PREVALENCE OF TOBACCO CONSUMPTION AMONG ADOLESCENTS FROM RURAL AREA OF WARDHA DISTRICT

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ABSTRACT

Background- Globally adolescent population is around 1200 million and out of six person, every one person is in adolescence (aged10 to 19 years) period. Yet most of them are healthy, but premature death, illness and injury among them can hinder ability to grow and develop to their full potential. It is estimated that 1.2 million adolescents died in 2015 and mostly from preventable or treatable causes. Tobacco consumption is world's leading cause of preventable morbidity and mortality. National Family Health Survey conducted in year 2016-17 reported tobacco consumption prevalence 38.9% in urban area and 48% in rural area of India. Method-It was a community based cross-sectional study conducted in eight villages of Wardha district adopted under Community Health Care program run by department of community medicine. Data was collected by interview from 485 adolescent in the age group of 10-19 years by domiciliary visits using pre-designed pre-tested questionnaire. Results: Prevalence of tobacco use (all forms), smokeless tobacco use and smoking in rural adolescents were 20.82%, 20.41%, and 2.68%, respectively. Prevalence of tobacco use in boys (30.29%) was more than girls (4.49%). Higher Prevalence was found in late adolescent period. Bidi was commonly used form of smoke tobacco while Kharra was the preferred smokeless tobacco. Almost all smokers were male but few exceptions were there. Conclusion: The prevalence of tobacco use among rural adolescents was very high (20.82%) as compared to national prevalence of 14.6% according to the global youth tobacco survey India 2009. There is a need of early intervention for tobacco cessation as overall mean age of 1st experienced to tobacco consumption was 12.02 years and in male and female users it was 12.25 years and 10.88 years respectively. 42.10 % adolescents 1st time experienced any type of tobacco products when they were in the 12-14 years age and only 0.66% adolescents experienced at the age of 17 -19 years. Maximum male (42.19%) and female (41.67%) ever user experienced their 1st tobacco consumption when they were 12-14 years old.

Keywords: Adolescent; Prevalence; Smokeless Tobacco; Smoking Tobacco product; Tobacco use; Rural Area.

INTRODUCTION

Adolescence is transition period in the life cycle of human from childhood to adulthood [1]. UNICEF and WHO defined Adolescence as the age between 10 and 19 years [2,3].

Tobacco consumption leads among all preventable causes of deaths in countries of south-east Asia Region (SEAR) [2]. SEAR caters 26% (more than one-fourth) population of World. Socio-cultural practice of tobacco use is too high that out of five females two of them and nearly half male population routinely uses either one (smoke or smokeless) or both form of tobacco. Young people in the South-East Asia Region had the highest prevalence of use of smokeless tobacco (7.3%) with distribution among boys (9.5%) and girls (4.8%). These users accounted for nearly 60% of all smokeless tobacco users aged 13–15 years in the world. Study reports that SEAR had 250 million smokers and nearly same number of smokeless form of tobacco users [3]. Tobacco consumption in South East Asia region, attribute 1.3 million (10%) of all deaths which accounts 14% among men and 5% in women [4].

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Globally India has third position in tobacco production while tobacco consumers are second largest in numbers. Mortality in India due to Tobacco use is 1.3 million [5]. Out of which 1.0 million due to smoking and remaining from smokeless form of tobacco use [5]. Tobacco control in India-2004 reported all proportionate deaths attributed to tobacco use is expected to rise from 1.4% in 1990 to 13.3% in 2020. Which will result in enormous economic, emotional and societal costs in a population of more than a billion people [6]. Global report of WHO (2012) states that 7% of all deaths for ages 30 years and above in India are attributable due to use of tobacco [7].

Among the youth, Adolescents belonging to 10-19 years age group were highly vulnerable due to high academic stress, peer group encouragement, popularity-gain and easy availability. Substance use if initiated in early age commonly found associated with poor prognosis, irresponsible behaviour and lifelong deceit pattern [8].

Over the course of adolescence, individuals establish their value systems and secure a social status associated with being an adult. Most people experience these processes and changes without much trouble; however,

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some fail to adjust to a rapidly changing social life and associate with friends, becoming easily exposed to cigarettes or alcohol. This can potentially lead to drug addiction or other delinquencies [9]. So with this background the present study was started with the basic objective of assessment of tobacco consumption among adolescents and determines the pattern of tobacco use among study participants of rural area of Wardha (District), Maharashtra.

METERIALS AND METHODS

Study design: It was a community based cross sectional study, conducted in rural area of Wardha district among adolescents from eight adopted villages under community health care programme (CHCP).

Study place: as undertaken in rural area of Wardha district among adolescents from 8 adopted villages under community health care programme (CHCP)

Study period: October 2016 to October 2018, total two years duration.

Sample size and sampling method: 485 adolescents were recruited from selected villages, number from each village were calculated via population proportionate to size (PPS). Study participants were selected through simple random sampling having following:

Inclusion criteria: House to house visit was held and after taking consent of parents, adolescents willing to participate were interviewed personally.

Ethics approval: Ethical clearance was obtained from ethical committee and same approved the study on date 29/09/2016 Ref no: DMIMS (DU)/IEC/2016-17/4052.

Method for selection of sample: For interviews pre designed and protested questionnaire was used. Interviews were conducted separately from each study participants in absence of family members and other persons by investigator in predesigned pretested semi structured questionnaire. The data was entered and analysed in the Microsoft Excel.

Data compilation and statistical analysis: In the present study frequency distribution of the study subjects according to age, gender, type of family, family size, Pictorial warnings and its effectiveness in quitting etc. Prevalence of tobacco consumption was worked out along with 95% CI. In addition to overall prevalence rate, the prevalence of tobacco consumption was also estimated in relation to these factors. To find out the association of tobacco consumption with the above factors, chi-square test and odds ratio were applied for each of the factor. The statistical significance was evaluated at 5% level of significance P value less than 0.05 was found to be statistically significant. Fisher exact test was applied when expected cell count was less than 5. For statistical analysis and test of significance we used free trial version 7.05 of statistical software Graph Pad Prism while Multi-variate logistic regression analysis were done using IBM SPSS statistics software trial version.

RESULTS

Demographic profile of adolescents shows out of 485 adolescents 63.30% study participants were males and 36.70% females. According to Age group 51.34% belonged to early adolescence (10-14 years) group and 48.66% late adolescence (15 to 19 years) group.

Father's Occupation in Majority (47.63%) of adolescents were Farming followed by labourer (33.20%) while service, Artisans, self-employed and unemployed were respectively (6.40%), (6.18%), (5.56%), (1.03%). Mother's occupation among most (68.66%) of adolescents were as labourer followed by house-wife (26.80%) while self-employed, service and farming found respectively (2.68%), (1.65%), (0.21%). Most of the study participants (77.11%) belonged to nuclear type family while 22.89% participants belonged to joint family. (Table 1)

Gender wise distribution of tobacco consumption among ever tobacco users, discontinued tobacco users and current tobacco users were ever tobacco user study participants was nearly one thirds while ever smokeless and ever smoke from tobacco users were respectively (30.52%) and (6.60%). Gender-wise distribution shows 41.69% male and 13.48% female were ever tobacco users. Much higher frequency found in male tobacco users in both forms smokeless and smoking in present study

Over-all one tenth ever users discontinued tobacco use and now they are tobacco non-user. Among discontinued tobacco users male and females users was equal. Prevalence (Current Users) of tobacco consumption in all forms was 20.82% while Prevalence of smokeless and smoking form of tobacco use in study participants was found respectively 20.41% and 2.68 %. Gender specific Prevalence of tobacco consumption among males (30.29%) was high in comparison to females (4.49%). Gender wise difference of tobacco consumption among ever users and current users in all forms (smoking/smokeless) of tobacco found statistically significant and more among males than female participants (Table 2).

Table no 3 shows Gender-wise distribution of Mode of tobacco use among current users. Out of total 93 male,97.85% were using smokeless tobacco and 13.98% were using smoking form while 11.83% were using both (smokeless+ smoking) form. In female study participants 100% users were using only smokeless form of tobacco. In present research different form of tobacco has been used, the predominantly were Kharra (73.12%) followed by Pan masala (13.98%) and Gutkha (10.75%). Commonest mode of consumption in current use were kharra (71.29%) followed by Pan masala (13.86%) and Gutka (9.90%) and other modes were Tobacco with lime, Nasmanjan (snuff), Tobacco without lime, Tobacco with betel nut and Khaini respectively 6.93%,3.96%,2.97%,1.98%, 0.99%. Beedi and cigarette were mode of smoke form tobacco consumption. (Table 3)

Frequency of tobacco use among current tobacco users ranges from less than once in a week to more than six times in a day. Commonest frequency among regular tobacco users were 2-3 times a day while among irregular users it was twice in a week. Among male and female regular tobacco users distribution were more than two thirds and irregular tobacco users were 25.81% and 25%. (Table-4)

As shown in table no.5, smokeless form of tobacco used in one time ranges from one gram to Four gram. Quantity of smokeless tobacco used in a day ranges from less than 5 grams in a day to maximum 40 grams in a day. Maximum (41.41%) current smokeless forms were using 5- 10 grams of tobacco in a day while minimum (1.01%) users were using more than 20 grams tobacco in a day.

As shown in table no.6, 100% smokers were male and they used one Beedi/ Cigarette in one time. Whole day total smoking (Beedi/ Cigarette) form tobacco consumption used by them ranges one beedi/Cigeratte in a day to maximum Eight Beedi/ cigarette in a day. Frequency shows procurement in loose form in spite of packet from shops.

Table 1. Distribution of Adolescents as per Socio-Demographic Characteristics

Characteristics	Number(N= 485)	Percentage %
Gender		
Males	307	63.30%
Females	178	36.70%
Age group		
Early adolescents(10-14)	249	51.34%
Late adolescents(15-19)	236	48.66%
Education		
Illiterate	1	0.21%
Primary (5th STD)	75	15.46%
Middle (8th STD)	172	35.46%
Secondary (10th STD)	154	31.75%
Higher secondary (12th STD)	73	15.05%
Graduate	10	2.07%
Religion		
Hindu	428	88.25%
Muslim	10	2.06%
Christian	2	0.41%
Buddhist	45	9.28%
Occupation of Father		
Farmer	231	47.63%
Labourer	161	33.20%
Service	31	6.40%
Artisans	30	6.18%
Self employed	27	5.56%
Un-employed	5	1.03%
Occupation of Mother		
Labourer	333	68.66%
House wife	130	26.80%
Self employed	13	2.68%
Service	8	1.65 %
Farmer	1	0.21%
Type of Family		
1)Nuclear	374	77.11%
2)Joint	111	22.89%
Socio-Economic Class*		
(Monthly Per capita income)		
Upper class (Rs.6254& above)	11	2.27%
Upper Middle Class(Rs.3127-6253)	42	8.66%
Middle Class(Rs.1876-3126)	81	16.70%
Lower Middle Class(Rs.938-1875)	217	44.74%
Lower Class(Below Rs.938)	134	27.63%

*Monthly Per capita income, Distribution of observe participants in line with Socio-economic reputation (As consistent with modified B.G. Prasad Socio-financial Scale January 2017)

Table 2. Gender-wise distribution of tobacco Consumption in the research participants

Tobacco Users	Male N=307(%)	Female N=178(%)	Total (N=485)(%)	Chai square	P-value
Tobacco Ever user	128(41.69%)	24(13.48%)	152(31.34%)	41.67	<0.0001
Ever Smokeless tobacco users	125(40.71%)	23(12.92%)	148(30.52%)	41.05	<0.0001
Ever smoker	30(9.77%)	2(1.12%)	32(6.60%)	Fisher test	<0.0001
Discontinued Tobacco Users	35(11.40%)	16(8.99%)	51(10.51%)	0.6966	0.4039
Discontinued smokeless tobacco Users	34(11.07%)	15(8.43%)	49(10.10%)	0.8698	0.3510
Discontinued smoking Users	17(5.54%)	2((1.12%)	19(3.92%)	Fisher test	0.0148
Current tobacco users	93(30.29%)	8(4.49%)	101(20.82%)	45.48	<0.0001
Current smokeless tobac-co user	91(29.64%)	8(4.49%)	99(20.41%)	45.72	<0.0001
Current smoker	13(4.23%)	0(0.0%)	13(2.68%)	Fisher test	0.0016

Table 3. Different Form of Tobacco Use by adolescent

Tobacco in Different Forms	Male N=93 %	Female N=8 %	Total N=101 %
*Smokeless	n=91(97.85%)	n=8 (100%)	n=99(98.02%)
Kharra	68(73.12%)	4(50%)	72(71.29%)
Pan-masala	13(13.98%)	1(12.5%)	14(13.86%)
Gutka	10(10.75%)	0(0)	10(9.90%)
Tobacco with lime	6(6.45%)	1(12.50%)	7(6.93%)
Nasmanjan	2(2.15%)	2(25%)	4(3.96%)
Tobacco With-out Lime	3(3.26%)	0(0)	3(2.97%)
Tobacco With Betel nut	2(2.15%)	0(0)	2(1.98%)
Khaini	1(1.08%)	0(0)	1(0.99%)
Smoke Form	n=13(13.98%)	n=0	n=13(12.87%)
Beedi	7(53.85%)	0	7(53.85%)
Cigarette	4(30.77%)	0	4(30.77%)
Both(Beedi+ cigarette)	2(15.38%)	0	2(15.38%)
Both(Smoke+Smokless)	11(11.83%)	0	11(10.89%)

Table 4. Frequency of tobacco consumption among male and female current users

Frequency of tobacco use	Male N=93 %	Female N=8 %	Total N=101 %
Regular (Daily) User	69(74.19%)	6(75.00%)	75(74.26%)
Once daily	12(12.90%)	2(25.00%)	14(13.86%)
2-3 times	32(34.40%)	1(12.50%)	33(32.67%)
4-5 times	18(19.35%)	2(25.00%)	20(19.80%)
More than 6 times a day	7(7.52%)	1(12.50%)	8(7.92%)
Irregular (Frequency in a week) user	24(25.81%)	2(25.00%)	26(25.74%)
Less than once	2(2.15%)	1(12.5%)	3(2.97%)
Once	1(1.08)	0	1(0.99%)
Twice	9(9.68%)	1(12.5%)	10(9.90%)
Thrice	5(5.38%)	0	5(4.95%)
Four days	3(3.23%)	0	3(2.97%)
Five days	3(3.23%)	0	3(2.97%)
Six days	1(1.08%)	0	1(0.99%)

Table 5. Gender-wise Distribution of Quantity of tobacco product in Smokeless form

Quantity of Smokeless tobacco	Male N=91 (91.92%)	Female N=8 (8.08%)	Total N=99 (100%)
Used in one time			
1 gram	12(13.19%)	0	12(12.12%)
2 gram	52(57.14%)	5(62.5%)	57(57.58%)
2.5 gram	7(7.69%)	1(12.5%)	8(8.08%)
3 gram	16(17.58%)	2(25.0%)	18(18.18%)
4 gram	4(4.40%)	0	4(4.04%)
Used in whole day			
<5 grams	32(35.16%)	4(50.0%)	36(36.36%)
5-10Grams	39(42.86%)	2(25.0%)	41(41.41%)
10-15 grams	6(6.59%)	1(12.5%)	7(7.07%)
15-20 grams	13(14.29%)	1(12.5%)	14(14.14%)
>20 grams	1(1.10%)	0	1(1.01%)

One kharra =20 gram, One small packet=2.5 gram.

Table 6. Gender-wise Distribution of Quantity of tobacco product in Smoke-Form

One Beedi/Cigarette were used in any one session by all 13 male current tobacco users			
No. of Beedi/Cigarette used in whole day	Male N=13	Female N=0	Total N=13
1	2(15.38%)	0	2(15.38%)
2	5(13.19%)	0	5(13.19%)
3	2(15.38%)	0	2(15.38%)
4	1(7.69%)	0	1(7.69%)
5	2(15.38%)	0	2(15.38%)
8 or more in a day	1(7.69%)	0	1(7.69%)
Total	13	0	13

DISCUSSION

Prevalence of tobacco consumption in all forms, among studied adolescents was 20.82%. while prevalence of tobacco consumption in male and female adolescents respectively 30.29% and 4.49%.This difference among male and female participants were found statistically highly significant (P value=<0.0001) and was more in male tobacco users.

The prevalence of tobacco use among school students in different states of India has been reported to vary from 1.9 percent (Delhi) to 75.3 percent (Mizoram)(10–12).

Surekha Kishore et al (2007) (13) in similar study from rural area of Wardha district, reported overall prevalence of tobacco consumption 46.83%, while among boys and girls respectively 70.37% and 27.13%. Dongre AR et al (14) reported in 2008 from rural Wardha, that 39% adolescents consumed any type of tobacco products in last one month however among boys and girls it was 68.3% and 12.4% respectively. He found this difference among boys and girls statistically significant (p value= 0.000) and more in boys.

Zahiruddin Q.S et al (15) from tribal villages of Wardha district (Maharashtra), reported prevalence of tobacco use (all forms) among adolescents 52.07%. In his study 66.25% boys and 31.71% girls were using some form of tobacco. They also found this difference statistically significant (p value=0.006) and more in boys. D.D.Narain et al (2009) (16) in his study from neighbour district Yavatmal, Maharashtra reported overall prevalence of tobacco consumption among adolescents of tribal area was 45.42%.

Raj Narayan et al (17) in their study among school children in Noida, India found 12.2% boys and 10.2% girls consumed tobacco and they also found this difference statistically significant (p value < 0.05). Varun Kumar et al (18) from Delhi supplemented the results with similar findings that the risk of current tobacco use was found to be higher among males (p value=0.000).

National Family Health Survey (NFHS) phase-4 (19), (2015-16) from Maharashtra state reported 33.9% men and 4.2% women using any kind of tobacco while in NFHS-3 (2005-06) Maharashtra, 48.3% men and 10.5% women used any kind of tobacco. Nation-wide survey in India (NFHS-4) (20) conducted in year 2015-16 reported Prevalence of tobacco consumption in any form among age group of 15-49 years in Men and women respectively 44.5% and 6.8% while in NFHS-3, 57% men and 10.8% women were using any kind of tobacco in India.

Global Adult Tobacco Survey (GATS 2, 2016-17) (21) among adults of age 15 years or older reported prevalence of current tobacco use(smoking and/or smokeless) as 26.6% in Maharashtra and 28.6% in India.

Prevalence of tobacco use in present study is very near with prevalence of tobacco consumption in Maharashtra state and India. Previous NFHS-3, NFHS-4 and GATS-2, survey conducted in Maharashtra state and country level reports shows male predominance and overall periodical decreasing trend in prevalence of tobacco consumption. When we compare previous studies conducted in rural area of Wardha and present study, similar male predominance and overall decreasing trend in prevalence of tobacco consumption were found.

Regarding the pattern of Tobacco consumption- Tobacco consumption was present in two basic types, smokeless and smoking form of tobacco. The study revealed that smokeless form of tobacco consumption among adolescents was more prevalent (20.41%) as compared to smoking (2.68 %) form while 2.27%were using both (smoking + smokeless) forms of tobacco.

In similar study Surekha Kishore et al (13)(2007) from rural area of Wardha, found that 41.35% adolescents were using smokeless tobacco and 5.48% were smokers. Dongre A.R. et al(14) 2008 in their study among adolescents in rural Wardha, found that the 39% adolescents had consumed smokeless tobacco and only 1.29% adolescents were used tobacco as smoking bidi/ cigarette in last one month.

Zahiruddin Q.S et al(15) (2011) in their study among adolescents of tribal villages of Wardha district, found that 50.41% adolescents were using smokeless tobacco and 23.14% smoke type, while both smokeless and smoke form were used by 21.48%. The proportion of smokers in their study was higher as compared to the smokers in the present study. D.D Narain et al (16) (2009) reported smokeless form of tobacco as most prevalent (44.42%) followed by smoked form (8.17%) among adolescents of tribal areas in Maharashtra . Exclusive smokeless, exclusively smoke and both forms of tobacco were used by respectively 40.83 %, 4.58 and 3.9% adolescents.

Global youth tobacco survey-1 (22) (2009) gives country level representative data for India and reported use of smokeless tobacco (12.5%) more as compared to smoked form (4.4%). **DLHS-4** (2012-13) reported use of tobacco in 15 years and above population of Maharashtra that 39.3% men and 11.3% women used any kind of smokeless tobacco in rural area and use of smoking form tobacco among male and female was respectively 7.6% and 0.4%. NFHS-4(19)(2015-16) from rural area of Maharashtra reported any kind of smokeless tobacco use among 15-49 years men and women was 39.3% and 7.4%.

GATS-2(Global Adult Tobacco survey) 2016-17)(21) reported that overall 21.4% adults in India currently used smokeless form and 10.7% smoke form of tobacco. Smokeless forms of tobacco were used by 29.6% men and 12.8% women. Smoking form of tobacco use was present in 19% men and 2.0% women.

Nearly all previous studies from local, district, state and national survey reports established similar findings as tobacco consumption in smokeless form is more prevalent in various parts of India in contrast to smoking form of tobacco which is more prevalent in western countries.

Smokeless form of tobacco use was present in 97.85% male and 100% female tobacco users. Tobacco use in smoke form was present only in male users and overall 12.87% tobacco users used smoking form of tobacco.

Kharra was most prevalent mode of smokeless tobacco consumption among the tobacco users of the study population. In male users Kharra (73.12%) followed by Pan Masala (13.98%) while in female users Kharra (50%) followed by Nasmanjan (25%) was the most prevalent mode of tobacco consumption. Use of smoke from to-

bacco was found only among boys and no girls study participants were using smoking form of tobacco. Out of 13 smokers 53.85% were Bidi smoker followed by Cigarette 30.77% while15.38% used both bidi and cigarette. Bidi smoking was more commonly used in comparison to cigarettes in smoked form.

In similar study Dongre AR.et al (14)from rural Wardha reported 79.2% boys consumed kharra (Mawa) and 72% girls use dry snuff (nus) as mode of smokeless form of tobacco. In their study 4.0% boys used bidi/ cigarettes as mode of smoking while no girls used any tobacco product in smoke form. Zahiruddin Q.S et al (15) from tribal Wardha reported pan masala (88.52%) followed by betel quid (84.43%) and Gutka(77.87%) as preferred mode of smokeless tobacco consumption. Snuff and the betel quid among female (84.62%) users. Bidi's were most commonly used for smoking by adolescent boys and girls in their study area.

Varun Kumar et al (18) in their studied population from Delhi found respectively 76.7% users consumed Ghutka, 9.2% Khaini, 8.3% Pan-Masala, and 5.8% consumed zarda. While, among ever smokers whose prevalence was 15.4%, 95.3% smoked cigarettes whereas 4.7% smoked hukka. Chaudhry K et al (23) reported unique modes of tobacco use in India. Apart from the smoked forms that include bidis, cigarettes and cigars, a plethora of smokeless forms of consumption exist and they account for about 35% of the total tobacco consumption. Raj Narain et al (17) among school children in Noida, reported increased use of cigarettes as compared to bidi among the adolescents.

The differences in various studies might be due to Legislative ban (24) on some form of tobacco from most of states and union territories of India. Hence mode of tobacco consumption depends on availability of tobacco products and shift users towards easy and locally available tobacco products.

According to Centers for disease control and prevention use of tobacco primarily start and establish in adolescence period. Trans disciplinary tobacco use research Centre studied rewarding effects of nicotine on brain and found it more effective on adolescent brain in contrast to adult brain. Study also suggested that 1st nicotine exposure is not only rewarding but also increase sensitivity of adolescents which might contributes towards increased chances for tobacco consumption among adolescents (25).

To understand establishment of tobacco use as habit of tobacco consumption it seems necessary to understand frequency and amount of tobacco consumption among tobacco users. So we observed frequency of tobacco use in a week as well in a day. We also studied quantity of tobacco consumed in one session as well in whole day.

Quantity of Tobacco Consumption

present study daily (Regular) tobacco users were 74.26% while less than once in a day (Irregular) tobacco users were 25.74%. Among regular tobacco users frequency of tobacco consumption ranges from once in a day to more than six times a day, Maximum more than one third users were using tobacco products 2 to 3 times a day followed by 4 to 5 times a day (19.80%) and least users (7.92%) were using it more than six times a day. Among irregular tobacco users frequency of tobacco consumption ranges from less than once in a week to maximum six days in week. Maximum irregular tobacco users were using twice in a week (9.90%) and least users (0.99%) were using it once in a week.

Quantity of smokeless tobacco products used in a day ranges from less than 5 grams in a day to maximum 2 kharra (40 grams) in a day. Maximum (38.38%) current smokeless form was using 5- 10 grams of tobacco products in a day while minimum (1.01%) users were using more than 20 grams tobacco products in a day.

In present study shows 100% smokers were male users and in one session of tobacco consumption they used one Beedi/ Cigarette. In a single day total smoking (Bidi/ Cigarette) form tobacco consumption ranges one bidi/ Cigarette to maximum Eight Bidi/ cigarette. Frequency of smoking shows procurement in loose form in spite of packet from shops. Quantity used in smokeless form of tobacco in one time ranges from one gram to Four gram.

According to age group of study participants we found tobacco consumption among early adolescents were 12.85% while in late adolescent's 29.24%. Late adolescents were 2.80 times more at risk of consuming tobacco as compared to early adolescents and this difference being statistically significant (P value <0.0001, OR= 2.80(95% CI 1.774 to 4.392).Higher prevalence among late adolescents may be due to fact that in rural area, tobacco use is a part of the custom or tradition and late adolescents is considered to be grown up to use tobacco in some form.

Zahiruddin Q.S et al (15) from Wardha, Maharashtra reported 58.82% late adolescents and 39.62% early adolescents were using tobacco products with the difference being statistically significant and higher among late adolescents. Pradhan PMS et al (26) from Eastern Nepal reported 25.8% late adolescents consuming tobacco in any form with the difference being statistically significant (P value < 0.001, OR=1.64(95% CI 1.17 to 2.28)). Kapoor SK et (12) from Haryana also found similar findings. Present study in addition to previous studies supports the fact that as age increases among adolescent's chances of tobacco consumption becomes more. Hence need of more attention towards anti- tobacco activity as age increases.

CONCLUSION

The prevalence of tobacco use among rural adolescents was very high as compared to national prevalence of as per global youth tobacco survey India 2009. There is a need of early intervention for tobacco cessation as overall mean age of 1st experienced to tobacco consumption with that we have to follow legislation regarding tobacco consumptions.

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