Assessment of knowledge, attitude, and practices and motivation to quit tobacco habits in relation to age and educational status among male tobacco users visiting a Government Dental College Hospital, India

J. R. Sukhabogi, B. R. Chandrashekar¹, G. Satish Kumar², N. Harita²

Department of Public Health Dentistry, Government Dental College and Hospital, Hyderabad, Telangana, ¹Department of Public Health Dentistry, JSS Dental College and Hospital, JSS Academy of Higher Education and Research, JSS Medical Institutions Campus, Mysore, Karnataka, India, ²Masters in Biomedical Sciences, Rutgers University, New Brunswick, NJ, USA

Address for correspondence: Dr. B. R. Chandrashekar, Department of Public Health Dentistry, JSS Dental College and Hospital, JSS Academy of Higher Education and Research, JSS Medical Institutions Campus, SS Nagar, Mysore, Karnataka, India. E-mail: drchandrubr@yahoo.com

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ABSTRACT

Background: Tobacco use has become an epidemic of modern times. Its use is widespread among young adults and those from lower socioeconomic classes.

Objective: The objective is to assess knowledge, attitude, and practices (KAP) and motivation to quit tobacco habits in relation to age and educational status among male tobacco users visiting a Government Dental College Hospital, India.

Materials and Methods: This was a questionnaire survey conducted among 199 male adult smokers visiting the Department of Public Health Dentistry in a Government Dental College in India. Quota sampling was used for recruiting the required number of study participants. Information on KAP related to smoking habits was collected using a predesigned structured questionnaire by two trained and calibrated dentists. Knowledge, attitude toward quitting and their self-confidence toward quitting was compared in relation to age and educational status using Chi-square test.

Results: A higher percentage of younger adults aged 18–24 years were interested in quitting the habit (100%) compared to those aged 45–64 years (85.2%). Similarly, a higher percentage of young adults have tried quitting the habit (76.9%) compared to their older counterparts (64.8%) (P < 0.05). Knowledge on ill effects of smoking increased with increasing educational attainment (P < 0.001). People with higher educational attainment had observed the warning sign on packaging (73.7%) compared to those with less than primary education (25.9%) and they also reported that the presence of such warning sign motivated them to think about quitting (54.8% vs. 0%) (P < 0.001).

Conclusion: Knowledge, positive attitude toward quitting and self-confidence to quit were higher among younger adults and those with secondary education compared to their elder counterparts and those with less than primary education.

Keywords: Attitude, educational status, knowledge, attitude and practices, knowledge, practice, smoking, tobacco

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The consumption of tobacco accounts to nearly 6 million deaths worldwide each year. Globally, around 100 million premature deaths have occurred due to tobacco-related habits in the 20th century according to the World Health Organization estimates. This figure is expected to increase to 1 billion in the 21st century if the existing trend of tobacco use persists.\(^1\) The massive disability, disease, and death attributable to tobacco habits has resulted in problem of tobacco being recognized as a major public health concern in the recent times. Tobacco addiction has become an epidemic of modern times.\(^2\) Nearly one person dies every 6 s because of tobacco habits. Majority of tobacco users (more than 80%) of the more than 1 billion users live in low- and middle-income countries. The burden of tobacco-attributable illness and death is heaviest in these countries. Tobacco use results in severe societal loss owing to reduced productivity, environmental damage, and poverty to the families.\(^3\) Literature indicates that 30%–60% of men and 1.8%–15.6% of women in the South-East Asia Region use some form of tobacco.\(^4\) India is the second largest producer and consumer of tobacco after China. In India, around 275 million adults use tobacco in some form which accounts to more than one-third of adult's population in the country. In these 275 million users, 163.7 million consume smokeless tobacco, 69 million are smokers, and 42.3 million consume tobacco in both the forms.\(^5\) According to Global Adults Tobacco Survey – 2 conducted in 2016–2017 by Tata Institute of Social Sciences, Mumbai, 28.6% of adults aged 15 years and above (26.7 crore) used tobacco in some form. Among these, 19.9 crore adults were from rural areas and 6.8 crore adults were from urban areas. Every fifth adult (19.9 crore) used smokeless tobacco, every tenth adult (10.0 crore) smoked tobacco and 3.2 crore adults resorted to dual use of tobacco.\(^6\) Majmudar et al. in their study to assess tobacco-related knowledge, attitudes, and practices among women from urban low socioeconomic strata found the prevalence of smokeless tobacco use to be very high among them.\(^7\) Tobacco-related habits are most often found among individuals from low socioeconomic status.\(^8\) This high prevalence is attributed to lack of awareness on ill effects of these adverse habits.\(^9,10\) However, literature also suggests that the prevalence of smoking is high among medical and technical professionals who have high educational attainment.\(^11-14\) Here, high prevalence of smoking was attributed to stress and peer pressure. The raising tobacco concerns especially among adults, makes it imperative to assess the knowledge, attitude, and practices (KAPs) related to tobacco habits and understand factors which drive adults to get into these habits. This understanding will augment the effectiveness of preventive strategies that could be applied individually and at community level. Literature assessing KAP related to tobacco habits among population in Telangana state in India is scanty. Hence, the present study was undertaken to assess KAP and motivation to quit tobacco habits among male tobacco users visiting a Government Dental College Hospital in Hyderabad, India.

### MATERIALS AND METHODS

This was a cross-sectional questionnaire survey conducted among male patients visiting Government Dental College and Hospital, Hyderabad, from December 2014 to February 2015. Ethical clearance for the study was obtained from institutional Ethics Committee vide reference number ECR/300/Inst/AP/2013/RR – 16 dated November 10, 2014. The sample size was computed using nMasters software (Biostatistics Resource and Training Center, Christian Medical College, Vellore, Tamil Nadu, India) for estimating difference between two proportions based on risk difference. It was computed to be 191 with an estimated risk difference of 0.03 and population risk difference of 0.1 at 95% confidence interval. However, the sample size was rounded off to 200 to compensate for any nonresponse or incomplete data collection. Quota sampling technique was used for selecting the required number of study participants. All participants reporting to Public Health Dentistry Department of Government Dental College and Hospital, Afzalgunj from December 1, 2014 were requested to participate in the study after explaining the research protocol. All male tobacco users who consented to participate were considered till the required sample size was achieved. The informed consent was obtained from each participant before giving them the questionnaire. Information on KAP related to tobacco habits was collected using a predesigned structured questionnaire by two calibrated dentists. The questionnaire eliciting the desired information was developed by synthesis of literature review and expert inputs. The initial questionnaire had 34 items. However, after content validation by three subject experts, four items were deleted as they were redundant, four items were removed for being not very relevant, and two items for creating ambiguity in the wording. The final questionnaire had 24 items along with demographic information. The questionnaire was subjected to cognitive interview among 10 adult volunteers visiting the department to elicit response process validity and wordings of two items were modified after this. Among 24 items, 11 items were for eliciting knowledge on tobacco-related ill effects, five items for assessing their attitude toward quitting tobacco habits and four items for eliciting their practice and quit attempts. Each item was coded on a 5-point Likert scale with 1 being strongly disagree to 5 being strongly agree. Two questions elicited the factors that lead them to get into this habit as well as frequency and duration of these habits while other two questions were related to warning.
Table 1: Sociodemographic details of study participants

| Age groups (years) | Less than primary education | Primary education | Secondary education | Higher secondary and above | Total |
|--------------------|-----------------------------|-------------------|---------------------|----------------------------|-------|
| 18-24              | 0 (0)                       | 12 (45.2)         | 14 (53.8)           | 0 (0)                      | 26 (100) |
| 25-44              | 21 (37.6)                   | 32 (26.9)         | 36 (30.3)           | 30 (25.2)                  | 119 (100) |
| 45-64              | 6 (11.1)                    | 14 (25.9)         | 7 (13)              | 27 (50)                    | 54 (100) |
| Total              | 27 (13.6)                   | 58 (29.1)         | 57 (28.6)           | 57 (28.6)                  | 199 (100) |

Table 2: Details of tobacco products used in relation to age and educational attainment

| Age groups (years) | Cigarette, n (%) | Bidi, n (%) | Total, n (%) |
|--------------------|------------------|-------------|--------------|
| 18-24              | 26 (100)         | 0 (0)       | 26 (100)     |
| 25-44              | 99 (83.2)        | 20 (16.8)   | 119 (100)    |
| 45-64              | 30 (55.6)        | 24 (44.4)   | 54 (100)     |
| Total              | 155 (77.9)       | 44 (22.1)   | 199 (100)    |

| Educational attainment | Cigarette, n (%) | Bidi, n (%) | Total, n (%) |
|------------------------|------------------|-------------|--------------|
| Less than primary education | 14 (51.9)      | 13 (48.1)    | 27 (100)    |
| Primary education      | 46 (79.3)        | 12 (20.7)    | 58 (100)    |
| Secondary education    | 49 (86)          | 8 (14)       | 57 (100)    |
| Higher secondary and above | 46 (80.7)      | 11 (19.3)    | 57 (100)    |
| Total                  | 155 (77.9)       | 44 (22.1)    | 199 (100)   |

Chi-square test was used for comparing these responses in relation to age and educational attainment. The statistical significance was fixed at 0.05.

RESULTS

A total of 199 participants completed the survey. Among them, 57 (28.6%) participants each had secondary and higher secondary education, 58 (29.1%) had primary education and 27 (13.6%) had less than primary education. Majority of these smokers were in the age group of 25–44 years [Table 1]. It was evident that 77.9% of these participants consumed cigarette while 22.1% consumed bidies. A higher percentage of younger adults were consuming cigarettes (100% among 18–24 years) while consumption of bidi was prevalent among older adults (44% among those aged 45–64 years) [P < 0.001, Table 2]. Bidi consumption was more among individuals with less than primary education (48.1%) compared to those with higher educational attainment [P = 0.004, Table 2]. 44.7% of the individuals in the present study initiated smoking due to peer pressure. This was the most common reason for initiating smoking followed by for fun (26.1%) and stress/work pressure (25.6%) in the descending order. There was no significant difference in the reason for initiating smoking with regard to age [P = 0.13, Table 3]. However, with regard to educational attainment, majority of people with less than primary education initiated smoking for fun while those with secondary and higher secondary education initiated smoking either for peer pressure or fun [P < 0.001, Table 3]. 78.4% of the participants did notice the warning sign on the packaging while 70.5% of the participants said that the warning signs on the packaging did not motivate them to quit the habit. It was evident that all younger adults in the age group of 18–24 years were aware about the warning signs and none of these individuals were affected by these warning signs while this warning sign did motivate some older adults to think about quitting. The presence of such warning sign did motivate them to think about quitting [P < 0.001, Table 4]. The responses to 20 items on KAP in relation to age are summarized in Table 5. A higher percentage of younger adults were interested in quitting the habit (100%) and they also expressed confidence in quitting this habit (53.8%) than compared to their older counterparts (P < 0.05). Knowledge on ill effects of smoking increased with increasing educational attainment [P < 0.001, Table 6]. The responses to twenty items on KAP in relation to educational attainment are summarized in Table 6. Higher percentage of adults with more than secondary education expressed their desire and
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Table 3: Reasons for initiating smoking in relation to age and educational attainment

| Age groups (years) | Stress and work pressure, n (%) | For fun, n (%) | Peer pressure, n (%) | Others, n (%) | Total, n (%) |
|--------------------|-------------------------------|---------------|---------------------|--------------|-------------|
| 18-24              | 4 (25.4)                      | 6 (37.5)      | 16 (61.5)           | 0 (0)        | 26 (100)    |
| 25-44              | 29 (24.4)                     | 30 (25.2)     | 53 (44.5)           | 7 (5.9)      | 119 (100)   |
| 45-64              | 18 (33.3)                     | 16 (29.6)     | 20 (37)             | 0 (0)        | 54 (100)    |
| Total              | 51 (25.6)                     | 52 (26.1)     | 89 (44.7)           | 7 (3.5)      | 199 (100)   |

Statistical inference

Table 4: Awareness about warning on packaging in relation to age and educational attainment

| Age groups (years) | Did they see a warning sign on packaging | Impact of warning signs motivating them to quit |
|--------------------|-----------------------------------------|-----------------------------------------------|
|                    | Yes, n (%) | No, n (%) | Total, n (%) | Yes, n (%) | No, n (%) |
| 18-24              | 26 (100) | (0) | 26 (100) | 0 (0) | 26 (100) |
| 25-44              | 97 (81.5) | 22 (18.5) | 119 (100) | 35 (30.1) | 62 (61.5) |
| 45-64              | 33 (61.1) | 21 (38.9) | 54 (100) | 11 (33.3) | 22 (66.7) |
| Total              | 156 (78.4) | 43 (21.6) | 199 (100) | 46 (23.1) | 110 (70.5) |

Statistical inference

DISCUSSION

The crisis of tobacco in India is multifaceted. It is attributed to undue use of different smoking forms along with an array of smokeless tobacco products.[15] Younger adults preferred cigarettes while older adults used more bidies. Individuals with less than primary education used bidies while those with higher educational attainment preferred cigarettes. Bidies are mostly manufactured in the unorganized sector while cigarettes are mainly manufactured in large-scale industries. The cost of bidies is less than that of cigarettes. Lack of affordability among those with lower education could have resulted in high prevalence of bidies consumption among them. Younger adults feel cigarette smoking as a fashion symbol. This confidence to quit the habit compared to those with less than primary education $[P < 0.001, \text{Table 6}]$.

Gilman et al. in their study found that lower education was associated with more pack-years of smoking, fewer quit attempts and a lower likelihood of cessation. The effect of education was characterized by a higher risk of smoking frequency/intensity among participants without high school degrees compared to those who had graduated college.[17] Thankappan and Thresia in their study on tobacco use and social status found tobacco use to be associated with social class. They found the prevalence of smoking to be high among lower social classes with beedi being the most common form of smoking form of tobacco consumed by these people.[18] Most individuals with low educational attainment in the present study initiated smoking for fun while those with higher educational attainment quoted peer pressure. Katainen in their study found that the nonmanual workers

CI - Confidence interval
Table 5: Knowledge, attitude, and practices about smoking in relation to age

| Question                                                                 | 18-24 years | 25-44 years | 45-64 years | Total     |
|--------------------------------------------------------------------------|-------------|-------------|-------------|-----------|
| Smoking is the main cause of throat and oral cancers                      | 17 (65.4)   | 9 (43.6)    | 13 (50)     | 28 (51.9) |
| Statistical inference                                                    | $\chi^2$: 1.33, df: 2, $P=0.52$, $r=0.08$, 95% CI=−0.06-0.23, effect size=0.005 |
| Risk of tooth loss in smokers is twice more than in nonsmokers           | 0 (0)       | 26 (100)    | 12 (10.5)   | 23 (7.2)  |
| Statistical inference                                                    | $\chi^2$: 4.88, df: 2, $P=0.09$, $r=0.16$, 95% CI=0.02-0.29, effect size=0.0051 |
| Smoking causes stains on teeth and tongue                                | 13 (50)     | 13 (50)     | 58 (48.7)   | 61 (51.3) |
| Statistical inference                                                    | $\chi^2$: 0.34, df: 2, $P=0.85$, $r=0.04$, 95% CI=−0.10-0.17, effect size=0.005 |
| Smoking is a major source of bad breath                                  | 17 (65.4)   | 9 (34.6)    | 64 (53.8)   | 55 (46.2) |
| Statistical inference                                                    | $\chi^2$: 1.42, df: 2, $P=0.49$, $r=0.08$, 95% CI=−0.05-0.22, effect size=0.005 |
| Smoking causes black hairy tongue                                         | 0 (0)       | 26 (100)    | 4 (3.4)     | 115 (96.6) |
| Statistical inference                                                    | $\chi^2$: 2.74, df: 2, $P=0.25$, $r=0.12$, 95% CI=−0.02-0.25, effect size=0.0051 |
| Smoking can cause inflammation in salivary glands                        | 0 (0)       | 26 (100)    | 0 (0)       | 54 (100)  |
| Smoking delays healing after tooth extraction and can lead to temporary and painful condition known as dry socket | 0 (0)       | 26 (100)    | 119 (100)   | 0 (0)     |
| Smokers have less success with gum treatments and dental implants         | 0 (0)       | 26 (100)    | 10 (8.4)    | 104 (52.3) |
| Statistical inference                                                    | $\chi^2$: 7.08, df: 2, $P=0.03$, $r=0.19$, 95% CI=0.05-0.31, effect size=0.0051 |
| Smokers need to visit dentist more often than others                      | 13 (50)     | 13 (50)     | 55 (46.2)   | 64 (53.8) |
| Statistical inference                                                    | $\chi^2$: 6.04, df: 2, $P=0.05$, $r=0.17$, 95% CI=0.03-0.30, effect size=0.0051 |
| Smoking effects any organs                                               | 15 (57.7)   | 11 (42.3)   | 72 (60.5)   | 47 (39.5) |
| Statistical inference                                                    | $\chi^2$: 2.32, df: 2, $P=0.31$, $r=0.11$, 95% CI=−0.03-0.24, effect size=0.0051 |
| Smoking is the major cause of lung cancer                                 | 15 (57.7)   | 11 (42.3)   | 52 (43.7)   | 67 (56.3) |
| Statistical inference                                                    | $\chi^2$: 9.53, df: 2, $P=0.01$, $r=0.22$, 95% CI=0.08-0.36, effect size=0.0052 |

Questions on attitude and practices

| Question                                                                 | Yes, n (%) | No, n (%) | Yes, n (%) | No, n (%) | Yes, n (%) | No, n (%) | Yes, n (%) | No, n (%) |
|--------------------------------------------------------------------------|------------|-----------|------------|-----------|------------|-----------|------------|-----------|
| Are you interested in quitting smoking?                                  | 26 (100)   | 0 (0)     | 112 (64.1) | 57 (35.9) | 46 (85.2)  | 8 (14.8)  | 184 (92.5) | 15 (7.5)  |
| Statistical inference                                                    | $\chi^2$: 6.69, df: 2, $P=0.035$, $r=0.18$, 95% CI=0.04-0.31, effect size=0.0051 |
| Are you confident that you will be successful in quitting the habit?     | 14 (53.8)  | 12 (46.2) | 94 (79)    | 25 (21)   | 31 (57.4)  | 23 (42.6) | 139 (69.8) | 60 (30.2) |
| Statistical inference                                                    | $\chi^2$: 11.85, df: 2, $P=0.003$, $r=0.24$, 95% CI=0.11-0.37, effect size=0.0052 |
| Have you ever tried quitting smoking?                                    | 20 (76.9)  | 6 (23.1)  | 79 (66.4)  | 40 (33.6) | 35 (64.8)  | 19 (35.2) | 134 (67.3) | 65 (32.7) |
| Statistical inference                                                    | $\chi^2$: 1.29, df: 2, $P=0.52$, $r=0.08$, 95% CI=−0.08-0.21, effect size=0.005 |
| Do you know the benefits of stopping smoking?                            | 18 (69.2)  | 8 (30.8)  | 97 (81.5)  | 22 (18.5) | 36 (66.7)  | 18 (33.3) | 151 (75.9) | 48 (24.1) |
| Statistical inference                                                    | $\chi^2$: 5.20, df: 2, $P=0.07$, $r=0.16$, 95% CI=0.02-0.29, effect size=0.0051 |
| Did you find any difficulties while quitting the habit?                  | 7 (35)     | 13 (65)   | 33 (41.8)  | 46 (58.2) | 29 (82.9)  | 6 (17.1)  | 66 (51.3)  | 65 (48.5) |
| Statistical inference                                                    | $\chi^2$: 18.95, df: 2, $P<0.001$, $r=0.34$, 95% CI=0.17-0.43, effect size=0.0054 |
| Does anyone in your family smoke?                                        | 9 (34.6)   | 17 (65.4) | 48 (40.3)  | 71 (59.7) | 14 (25.9)  | 40 (74.1) | 71 (35.7)  | 128 (64.3) |
| Statistical inference                                                    | $\chi^2$: 3.38, df: 2, $P=0.19$, $r=0.13$, 95% CI=−0.01-0.26, effect size=0.0051 |
| Do your family members discourage you from smoking?                     | 17 (77.3)  | 5 (22.7)  | 77 (67)    | 38 (33)   | 41 (78.8)  | 11 (21.2) | 135 (71.4) | 54 (28.6) |
| Statistical inference                                                    | $\chi^2$: 2.9, df: 2, $P=0.24$, $r=0.12$, 95% CI=−0.02-0.26, effect size=0.0051 |
| Have you ever tried tobacco replacement therapy like nasal sprays, chewing gums, lozenge drugs like Zyban? | 4 (15.4)   | 22 (84.6) | 61 (53)    | 54 (47)   | 10 (19.2)  | 42 (80.8) | 75 (38.9)  | 118 (61.1) |
| Statistical inference                                                    | $\chi^2$: 24.20, df: 2, $P<0.001$, $r=0.35$, 95% CI=0.22-0.47, effect size=0.0055 |
| Have you been to a dentist before?                                       | 13 (50)    | 13 (50)   | 84 (70.6)  | 35 (29.4) | 27 (50)    | 27 (50)   | 124 (62.3) | 75 (37.7) |
| Statistical inference                                                    | $\chi^2$: 8.64, df: 2, $P=0.01$, $r=0.23$, 95% CI=0.07-0.34, effect size=0.0052 |

Cl - Confidence interval

Inequalities in smoking highlighted the role of education, self-efficacy, and deprivation. They found that education independently reduced the odds of a manual class person tended to consider their smoking functional, pleasurable and controlled similar to the results of present study.\cite{19} Layte and Whelan in their review on explaining social class...
Table 6: Knowledge, attitude, and practices about smoking in relation to educational attainment

| Question                                                                 | Less than primary education | Primary and secondary education | Higher secondary and above | Total |
|--------------------------------------------------------------------------|-----------------------------|---------------------------------|---------------------------|-------|
|                                                                           | Yes, n (%)                  | No, n (%)                        | Yes, n (%)                | No, n (%) |
| Smoking is the main cause of throat and oral cancers                     | 28 (49.1)                   | 29 (50.9)                       | 41 (71.9)                 | 16 (28.1) |
| Statistical inference                                                    | 7.56, df: 2, P=0.02, r=0.19, 95% CI=0.06-0.33, effect size=0.0052 |
| Risk of tooth loss in smokers is twice more than in nonsmokers           | 0 (0)                       | 52 (100)                        | 8 (14)                    | 49 (86) |
| Statistical inference                                                    | 8.01, df: 2, P=0.02, r=0.20, 95% CI=0.06-0.33, effect size=0.0052 |
| Smoking causes stains on teeth and tongue                                | 44 (77.2)                   | 13 (22.8)                       | 31 (54.4)                 | 26 (45.6) |
| Statistical inference                                                    | 4.08, df: 2, P=0.001, r=0.45, 95% CI=0.33-0.56, effect size=0.0058 |
| Smoking is a major source of bad breath                                  | 21 (36.8)                   | 36 (63.2)                       | 43 (75.4)                 | 14 (24.6) |
| Statistical inference                                                    | 17.3, df: 2, P=0.001, r=0.29, 95% CI=0.16-0.42, effect size=0.0053 |
| Smoking causes black hairy tongue                                        | 4 (7)                       | 53 (93)                         | 0 (0)                    | 57 (100) |
| Statistical inference                                                    | 10.17, df: 2, P=0.01, r=0.33, 95% CI=0.09-0.37, effect size=0.0052 |
| Smoking can cause inflammation in salivary glands                        | 0 (0)                       | 57 (100)                        | 0 (0)                    | 57 (100) |
| Smoking delays healing after tooth extraction and can lead to temporary and painful condition known as dry socket | 0 (0)                       | 57 (100)                        | 0 (0)                    | 57 (100) |
| Smokers have less success with gum treatments and dental implants        | 0 (0)                       | 57 (100)                        | 10 (17.5)                | 47(82.5) |
| Statistical inference                                                    | 26.23, df: 2, P=0.001, r=0.36, 95% CI=0.23-0.48, effect size=0.0055 |
| Smokers need to visit dentist more often than others                      | 25 (43.9)                   | 32 (56.1)                       | 29 (50.9)                 | 28 (49.1) |
| Statistical inference                                                    | 4.09, df: 2, P=0.03, r=0.14, 95% CI=0.00-0.28, effect size=0.0051 |
| Smoking effects any organs                                               | 27 (47.4)                   | 30 (52.6)                       | 47 (82.5)                 | 27 (47.5) |
| Statistical inference                                                    | 21.48, df: 2, P=0.001, r=0.33, 95% CI=0.19-0.45, effect size=0.0054 |
| Smoking is the major cause of lung cancer                                | 38 (66.7)                   | 19 (33.3)                       | 39 (68.4)                 | 18 (31.6) |
| Statistical inference                                                    | 25.02, df: 2, P=0.001, r=0.35, 95% CI=0.22-0.47, effect size=0.0055 |

Questions on attitude and practices

| Question                                                                 | Yes, n (%)                  | No, n (%)                        |
|--------------------------------------------------------------------------|-----------------------------|---------------------------------|
| Are you interested in quitting smoking?                                  | 53 (93)                     | 4 (7)                           |
| Statistical inference                                                    | 8.23, df: 2, P=0.02, r=0.20, 95% CI=0.07-0.33, effect size=0.0052 |
| Are you confident that you will be successful in quitting the habit?      | 43 (71.9)                   | 16 (28.1)                       |
| Statistical inference                                                    | 13.16, df: 2, P=0.001, r=0.26, 95% CI=0.12-0.38, effect size=0.0053 |
| Have you ever tried quitting smoking?                                    | 32 (55.1)                   | 25 (43.9)                       |
| Statistical inference                                                    | 4.55, df: 2, P=0.01, r=0.15, 95% CI=0.01-0.28, effect size=0.0051 |
| Do you know the benefits of stopping smoking?                            | 53 (93)                     | 4 (7)                           |
| Statistical inference                                                    | 33.21, df: 2, P=0.001, r=0.26, 95% CI=0.12-0.38, effect size=0.0053 |
| Did you find any difficulties while quitting the habit?                   | 15 (46.9)                   | 17 (53.1)                       |
| Statistical inference                                                    | 12.73, df: 2, P=0.002, r=0.25, 95% CI=0.12-0.38, effect size=0.0053 |
| Does anyone in your family smoke?                                        | 19 (33.3)                   | 38 (66.7)                       |
| Statistical inference                                                    | 3.55, df: 2, P=0.03, r=0.13, 95% CI=0.00-0.27, effect size=0.0051 |
| Do your family members discourage you from smoking?                      | 45 (78.9)                   | 12 (21.1)                       |
| Statistical inference                                                    | 5.92, df: 2, P=0.05, r=0.17, 95% CI=0.03-0.3, effect size=0.0051 |
| Have you ever tried tobacco replacement therapy like nasal sprays, chewing gums, lozenge drugs like Zyban? | 17 (29.8)                   | 40 (70.2)                       |
| Statistical inference                                                    | 27.31, df: 2, P=0.001, r=0.29, 95% CI=0.16-0.42, effect size=0.0053 |
| Have you been to a dentist before?                                        | 36 (63.2)                   | 21 (36.8)                       |
| Statistical inference                                                    | 2.35, df: 2, P=0.31, r=0.11, 95% CI=0.03-0.24, effect size=0.0051 |

Statistical inference:
- Z, df, P, r, 95% CI, effect size
smoking relative to a nonmanual by 12%. They also found that measures of disadvantage and deprivation account for almost one-third of the class differential in smoking. They suggested that the living conditions of lower social class groups leads to the development of lower self-efficacy and a lower propensity to quit smoking.\(^{[20]}\) Knowledge on adverse effects of smoking increased with increasing educational attainment which was similar to the results of a study by Kumar and Borker and others.\(^{[21-24]}\) A higher percentage of younger adults expressed their desire to quit smoking and were confident of doing so. The willingness to quit the habit as well as confidence to do so increased with increasing educational status. Younger adults and those with higher educational attainment had a higher level of awareness about the ill-effects of smoking and this could have motivated them to consider quitting the habit similar to the results of study by Milcarz. \(^{et al.}\) and others.\(^{[25-27]}\) Most of the younger adults and those with higher secondary education quoted that they have observed warning signs on packaging and some of them also expressed that these signs have motivated them to consider quitting. However, majority of the individuals who are older and those with less than primary education failed to witness the presence of warning signs. This clearly highlights the need to make these warning signs more visible. Jung in a review on implications of graphic cigarette warning labels (GWLS) on smoking behavior claimed that GWLS were more effective than text warnings in motivating smokers to consider quitting. The presence of these warnings were claimed to have a positive impact in motivating smokers to quit.\(^{[28]}\)

**CONCLUSION**

We found that knowledge, positive attitude toward quitting and self-confidence to quit were higher among younger adults and those with secondary education. It is essential for every health-care professional to elicit information on tobacco habits in every patient encounters and facilitate them to quit these habits. In such counseling sessions, priority should be given to those from lower social classes who lack awareness on ill-effects of smoking.

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**Conflicts of interest**

There are no conflicts of interest.

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