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Research Article

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Perceptions regarding tobacco usage among adolescents & young adults in a district of Western Uttar Pradesh (India): a qualitative study

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ABSTRACT

Background: Tobacco usage in adolescents & young adults of state Uttar Pradesh of India is rising to an alarming level; although strategies to curtail them are also running; but the rising usage, can be better known by exploring the role of their perceptions regarding the usage of tobacco.

Methods: This cross sectional study was done on total 400 (200 adolescents aged: 10-19 years & 200 young adults aged 20-30 years) by simple random technique using in-depth-interview schedule for 3 months in district Muzaffarnagar (Uttar Pradesh) in India.

Results: The 41% Adolescents (AD) and 54.5% Young Adults (YA) were using tobacco (X^2 =5.0, P <0.05); and this was mainly in smoked form (62.1% in AD & 54.1% in YA) and that too in the form of cigarettes in AD (56.8%) and bidi in YA (69.4%). Majority of them had also no knowledge regarding harmful effects of tobacco usage in AD & YA groups (50% & 41.2% respectively). Only 39% of AD group and 23% of YA group wanted to quit tobacco in future, that too only for saving money (43.7%) in AD group as compared to 40% of YA group who wanted to leave tobacco to remain healthy despite the information regarding harmful effects of tobacco from family/educational institutions level (X^2 =8.1, P <0.05).

Conclusions: Tobacco usage perceptions among adolescents and young adults in rural area are not healthy; as per results of this in-depth analysis, for which serious efforts from multiple levels are required to safeguard the health of our future generations.

Keywords: Adolescents, Young adults, Tobacco, Perceptions, Rural area, Uttar Pradesh, India

INTRODUCTION

In India around 194 million men and 45 million women use tobacco in smoked or smokeless forms as per WHO data. Indians are the second biggest users of tobacco in many forms such as bidi, gutka, khaini, paan-masala, hukka, cigarettes etc. The irony in India is that the most dangerous time for starting tobacco use in India is adolescence from age 10 year onwards and early adulthood below 30 years, as nearly 55500 adolescents currently are using tobacco every day in India and that

too because of low socio-economic status of adolescents in family. ¹⁻⁵ High prevalence of adolescents tobacco users across many states of India have been reported in studies conducted in Uttar Pradesh, Chennai and other North-Eastern states of India. ⁵⁻⁸ Moreover these studies also indicate that more than 25% of adolescents aged 13 to 15 years in India had used tobacco in any form, and 17% were current user. ⁹⁻¹⁰ Tobacco use is therefore increasing among Indian school and college going adolescents as a persistent alarming issue till adulthood. ¹¹

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This alarming rise may be attributed to factors such as poor perceptions. Studies by qualitative techniques have revealed few critical issues in perceptions that: (a) Parents and peers can strong influence on youth tobacco use; (b) Tobacco chewing in the form of gutkha is considered less harmful and more accessible than smoking cigarettes; and (c) students are positive on role, government can play in tobacco control but this is not the complete picture, which is actually different in community. Studies also reveal that not only traditional forms; such as betel quid, tobacco with lime are very commonly used but also, the use of new products is on increasing level, not only among men but also among children, teenagers, women of reproductive age, medical and dental students. ¹³

Previous studies in other countries apart from India also indicate that male tobacco users' had belief of smokeless tobacco being less harmful to physical health than cigarette smoking, suggesting that adolescents and young adults often have poor knowledge regarding harmful effects of tobacco. ¹⁴ The poor perceptions also indicate that inadequate parental monitoring and association with deviant peers are also the factors operating in adolescent harmful tobacco use. ¹⁵

The need of hour is therefore qualitative studies; which can explore assessments and comprehensive measures of tobacco use as well focus on perceptions, so as to provide specific scientific evidence about how decisions on tobacco use are shaped using different tobacco products. ¹⁶ Moreover nearly 2.6 million young people aged 10 to 24 die which die each year, due to preventable causes out of 150 million young people used tobacco [WHO fact Sheet (2011) & Davey S et al. (2013)] the scope of prevention can expand by conducting qualitative in-depth research studies on basis of importance of this issue. ^{17,18}

With this background in mind, authors therefore selected this research topic to study on the adolescents and young adults in a rural area of India.

METHODS

This cross sectional study on tobacco use was done on total 400 (200 adolescents aged: 10-19 years & 200 young adults aged 20-30 years in district Muzaffarnagar (UP) during 15th Oct 2014 to 15th Jan 2015 were in-depthinterviewed.

All the study subjects (AD+ YA) residing in the field practice area of Rural Health Training Centre (RHTC) of Department of community medicine Muzaffarnagar medical college, Muzaffarnagar (UP) were enrolled and they were selected by using simple random sampling technique. 50% prevalence was assumed as per WHO criteria for calculation of sample size as no clear cut data was available in specified age groups.

Sample size calculation

 $N = 4PQ/L^2$

P = 50% (assumed prevalence as per WHO criteria)

Q = 50% (100-P)

L = Allowable error (10% of P) = 5

So, N=400

Sampling was done in such a way that 50% Subjects were selected randomly to constitute at least 200 Adolescents and at least 200 young adults, thus constituting sample size of 400. Therefore total 400 subjects were taken in study from age group 10-30 years for completing the sample size.

Inclusion criteria of tobacco usage

The criteria for selection of cases were as per working definitions of tobacco usage given by WHO.

Tobacco use in our study was defined as any habitual use of the tobacco plant leaf and its products, as per the responses of subjects in any form.

Data collection technique

Field investigators were adequately trained for the purpose of the collection of data using a semi-structured interview schedule.

First a pilot study on 40 subjects was undertaken (10% sample), required correction were also incorporated.

Statistical analysis

The data was tabulated into Epi-info. version 7.1.3.3 and analyzed by using this software. Nominal Data was analyzed by using Chi-Square test for knowing statistical associations.

RESULTS

The majority of adolescents were in age group 10-15 years (53.5%) and whereas young adults were maximum in age groups 20-25 (51%). In both category of age groups - AD & YA, there was a male predominance in both adolescents and young adults group (55.5% & 52%) and were maximum in Muslim religion (65% & 72%), with an illiterate educational background (61% & 59%), with their fathers mainly in agricultural occupation (75.5% & 76%), with a family income less than Rs. 20000/month (67% & 63%) and belonging to joint family (60.5% & 61%) (Table 1).

Table 1: Socio-demographic distribution of the adolescents & young adults.

| Socio- demographic variables | Adolescents (AD) (n=200) | | Young adults (YA) (n=200) | | | | |
|------------------------------------|--------------------------------|------|---------------------------------|----------|--|--|--|
| variables | Number | % | Number | % | | | |
| Age groups | | | | | | | |
| 10-15 | 107 | 53.5 | - | | | | |
| 15-20 | 93 | 46.5 | - | | | | |
| 20-25 | - | | 102 | 51 | | | |
| 25-30 | - | | 98 | 49 | | | |
| Total | 200 | 100 | 200 | 100 | | | |
| Sex | | | | | | | |
| Male | 111 | 55.5 | 104 | 52 | | | |
| Female | 89 | 44.5 | 96 | 48 | | | |
| Total | 200 | 100 | 200 | 100 | | | |
| Caste | | | | | | | |
| Upper | 46 | 23 | 45 | 22.5 | | | |
| Lower | 154 | 77 | 155 | 77.5 | | | |
| Total | 200 | 100 | 200 | 100 | | | |
| Religion | | | | | | | |
| Hindu | 54 | 27 | 46 | 23 | | | |
| Muslim | 130 | 65 | 144 | 72 | | | |
| Others (Sikhs/Jains) | 16 | 08 | 10 | 05 | | | |
| Total | 200 | 100 | 200 | 100 | | | |
| Family type | | | | | | | |
| Nuclear | 79 | 39.5 | 78 | 39 | | | |
| Joint | 121 | 60.5 | 122 | 61 | | | |
| Total | 200 | 100 | 200 | 100 | | | |
| Type of educa | tion | | | | | | |
| Illiterate | 122 | 61 | 118 | 59 | | | |
| Literate | 78 | 39 | 82 | 41 | | | |
| Total | 200 | 100 | 200 | 100 | | | |
| Father's occu | pation | | | | | | |
| Business | 24 | 12 | 18 | 09 | | | |
| Farmer | 151 | 75.5 | 152 | 76 | | | |
| Serviceman | 19 | 9.5 | 22 | 11 | | | |
| Not working | 6 | 03 | 8 | 04 | | | |
| Total | 200 | 100 | 200 | 100 | | | |
| Family income (/Month in Rs.) | | | | | | | |
| <20000 | 134 | 67 | 126 | 63 | | | |
| >20000 | 66 | 33 | 74 | 37 | | | |
| Total | 200 | 100 | 200 | 100 | | | |

In both the age groups - AD & YA groups the usage of tobacco was mainly in smoked form (62.1% in AD & 54.1% in YA) that too in the form of cigarettes in AD (56.8%) and bidi in YA (69.4%).

In smokeless forms -gutka was predominantly used by 48.4% in AD & 36% in YA. Both AD & YA age groups were also using tobacco in combined form (23.2% & 33.9%) (Table 2).

Table 2: Pattern of tobacco use in day to day life of AD & YA.

| | Adole | scents | Youn | Young adults | | | | |
|--|--|-----------|-----------|--------------|--|--|--|--|
| Variable | (n=20 | (n=200) | | (n=200) | | | | |
| | No. | % | No. | % | | | | |
| Tobacco usage (any form) | | | | | | | | |
| Yes | 82 | 41 | 109 | 54.5 | | | | |
| No | 108 | 59 | 91 | 45.5 | | | | |
| Total | 200 | 100 | 200 | 100 | | | | |
| Chi-square-tes | Chi-square-test: X ² =5.01, df=1, P <0.05 | | | | | | | |
| Age of initiatio | n of tob | acco | | | | | | |
| | AD (n | AD (n=82) | | YA (n=109) | | | | |
| 10-15 | 17 | 26.2 | - | - | | | | |
| 16-20 | 65 | 73.8 | - | - | | | | |
| 21-25 | - | - | 51 | 46.8 | | | | |
| 26-30 | - | - | 58 | 53.2 | | | | |
| Total | 82 | 100 | 109 | 100 | | | | |
| Combined form | n (Smol | ked & sr | nokeles | s) | | | | |
| | AD (n | =82) | YA (n | =109) | | | | |
| Yes | 19 | 23.2 | 37 | 33.9 | | | | |
| No | 63 | 76.8 | 72 | 66.1 | | | | |
| Total | 82 | 100 | 109 | 100 | | | | |
| Chi-square-test: X ² =2.62, df=1, P >0.05 | | | | | | | | |
| Types of tobacco usage | | | | | | | | |
| | AD (n | =82) | YA (n | =109) | | | | |
| Smoked form | | | | | | | | |
| | AD (n | =51) | YA (n | =59) | | | | |
| Cigarette | 29 | 56.8 | 18 | 30.6 | | | | |
| Bidi | 22 | 43.2 | 41 | 69.4 | | | | |
| Total | 51 | 100 | 59 | 100 | | | | |
| Smokeless form | | | | | | | | |
| | AD (n=31) | | YA (n=50) | | | | | |
| Khaini | 10 | 32.2 | 17 | 34 | | | | |
| Gutka | 15 | 48.4 | 18 | 36 | | | | |
| Pan masala | 06 | 19.4 | 15 | 30 | | | | |
| Total | 31 | 100 | 50 | 100 | | | | |

Majority of AD group (60.9%) & YA group (50.5%) subjects did not want to quit tobacco due to lack of attraction in AD group (50%) and lack of comfortability in YA group (64.2%), however these findings were not statistically significant (P > 0.05) (Table 3).

The 52.4% in AD group as compared to 49.5% in YA group had however some positive attitude towards banning smoking at home (Figure 1).

Moreover majority of AD & YA group subjects had also no knowledge regarding harmful effects of the tobacco usage in AD & YA groups (50% & 41.2% respectively) (Figure 1).

Table 3: Perceptions regarding tobacco usage.

| Multiple reasons | Adolescents (n=82) | | Young adults (n=109) | | Chi-square (X ²) test | | |
|--|--------------------|-----------|----------------------|-----------|-----------------------------------|--|--|
| Multiple reasons | Yes (%) | No (%) | Yes (%) | No (%) | P value | | |
| Why do use tobacco? | | | | | | | |
| Feel comfortable/relaxed | 56 (68.2) | 26 (31.8) | 46 (42.3) | 63 (57.7) | $X^2=12.8$, P < 0.001 | | |
| Feels attractive & smart | 54 (65.8) | 28 (34.2) | 44 (40.3) | 65 (59.7) | $X^2=12.1$, P < 0.001 | | |
| When stressed/anxious | 62 (75.6) | 20 (24.4) | 67 (61.4) | 42 (38.6) | $X^2=4.2$, P < 0.05 | | |
| Before sexual activity | 15 (18.2) | 67 (81.8) | 61 (55.9) | 48 (44.1) | $X^2=27.7$, P < 0.001 | | |
| Peer pressure | 65 (79.2) | 17 (20.8) | 25 (22.9) | 79 (77.1) | $X^2=56$, P < 0.001 | | |
| Does anyone in family use tobacco in any form? | | | | | | | |
| Yes | 33 | 40.3 | 47 | 43.2 | | | |
| No | 49 | 59.7 | 62 | 56.8 | $X^2=0.15, P>0.05$ | | |
| Total | 82 | 100 | 109 | 100 | | | |
| Does anyone in your family/school/college discuss the harmful effects of tobacco in any form with you? | | | | | | | |
| Yes | 43 | 52.5 | 79 | 72.5 | | | |
| No | 39 | 47.5 | 30 | 27.5 | $X^2=8.1$, P<0.05 | | |
| Total | 82 | 100 | 109 | 100 | | | |
| Do you have any plans to quit tobacco products in future? | | | | | | | |
| Yes | 32 | 39.1 | 54 | 49.5 | X ² =2.09, P >0.05 | | |
| No | 50 | 60.9 | 55 | 50.5 | | | |
| Total | 82 | 100 | 109 | 100 | | | |
| Why you do not want to quit tobacco | ? | | | | | | |
| | (n=50) | | (n=84) | | | | |
| | No. | % | No. | % | | | |
| Will not have confidence | 15 | 30 | 16 | 19.1 | NA | | |
| Will not have attraction | 25 | 50 | 13 | 15.4 | | | |
| Will not have comfortability | 08 | 16 | 54 | 64.2 | | | |
| Probably I do not know | 02 | 06 | 1 | 11.9 | | | |
| Total | 50 | 100 | 84 | 100 | | | |
| What is your idea about banning smoking in public place and homes? | | | | | | | |
| | (n=82) | | (n=109) | | | | |
| | No. | % | No. | % | | | |
| At home it should not be done | 43 | 52.4 | 54 | 49.5 | | | |
| it should not be done in public places | 33 | 40.2 | 40 | 36.7 | NA | | |
| At both places | 06 | 7.4 | 15 | 13.8 | | | |
| Total | 82 | 100 | 109 | 100 | | | |

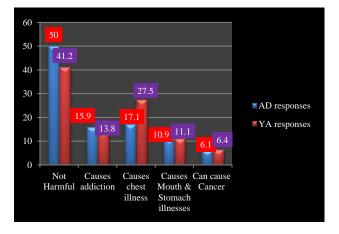


Figure 1: Responses of AD & YA on perceptions regarding harmful effects of Tobacco products.

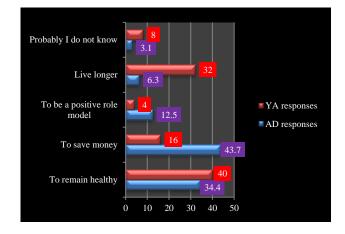


Figure 2: Responses of AD & YA on perceptions regarding quitting tobacco products.

The maximum 43.7% of subjects in AD group wanted to quit tobacco products in order to save money, whereas maximum 40% of Subjects in YA group wanted to quit tobacco in older to remain healthy (Figure 2).

DISCUSSION

In the present study, the 41% Adolescents (AD) and 54.5% Young Adults (YA) were using any form of tobacco similar to the previous studies in related age groups by Awasthi S et al. (2010)⁵ and also near to study finding of 30% of the population 15 years or older - 47% men and 14% of women by Rani M et al. (2003).3 The previous studies have also reported prevalence's of around 33% in Uttar Pradesh.³ Many studies also indicate that more than 25% of adolescents aged 13 to 15 years in India had used tobacco, and 17% reported current use. 9-10 The higher prevalence obtained in our study may be due their inherent socio-demographic and low socioeconomic factors of adolescents and young adults in district muzaffarnagar (Table 1) for which related factors can also be attributed such as utilization of health services in their area by adolescents and youth as found in previous studies.17

Many studies have also found that smoking prevalence is higher among disadvantaged groups, and disadvantaged smokers often face higher exposure to tobacco's harms. Thus there is also a strong socioeconomic element in tobacco use in India among both men and women, moreover there is a clear inverse relationship between level of wealth and prevalence of tobacco use. [17,18] Study in Kerala India by Thankappan KR & Thresia CU (2007) also indicated that tobacco use was significantly more among the low Socio-Economic (SE) groups compared to the high SE group 19 and so this fact was also just similar to our study.

There is also considerable variation in tobacco use by members of different religions, with Sikhs and Jains reporting the lowest prevalence [NFHS-3 (2005-6)].²⁰ However in our study predominantly Muslim population was taking tobacco due to their population in large numbers in our study area Muzaffarnagar (Table 1).

In our study, the age of initiation of tobacco were maximum in age group 16-19 years (73.8%) in AD group, whereas in young adults it were maximum in age group 26-30 years (53.2%). According to WHO, the prevalence of tobacco use increases with age. In 2005-2006, the reported prevalence of tobacco use was 3.5% among 15- to 19-year-olds, 9.1% among 20- to 34-year-olds. Results from the 2006 GYTS also show that 1.6% of 13- to 15-year-old students also smoked cigarettes, and another 8.5% used other tobacco products. Further, who were ever-smokers, more than half began before age 10.3. This may be due to the fact that existing factors such as reduced social support for quitting, low motivation to quit, stronger addiction to tobacco and lack of self-efficacy are playing important role. On the

whole, the potential risk factors for tobacco as found from previous studies are: age, psychosomatic status and, boring family atmosphere, not living with both father and mother, and health perceptions²² and these factors are also substantiated from our study. Study by Tylas SL & Pdederson LL (1998)²³ had also found the same facts that adolescent smoking was associated with age, ethnicity, family structure, parental socioeconomic status, personal income, parental smoking, parental attitudes, sibling smoking, peer smoking, peer attitudes and norms, family environment, attachment to family and friends, school factors. risk behaviours. lifestyle. depression/distress, self-esteem, attitudes, and health concerns as possible factors, such as social, personal, economic, environmental, biological, and physiological influences, may also influence smoking behaviour and all these factors are also well highlighted in our present study.

In our present study; the main reason for maximally using tobacco were that - they were more pressurized by Peer group in AD group (79.2%) and whereas in YA group the main reason for maximum use was - when they felt stressed/anxious (61.4% respectively) and both these responses were statistically significant (P <0.001 & P <0.05 respectively). In both AD & YA groups (59.7% & 56.8%) however their families were not using tobacco in any form but this was not statistically significant (P >0.05). But in both AD & YA groups (52.5% & 72.5%) the harmful effects of tobacco products were informed by either family members or educational institutions but this was found to be statistically significant (P < 0.05). This finding in our study is also similar to previous study by Song AV et al. (2009) in America in which it was also found that the habit of smoking initiation is directly related to smoking-related perceptions of risks and benefits.²⁴ The previous study had also found existing associations between attitudinal factors and in not only protection against smoking but also reducing smoking among youth and they also stressed that rather than solely focusing on health risks as a way to deter adolescent smoking, the role of perceived social risks and benefits in adolescents' smoking may be an additional critical focus for intervention for adolescents. 25,26

Moreover in our present study, it was also found that majority of AD & YA group subjects had no knowledge regarding harmful effects of tobacco usage in AD & YA groups (50% & 41.2% respectively) (Figure 1). When they were asked for quitting tobacco - the maximum 43.7% of subjects in AD group responded to quit tobacco products in order to save money, whereas maximum 40% of Subjects in YA group wanted to quit tobacco in older to remain healthy [Figure no :02]. This signifies the poor knowledge and attitude of AD & YA group subjects. Studies in past have also found that perceptions of risk decreased with time and adolescents with personal smoking experience report decreasing perceptions of risk and increasing perceptions of benefits over time and changes in risk perceptions may also be influenced by

personal and vicarious experience with smoking. ²⁷ Study of Bhimarasetty DM et al. (2013) had also revealed that among the various anti-tobacco measures, the most effective measure can be "teaching the harmful effects of smoking in schools" for adolescents. ²⁸ As signified in our study also.

In our study as we found that both the age groups - AD & YA groups the usage of tobacco was mainly in smoked form (62.1% in AD & 54.1% in YA) that too in the form of cigarettes in AD (56.8%) and bidi in YA (69.4%).Study of Nichter M et al. (2004) had also revealed similar fact that the cigarettes were one of the most addictive products because they are made of better quality tobacco, and are milder and smoother to smoke among male college students in India.²⁹

Social susceptibility to chewing tobacco and social susceptibility to smoking are found to be strong correlates of current tobacco use among government school students.³⁰

Study of Park HK et al. (2012) on middle school students in Saudi Arabia had also found similar risk factors affecting tobacco use as found in our study such as perceptions; family, friend, teacher; pressure to use tobacco from friend and; easy access to tobacco to adolescents.³¹ The clear social influences and attitudes towards tobacco use and religious beliefs and access to tobacco products were significantly associated with attitudes towards tobacco use and future intention of use in study of Park HK et al. (2012)³¹ as similar to given findings of our study. We also suggest protective factors for tobacco use such as parents' help; support from family, friends, and teachers; accessibility to tobacco; school& college performance and family income, father's education, and district of residence as similar to Study of Park HK et al. (2012).³¹

CONCLUSION

The tobacco usage scenario of adolescents and young people are not on healthier side in India; as health risks clouds constantly prevail on them, despite the presence of solutions in the form of many health and nutrition programmes targeted towards them. Tobacco usage is emerging as a rising tip of iceberg problem among adolescents and young adults in rural area, as their perceptions are not healthy in terms of tobacco usage, for which serious efforts from government, medical colleges, primary health care system and also from family level are constantly required to safeguard the health of our future generations. In this area more in-depth qualitative and interventional studies also needs to be done in future.

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Ethical approval: The study was approved by the

institutional ethics committee

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