<br>36(7.9%)<br>17(3.8%)    | 0.031 |
| 3. Do you know that pregnant women who are exposed to passive smoke may give birth to kids that weigh less?<br>Yes<br>No<br>Don't know  | 118(50.8%)<br>74(87%)<br>122(89.7%)   | 114(49.1%)<br>11(12.9%)<br>14(10.2)  | 232(51.2%)<br>85(18.8%)<br>136(3.8%)  | 0.000 |
| 4. Do you know that males who use tobacco products may experience decreased sexual importance and fertility?<br>Yes<br>No<br>Don't know | 140(57.1%)<br>59(69.4%)<br>115(83.3%) | 105(42.8%)<br>11(12.9%)<br>23(16.6%) | 245(54.1%)<br>85(18.8%)<br>138(30.0%) | 0.000 |
| 5. Do you know that smoking discolors the tongue and teeth?<br>Ye<br>No<br>Don't know                                                   | 221(65.3%)<br>60(81.0%)<br>43(66.9%)  | 117(34.6%)<br>14(18.9%)<br>8(33.0%)  | 338(75.6%)<br>74(16.3%)<br>41(9.1%)   | 0.008 |
| 6. Do you know that smoking leads to breathing disorder?<br>Yes<br>No<br>Don't know                                                     | 269(66.9%)<br>31(88.5%)<br>14(87.5%)  | 133(33.8%)<br>4(11.4%)<br>2(12.5%)   | 402(88.7%)<br>35(7.7%)<br>16(3.5%)    | 0.008 |
| 7. Do you know that smoking leads to paralysis?<br>Yes<br>No<br>Don't know                                                              | 184(64.1%)<br>50(73.5%)<br>77(78.5%)  | 100(34.8%)<br>18(26.4%)<br>21(21.4%) | 287(63.5%)<br>68(15.0%)<br>98(21.6%)  | 0.033 |

**Table 2:** Smoking-related attitude among gender

| Variables                                                                                                    | Male                                  | Female                              | Total                                 | P     |
|--------------------------------------------------------------------------------------------------------------|---------------------------------------|-------------------------------------|---------------------------------------|-------|
| 1. Smoking is effective to solve problems?<br>Yes<br>No<br>Don't know                                        | 180(90.0%)<br>110(49.1%)<br>24(77.4%) | 18(9%)<br>114(50.8%)<br>7(22.5%)    | 198(43.7%)<br>224(49.4%)<br>31(6.8%)  | 0.000 |
| 2. You will smoke if your best friend offers a cigarette?<br>Yes<br>No<br>Don't know                         | 176(96.1%)<br>124(49.2%)<br>14(77.7%) | 7(3.82%)<br>128(50.7%)<br>4(22.2%)  | 183(40.4%)<br>252(55.6%)<br>18(4.0%)  | 0.000 |
| 3. Smoking is harmful to your health?<br>Yes<br>No<br>Don't know                                             | 270(68.3%)<br>28(71.17%)<br>16(84.2%) | 125(31.6%)<br>11(28.2%)<br>3(15.7%) | 395(87.2%)<br>39(8.6%)<br>19(4.2%)    | 0.322 |
| 4. Smoke from other people cigarette is harmful to health?<br>Yes<br>No<br>Don't know                        | 176(96.1%)<br>124(49.2%)<br>14(77.7%) | 7(3.82%)<br>128(50.7%)<br>4(22.2%)  | 183(40.4%)<br>252(55.6%)<br>18(4.0%)  | 0.000 |
| 5. Smoking should be prevented in means of transportation<br>Yes<br>No<br>Don't know                         | 171(64.7%)<br>104(86.6%)<br>39(56.5%) | 93(35.2%)<br>16(13.3%)<br>30(43.4%) | 264(58.3%)<br>120(26.5%)<br>69(15.0%) | 0.000 |
| 6. Selling tobacco products to people under 18 years should not be prohibited?<br>Yes<br>No<br>Don't know    | 220(65.8%)<br>61(85.9%)<br>33(86.8%)  | 124(37.7%)<br>10(14.0%)<br>5(13.1%) | 334(55.0%)<br>71(15.7%)<br>38(8.4%)   | 0.000 |
| 7. Public places like school, hospital and park should be smoke free areas?<br>Yes<br>No<br>Don't know       | 155(62.2%)<br>130(74.4%)<br>29(96.6%) | 94(37.7%)<br>44(25.2%)<br>1(3.3%)   | 249(55.0%)<br>174(38.4%)<br>30(6.6%)  | 0.000 |
| 8. Banning of cigarette advertisements can reduce tobacco use?<br>Yes<br>No<br>Don't know                    | 114(54.2%)<br>136(80.9%)<br>64(85.3%) | 96(45.7%)<br>32(19.0%)<br>11(14.6%) | 210(46.4%)<br>168(37.1%)<br>75(16.6%) | 0.000 |
| 9. Raising taxes on cigarettes and other tobacco products can reduce tobacco use?<br>Yes<br>No<br>Don't know | 109(53.9%)<br>148(80.9%)<br>57(85.3%) | 93(46.0%)<br>33(19.4%)<br>13(19.4%) | 202(44.6%)<br>181(40.0%)<br>70(15.5%) | 0.000 |
| 10. Quitting of smokeless tobacco is good for health?<br>Yes<br>No<br>Don't know                             | 174(86.1%)<br>90(77.5%)<br>50(74.6%)  | 96(47.5%)<br>26(22.4%)<br>17(25.3%) | 202(59.6%)<br>116(25.6%)<br>67(14.8%) | 0.000 |

**Table 3:** Smoking-related perception among gender

| Variables                                                                                                                                         | Male                                  | Female                               | Total                                  | P     |
|---------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|--------------------------------------|----------------------------------------|-------|
| 1. Do you feel quitting will be difficult, when once you have started the habit?<br>Yes<br>No<br>Don't know                                       | 227(71.1%)<br>45(71.4%)<br>425(9.1%)  | 92(28.8%)<br>18(28.5%)<br>29(40.8%)  | 319(70.0%)<br>63(13.8%)<br>71(15.6%)   | 0.126 |
| 2. Do you think the number of friends increase/decrease for those with the smoking habit?<br>Yes<br>No<br>Don't know                              | 177(71.6%)<br>94(69.6%)<br>43(40.9%)  | 70(28.3%)<br>41(30.3%)<br>28(26.6%)  | 247(54.2%)<br>135(29.2%)<br>105(15.6%) | 0.202 |
| 3. Do you think this habit makes you more attractive?<br>Yes<br>No<br>Don't know                                                                  | 193(84.6%)<br>85(48.5%)<br>36(72.0%)  | 35(15.7%)<br>90(51.4%)<br>14(28.0%)  | 228(50.0%)<br>175(38.4%)<br>50(11.0%)  | 0.000 |
| 4. Do you think this habit makes you to lose habit?<br>Yes<br>No<br>Don't know                                                                    | 109(60.8%)<br>128(75.7%)<br>77(73.3%) | 70(39.1%)<br>41(24.2%)<br>28(26.6%)  | 179(39.3%)<br>169(37.1%)<br>105(23.0%) | 0.007 |
| 5. Do you think this habit is harmful to your health?<br>Yes<br>No<br>Don't know                                                                  | 241(65.4%)<br>45(84.9%)<br>28(87.5%)  | 127(34.6%)<br>8(15.1%)<br>4(12.5%)   | 368(80.7%)<br>53(11.6%)<br>32(7.0%)    | 0.001 |
| 6. Do you believe that if someone smoking or chewing tobacco, it will be hard stop?<br>Yes<br>No<br>Don't know                                    | 242(68.3%)<br>40(75.4%)<br>32(69.5%)  | 112(31.7%)<br>13(24.6%)<br>14(30.5%) | 354(77.6%)<br>53(11.6%)<br>46(10.1%)   | 0.578 |
| 7. Do you believe that using smokeless tobacco for a year or two, provided that you stop using it after that, is safe?<br>Yes<br>No<br>Don't know | 164(76.9%)<br>91(65.4%)<br>59(58.4%)  | 49(23.1%)<br>48(34.6%)<br>42(41.6%)  | 213(46.7%)<br>139(30.5%)<br>101(22.1%) | 0.002 |
| 8. Does smoking cigarettes make people feel more or less at ease during parties, celebrations, or other social events?<br>Yes<br>No<br>Don't know | 172(75.4%)<br>78(62.4%)<br>64(64.0%)  | 56(24.6%)<br>47(37.6%)<br>36(36.0%)  | 228(50.0%)<br>125(27.4%)<br>100(21.9%) | 0.000 |
| 9. Do you think boys/girls who smoke cigarettes/use other tobacco products have more or less friends?<br>Yes<br>No<br>Don't know                  | 138(75.8%)<br>117(70.9%)<br>59(55.6%) | 44(24.2%)<br>48(29.1%)<br>47(44.2%)  | 182(39.9%)<br>165(36.3%)<br>106(23.2%) | 0.0   |
| 10. Do you think smoke from another people's cigarette is harmful to you?<br>Yes<br>No<br>Don't know                                              | 225(63.9%)<br>56(91.8%)<br>33(80.4%)  | 126(36.1%)<br>5(8.2%)<br>8(19.6%)    | 352(77.0%)<br>61(13.4%)<br>41(9.0%)    | 0.000 |

354(77.6%) believe that if someone starts smoking or chewing tobacco, it will be hard to stop. 213(46.7%) Participants believe that smoking or using smokeless tobacco is safe for a year or two as long as you stop using it after that. 228(50%) participants felt that smoking cigarettes make people feel more or less at ease during parties, celebrations, or other social events. 352(77%) participants think that smoke from another peoples 'cigarette is harmful.

#### 4. Discussion

In the present study, the number of male students 314(69.2%) and female students 139(30.7%). Similar to 9 [9] and that shows of 50.7% male students and 48.2% are female students among medical students. Out of 453 students, 213(47%) were pharmacy 126(27.8%) were engineering, 207(20.53%) were Nursing 114 (25.2%). In present study, 389 (38.59%) of the total participants were studying 1<sup>st</sup> year, 119(46.3%) were studying 2<sup>nd</sup> year, 120 (26.5%) were studying 3<sup>rd</sup> year, 106(23.4%) were studying 4<sup>th</sup> year, 87(19.2%) were studying 5<sup>th</sup> year and 21(4.6%) studying. Study done by <sup>12</sup> among nursing students of three-year course of the university of Palermo shows 89(29.57%) were studying 1<sup>st</sup> year, 98(32.5%) were studying 2<sup>nd</sup> year, 114(37.87%) were studying 3<sup>rd</sup> year (27). Study was done by<sup>9</sup> among under graduate students of Bangladesh show result out of 260 respondents 70(26.9%) were smokers and 190(73.1%) were nonsmokers. In present study 338 participants (74.6%) Smoking discolours the tongue and teeth. According to a study by,<sup>13</sup> the frequency and length of tobacco use determine whether smokers' teeth develop brown, yellow, dark brown, or black stains. And 83% were aware of stained teeth and tongue. In present study, out of 453 students 265 (58.5%) had positive attitude towards on ill effect 142 (31.5%) were had negative attitude, towards ill effects of tobacco. Study done by<sup>10</sup> students in Nay Pyi Taw, reports of 10 (14.08%) were had high attitude level and 61 (85.92%) were had low attitude level.in present study attitude score among college student shows statistically significant value. Out of 453 students, 228 (50%) of the students believed that smoking makes them more beautiful. 39.3% of the students were certain that smoking can result in weight loss.

Study done by<sup>5</sup> among Adolescents of Mangalore city shows result that Smoking, according to 14% of participants, this habit enhances their appearance. 270(58.8%) had positive perception 117(25.12%) had negative perception. In present study perception among college student were statistically significant.

#### 5. Conclusion

This study on college students' knowledge, attitudes, and perceptions of tobacco use reveals a strong awareness of its harmful effects, with 74.39% displaying good knowledge. Additionally, 58.5% and 58.8% demonstrated positive attitudes and perceptions, respectively, towards tobacco's ill effects. Despite this awareness, some students continue to use tobacco, indicating a gap between knowledge and practice. Ongoing research on tobacco's prevalence and health impacts among youth is essential. Multi-level strategies, combining

education and Policies like the Cigarettes and Other Tobacco Products Act and creating smoke-free environments can significantly reduce tobacco use among college students and promote a tobacco-free future.

#### 6. Conflict of Interest

Authors declare no conflict of interest.

#### 7. Source of Funding

None.

**Ethical No:** IEC/AH&RC/AC/06/2024.

#### 8. Acknowledgement

We are extremely grateful to our guide for his guidance and support and all the participants for cooperation for smooth carryout of the study also thank our team members for their valuable support and patience throughout the study. Also, last but not the least AH & RC for approving and allowing to conduct the study.

#### Reference

1. Nivethitha R, Leelavathi L. Awareness on ill effects of tobacco usage among tobacco users. *J Adv Pharm Technol Res.* 2022;13(1):S217-22.
2. Rozi S, Butt ZA, Akhtar S. Correlates of cigarette smoking among male college students in Karachi, Pakistan. *BMC Public Health.* 2007; 7:312.
3. Rangey PS, Sheth MS, Khan A. Awareness about effects of tobacco and use in college students of Ahmedabad, India: A cross-sectional questionnaire-based survey. *Tobacco Prevention & Cessation.* 2018;
4. Sagar, Sandra and Gupta, Y, Knowledge, attitude, and awareness of tobacco among tobacco users in South Indian population -A questionnaire-based study. 2020 Oct. [https://www.researchgate.net/publication/344851055\\_Knowledge\\_attitude\\_and\\_awareness\\_of\\_tobacco\\_among\\_tobacco\\_users\\_in\\_South\\_Indian\\_population\\_A\\_questionnaire-based\\_study](https://www.researchgate.net/publication/344851055_Knowledge_attitude_and_awareness_of_tobacco_among_tobacco_users_in_South_Indian_population_A_questionnaire-based_study)
5. George, Rajani Mary; Thomas, Teenu. Perceptions and Practice of Tobacco Use among Adolescents of Mangalore city. *J Indian Assoc Pub Health Dent.* 2018;16(3):242-5.
6. Szymański J, Ostrowska A, Pinkas J, Giermaziak W, Krzych-Falta E, Jankowski M. Awareness of Tobacco-Related Diseases among Adults in Poland: A 2022 Nationwide Cross-Sectional Survey. *Int J Environ Res Public Health.* 2022; 19(9):5702.
7. Nagarajappa R, Daryani H, Sharda AJ, Asawa K, Batra M, Sanadhya S, Ramesh G. Knowledge and attitude towards smoking among Indian students of dentistry. *Int Dent J.* 2013; 63(5):244-8.
8. Dawood OT, Rashan MA, Hassali MA, Saleem F. Knowledge and perception about health risks of cigarette smoking among Iraqi smokers. *J Pharm Bio Allied Sci.* 2016;8(2):146.
9. Alwhaibi A, Wajid S, Alenezi A, Salami Y, Alhaydan I, Samreen S, Alhossan A, Al-Arifi MN. Prevalence of Smoking and Beliefs and Attitude Toward Smoking Habit and Smoking Cessation Methods Among Pharmacy Students: A Cross-Sectional Study in Saudi Arabia. *Front Public Health.* 2022;10:816101.
10. Singh, Shilpi and Dagrur, Kapil and Kariya, Pratik and Bargale, Seema and Shah, Shreyas.Knowledge and attitude regarding ill

- effects of smoking among college students. *Eur J Dent Ther Res*. 2015;(4):259-65.
11. Anam, M. R., Shamsi, T., Al Amin, A., Ahmed, N., Hasan, M. T., & Gupta, P. K. S. Knowledge, attitudes and practices relating to tobacco smoking in undergraduate students in a selected university of Bangladesh. *Int J Commun Med Pub Health*. 2022;9(4):1637–42.
  12. Provenzano S, Santangelo OE, Grigis D, Giordano D, Firenze A. Smoking behavior among nursing students: attitudes toward smoking cessation. *J Prev Med Hyg*. 2019;60(3):E203-10
  13. Kottke TE, Battista RN, DeFries GH, Brekke ML. Attributes of successful smoking cessation interventions in medical practice. A meta-analysis of 39 controlled trials. *JAMA*. 1988;259(19):2883-9.
  14. Htin Aung Myint MN, Yamamoto E, Ko MH, Khaing M, Reyer JA, Hamajima N. Knowledge, attitude, and usage pattern of tobacco among high school students in Nay Pyi Taw, Myanmar. *Nagoya J Med Sci*. 2019;81(1):65-79.
  15. Sychareun V, Hansana V, Choummanivong M, Nathavong S, Chaleunvong K, Durham J. Cross-sectional survey: smoking among medical, pharmacy, dental and nursing students, University of Health Sciences, Lao PDR. *BMJ Open*. 2013;3(8):e003042.

**Cite this article:** Sushmitha SM, Swamy K, Gowda SD, Krishna J. Knowledge attitude and perception on ill effects of tobacco usage among college students. *Indian J Pharma Pharmacol*.2025;12(1):54-60.