INTRODUCTION

Over the world, tobacco kills more than 8 million people every year. Among them, more than 7 million of those deaths are the result of direct tobacco use, whereas around 1.2 million are the result of second-hand smoke [1]. In India, there are 275 million current tobacco users, including 197 million men and 78 million women. The prevalence of smoking and smokeless tobacco in India is 24% and 33% among men and 3% and 18% among women, respectively [2].

Harmful effects of smoking are cough, shortness of breath, respiratory illnesses, reduced physical fitness, poor lung function, lung cancer, cardiovascular mortalities, and morbidities, whereas smokeless tobacco can cause cancers of mouth, pharynx, esophagus, receding gums, and leukoplakia [3].

A WHO report on tobacco consumption mention that tobacco consumption in India will continue to increase at 2.4% per annum and most of the new users will be school children. The objective of the study was to estimate prevalence and pattern of tobacco use among school-going adolescents and to assess their knowledge of harmful effects of tobacco.

METHODS

A cross-sectional study was carried out at government schools in urban and rural field practices areas of Jhalawar Medical College, Jhalawar. A semi-structured questionnaire pertaining information regarding age, sex, use of tobacco, knowledge of hazards, etc., was used for data collection.

Results: Out of the 337 students, 15.1% reported an experience of any type of tobacco use. 8.61% students use smoking form of tobacco, 6.52% student use smokeless tobacco, and 1.49% of students use both form of tobacco. The difference of tobacco use among boys and girls student was statistically significant. Most common influential factor for tobacco use was peer pressure among the tobacco user. Out of the 51 tobacco users, adolescent students 31.37% have desire to quit tobacco.

Conclusion: High prevalence of tobacco use among school-going students was alarming situation. The desire to quit tobacco among adolescent was very low.

Keywords: Adolescent, School children, Smoking, Tobacco.
"Current use" was defined as having used tobacco at least once in the last 30 days preceding the survey. "Never use" was defined as having not used tobacco even once in their lifetime. Data were entered into the MS excel 10. During data entry, 5 incompletely filled formats from rural area school and 2 from urban area school (total 07) were rejected. Hence, in the present study, data of total 337 adolescent students were analyzed using appropriate statistical tests. p<0.05 was considered statistically significant at 5% level of significance.

RESULTS

In this study, a total of 337 students were assessed, age of the students ranged from 13 to 19 years. Among the 337 adolescent students, 189 (56.08%) belongs to school of urban area and 148 (43.92%) student belongs to rural area school. 178 (52.82%) were boys and 159 (47.18%) were girls.

Out of the 337 students, 51 (15.1%) reported an experience of any type of tobacco use. 29 (8.61%) student use smoking form of tobacco, 22 (6.52%) student use smokeless tobacco, and 5 (1.48%) student use both form of tobacco. 41 (23.03%) boys student use tobacco, while among girl students, 10 (6.29%) use tobacco. This difference of tobacco use among boys and girls student was statistically significant (p=0.00003) (Table 1).

Table 1: Tobacco use among students according to gender and school

<table>
<thead>
<tr>
<th>Form of tobacco consumed</th>
<th>Gender</th>
<th>School</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Boys n (%)</td>
<td>Girls n (%)</td>
<td>Urban n (%)</td>
</tr>
<tr>
<td>Smoking</td>
<td>25 (14.04)</td>
<td>4 (2.52)</td>
<td>16 (8.46)</td>
</tr>
<tr>
<td>Yes</td>
<td>16 (8.99)</td>
<td>6 (3.77)</td>
<td>4 (2.12)</td>
</tr>
<tr>
<td>Smokeless tobacco</td>
<td>5 (2.80)</td>
<td>0 (0.0)</td>
<td>2 (1.06)</td>
</tr>
<tr>
<td>Any type of tobacco use</td>
<td>41 (23.03)</td>
<td>10 (6.29)</td>
<td>20 (10.58)</td>
</tr>
<tr>
<td>Yes</td>
<td>137 (76.97)</td>
<td>149 (93.71)</td>
<td>169 (89.42)</td>
</tr>
<tr>
<td>No</td>
<td>178 (100)</td>
<td>159 (100)</td>
<td>189 (100)</td>
</tr>
<tr>
<td>Total</td>
<td>182 (100)</td>
<td>165 (100)</td>
<td>251 (100)</td>
</tr>
</tbody>
</table>

χ²=18.33; p=0.00003***

**Statistically significant

Influential factors for initiation of consumption of tobacco products (n=51)

Table 2: Influential factors for initiation of consumption of tobacco products (n=51)

<table>
<thead>
<tr>
<th>Influential factors</th>
<th>Gender</th>
<th>School</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Boys (n=41) n (%)</td>
<td>Girls (n=10) n (%)</td>
<td>Urban (n=20) n (%)</td>
</tr>
<tr>
<td>Family members</td>
<td>14 (34.15)</td>
<td>2 (20.00)</td>
<td>4 (20.00)</td>
</tr>
<tr>
<td>Peer pressure</td>
<td>37 (90.24)</td>
<td>7 (70.00)</td>
<td>16 (80.00)</td>
</tr>
<tr>
<td>Advertisements/Movies</td>
<td>14 (34.15)</td>
<td>2 (20.00)</td>
<td>6 (30.00)</td>
</tr>
<tr>
<td>Pleasure/Experiment</td>
<td>11 (21.57)</td>
<td>3 (30.00)</td>
<td>5 (25.00)</td>
</tr>
<tr>
<td>Stress</td>
<td>12 (29.27)</td>
<td>4 (40.00)</td>
<td>7 (35.00)</td>
</tr>
</tbody>
</table>

*p<0.05

As depicted in Table 5, Out of the 51 tobacco user adolescent students 16 (31.37%) have desire to quit tobacco and 35 (68.63%) user either have no such desire or not yet decide to quit tobacco. Girls adolescent students have comparatively high desire to quit tobacco than boys adolescent student. The Difference of desire to quit tobacco between girls and boys student was found to be statistically significant (p=0.01). The Difference of desire to quit tobacco between student of urban and rural area was found to be statistically insignificant (p=0.09).

DISCUSSION

Tobacco addiction is one of the emerging major threats among school adolescent students in developing countries. The early age of initiation of tobacco require urgent need to protect and intervene this vulnerable group from falling into addiction. Tobacco use in early life make adolescent vulnerable for host of many diseases in future.

The present study was conducted to explore the prevalence of tobacco use, pattern of tobacco use, and knowledge about harmful effects and laws against tobacco use among the vulnerable adolescent group. In the present study, 15.1% of adolescent students reported an experience of any type of tobacco use which was higher compared to GYTS-2009 14.6% among 13-15-year-old students in India [8]. A study conducted by Kishore et al. in rural Wardha, Maharashtra reported that 35% of the school children were tobacco users which were higher compared to the present study [9].
The tobacco use by girl adolescent students is a serious concern for society. A study by Kishore et al. [8] found a higher usage of tobacco among female students. However, in contrast to the present study, the GYTS-2009 reported that boys (19.0%) consuming tobacco was more common among urban students compared to rural students (6.4%) [12]. In our study, boys consume more tobacco compared to urban area (6.4%) [12]. A study conducted in Kerala by Gurunani found that tobacco use was more in the transitional Karnataka (10.1%) than rural (4.7%) students [13].

In the present study, smoking form of tobacco use was common form as (8.61%) student use smoking form of tobacco, (6.52%) student use smokeless tobacco, and 5 (1.48%) students use both form of tobacco. Discovar result to the present study were found in GYTS-2009, in which 4.4% of students currently smoke cigarettes, 12.5% currently use some other form of tobacco [8]. Other study done by Rajeshwari et al. in a co-education school also found that smokeless tobacco use was common form than smoking form [smoking: 7.7%, chewing: 8.1%; and both forms: 3.4%] [10].

In the present study, (23.03%) boy students use tobacco while among girl students (6.29%) use tobacco. This difference of tobacco use among boys and girl students was statistically significant (p=0.0003). Similar to the present study GYTS-2009 reported that boys (19.0%) consuming more tobacco than girls (8.3%) [8]. In contrast to the present study, none of the girls were found to use tobacco in the study by Kishore et al. [9]. The tobacco use by girl adolescent students is a serious concern for society.

Smoking (14.04%) was common form of tobacco use among boys, while among girls most common form was smokeless tobacco (3.77%). Contrast to the present study, Shruthi et al. found a higher usage of smokeless form of tobacco (17.9%) among high school boys [11].

Among the student of rural school (20.95%) uses tobacco, while (10.58%) student from urban school use tobacco. This difference of tobacco use among students of urban and rural area school was statistically significant (p=0.0084). Similar to the present study Matariya et al. in Gujarat also observed that students from the rural area (9.8%) consume more tobacco compared to urban area (6.4%) [12]. However, a study conducted in Karnataka by Gurunani found that tobacco use was more in transitional Karnataka (10.1%) than rural (4.7%) students [13].

In the present study, among the tobacco user, 31.37% of adolescent students were having desire to quit tobacco. However, GYTS report depicted that 67.2% of the smokers had tried to stop smoking in the past year [8]. Girls adolescent student (70.00%) have significantly high desire to quit tobacco than boys adolescent student (21.95%) (p=0.01). Nearly 56.41% of the male and 50% of the female tobacco users wanted to quit tobacco according to a study by Muzammil et al. [14]. Desire to quit tobacco between student of urban (45.00%) and rural area (22.58%) was found to be statistically insignificant (p=0.09). Such unfavorable desire to quit has a strong predisposition toward the habit of smoking and should be addressed at this vulnerable group.

The present study found that, among the tobacco user students, there were multi-influencing factor for tobacco use such as peer pressure (86.27%), use by family member (31.37%), advertisement/movies (31.37%), and experiments (31.37%). Other study also reported that friends pressure and tobacco use family member were common influencing factor [14,15]. However, other study by Matariya and Patel reported that common reasons for the initiation of tobacco consumption were friends and mental stress [12,16].

In our study, most of students know that tobacco use may cause mouth cancer (61.72%) and lung cancer (45.10%). A study by Mukherjee et al.
Kumar et al.


reported lower tobacco use than the present study that was 18.5% of the study population [3]. In our study only, 18.10% of adolescent student were know at least three or more section of anti-tobacco laws. This highlights importance of continued educational activities emphasizing tobacco hazards and existing law "The Cigarettes and Other Tobacco Products" address this problem. In the present study, most of students acquire their knowledge from social media (69.14%) and school education (61.72%). Among the adolescent student's life social media playing importance role in imparting knowledge about health hazards of tobacco. School education and involvement of teachers are important steps in addressing tobacco use.

CONCLUSION AND RECOMMENDATION

High prevalence of tobacco use among school going students was alarming situation. Girl adolescent students also consuming tobacco. The desire to quit tobacco among adolescent was very low. Peer pressure was one of the most common causes of tobacco use. Study depicted that most of school-going girls and boys have knowledge regarding the hazards of tobacco on health however they have low knowledge about anti-tobacco laws. Continue educational activities should be focus to motivate adolescent to quit tobacco. As most of the students started tobacco use under their friend's pressure, so importance should be given to tackle the peer pressure. There is need for a strong life skills education to prevent tobacco use among vulnerable adolescent students into the school curriculum.

Limitation

This study was conducted on small sample size including few schools. Hence, we cannot generalize these findings to general population.

REFERENCES