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## Evaluation of knowledge and attitude towards ill effects of tobacco and alcohol: A systematic review

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### Abstract

**Objective:** Aim of this systematic review is to systematically evaluate the knowledge and attitude towards ill effects of tobacco and alcohol among adolescents.

**Methods:** It includes systematic review of literature from 2010 to 2020. Studies were sourced from a total of 5 databases: PubMed, Cochrane, Google scholar, World health organization and Global Adult tobacco survey: GATS ATLAS. All possible studies were identified for review through search terms and search strategy. Inclusion criteria were primary research study that was published in English and conducted among adolescents.

**Findings:** Nineteen studies met the inclusion criteria in relation to aspect of knowledge and attitude towards ill effects of tobacco and alcohol. The review highlighted that the adolescent were indulge in the act of substance abuse. Knowledge among adolescent were found to be adequate. Even though the knowledge was present, the prevalence of tobacco and substance abuse was found to be higher. Few studies reveals that there were negative attitude towards substance abuse.

**Conclusion:** This systematic review provides an overview of the knowledge and attitude towards ill effects of tobacco and alcohol. The review also highlighted the need for provision of educational and awareness programme for adolescents.

**Keywords:** Systematic review, tobacco and alcohol, substance abuse, public health and economy

### Introduction

Substance abuse is a world issue. It occurs when an excess amount of prescribed medicine, alcohol, legal and illegal substance is taken. Smoking and other forms of tobacco use are the second biggest cause of death in the world that is on a constant increase and it is the single biggest preventable cause of death. Scientific evidences have proved that consumption of tobacco may lead to disease, disability and death. It causes a serious health issues to adolescents and has great impact on nation's public health and economy. Half of the people die prematurely due to diseases related to smoking.

Adolescence is a phase that is sensitive to social influences and thus sensitive to marketing of tobacco products by role models, cinemas, newspaper, social media etc. Adolescents are the most vulnerable population to initiate tobacco use. It was found that most of the adult tobacco users start tobacco use in adolescence.

### Materials and Methods

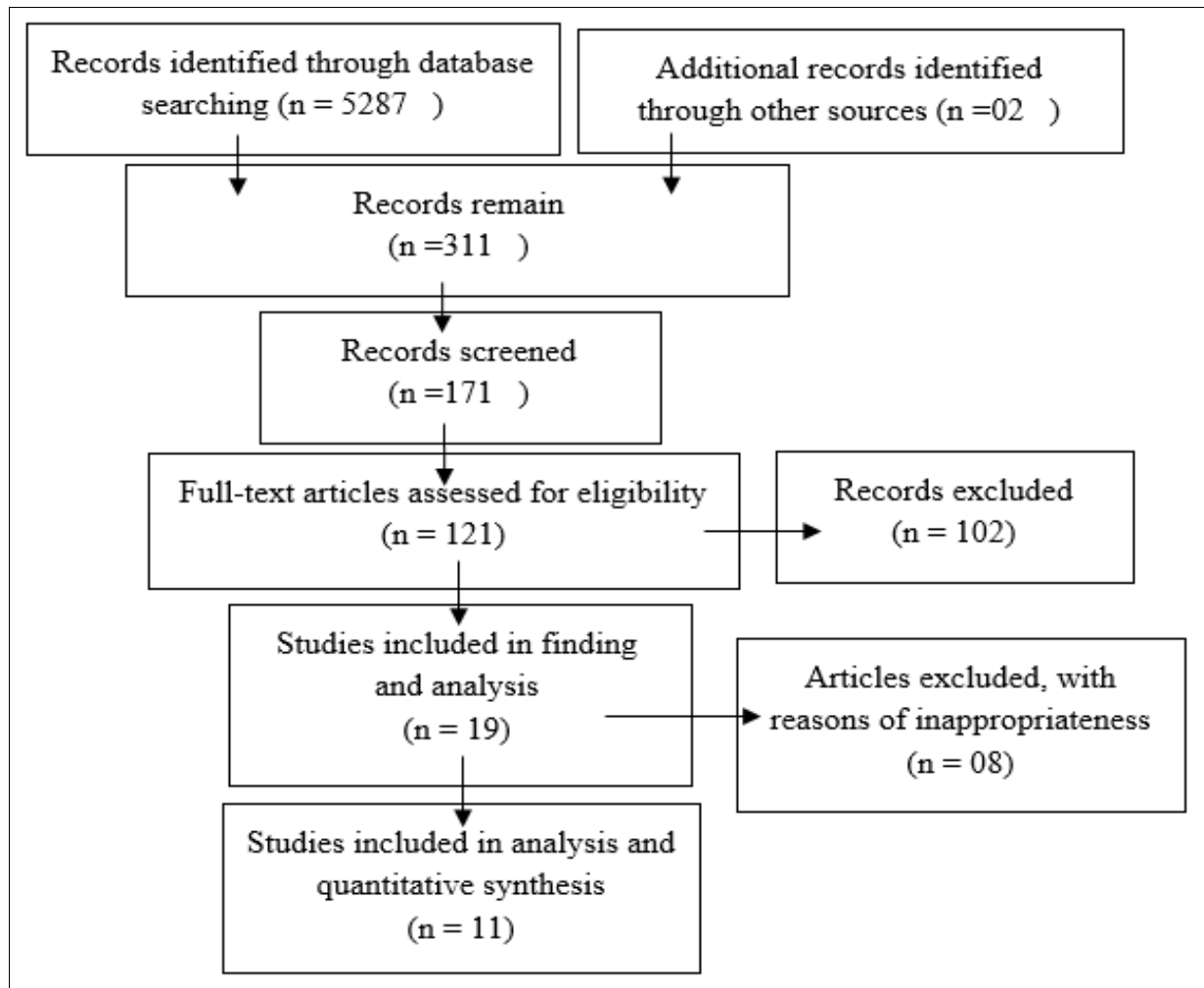
**Literature Search strategy:** The main purpose of literature search was to identify relevant articles and research studies related to knowledge and attitude of adolescent related to substance abused.

### Bibliographic database

Following bibliographic databases were searched using a combination of text term and MeSH heading in order to identify primary studies published between, 2016 to 2021.

- PubMed.
- Cochrane.
- Google scholar.

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#### Other online searchable resources

Following database was additionally searched in order to identify any other primary report or guidelines.

- World health organization.
- Global Adult tobacco survey: GATS ATLAS.

**Study selection:** After identifying literature from an electronic database, articles were further screened using eligibility criteria.

#### Inclusion criteria

**Study design:** Cross sectional studies and retrospective studies were included in the study.

**Population:** Studies that evaluate the knowledge and attitude of adolescent related to substance Abuse.

**Outcome measure:** Study will evaluate the knowledge and attitude of tobacco and alcohol consumption among adolescents.

**Language:** Studies that was written and published in English.

**Time period:** In order to focus on current context studies published from 2010 onwards were included.

**Types of publication:** Primary research study.

#### Exclusion

- Studies that was not available as full text.
- Studies published in language other than English.
- Studies was not published in India.

#### Review method

##### Screening method

**Articles screening:** Titles and Abstracts were screened using exclusion criteria. Studies was included for full text review.

#### Findings observation and data analysis

To detect the knowledge and attitude of adolescent regarding ill-effects of tobacco and alcohol cross sectional and retrospective study was selected. Study variables have to be processed and analyzed in a systematic manner to fulfill the objectives. The selected studies were organized and data sheet was prepared for complete analysis.

#### Analysis and interpretation of selected studies was done under following headings

- Characteristics of studies.
- Qualitative synthesis of studies.
- Frequency and percentage of year of publication.
- Frequency and percentage of data collection methods.
- Frequency and percentage of substance abuse.

**Table 1:** Characteristic of studies

Author Name	Year	Sampling technique	Tool	Substance abused	Result
Jasani P, Jadeja Y, Patel N, Jadeja D, Shrimali J, Purani S <sup>[3]</sup>	2019	Simple Random sampling	Questionnaire	Tobacco Alcohol	<ul style="list-style-type: none"> <li>Prevalence of substance is seen higher (37.67%) among adolescent.</li> <li>Male participants were found to use more substance as compared to female.</li> </ul>
Janeswar A, Kumar G; <i>et al.</i> <sup>[4]</sup>	2019	Stratified random sampling	Questionnaire	Smoking Smokeless tobacco	<ul style="list-style-type: none"> <li>More than half of male participants were using tobacco.</li> <li>Around 45.3% female were using tobacco.</li> </ul>
Singha AS, Malandia B, Rema H, Mor K, Aier AP <sup>[5]</sup>	2019	total enumerative sampling technique	Questionnaire	Tobacco	<ul style="list-style-type: none"> <li>The study findings percentage of knowledge of the participants regarding tobacco was 62.25% and 57.2%. Had practiced tobacco the study findings percentage of knowledge of the participants regarding tobacco was 62.25% and 57.2%. Had practiced tobacco.</li> <li>A significant association was present between practice and gender (<math>p&lt;0.05</math>) and type of schools with knowledge (<math>p&lt;0.05</math>)</li> </ul>
George R.M, Thomas T; <i>et al.</i> <sup>[6]</sup>	2018	Universal sampling	Questionnaire	Cigarette smoking. smokeless tobacco	<ul style="list-style-type: none"> <li>One fourth participants i.e. 102 (25%) have tried cigarette smoking.</li> <li>Around 7.9% have tried smokeless tobacco</li> <li>Minority i.e. 4.3% of them buy tobacco products by shopkeepers.</li> <li>More than half i.e 66.1% of them were knowledgeable about the harmful effects of passive smoking</li> </ul>
Sakore DN, Parande MA, Tapare VS, Bhattacharya S <sup>[11]</sup>	2017	3 stage cluster sampling	Interview questionnaire	Smoking	<ul style="list-style-type: none"> <li>Mean age of participants were <math>18.6\pm 1.2</math> years.</li> <li>About 162 students have good knowledge of ill-effect of tobacco consumption.</li> </ul>
Singh M, Bala N, Garg P.D, Bansal S, Bumrah S, Attri A <sup>[7]</sup>	2017	Total enumerated sampling	Interview	Opioids and polysubstance	<ul style="list-style-type: none"> <li>Majority of participants were in age group 16-19 year of age.</li> <li>Male participants were found to use more substance abuse as compound to female.</li> <li>Opioids and polysubstance use are common among them.</li> </ul>
Ballal Kirthinath, Kul Karni Muralidhar, Aggarwal Ayushi, Kamath Asha, Kumar Muthu <sup>[13]</sup>	2016	Convenient sampling	Questionnaire	Cigarette smoking Gutka bidi	<ul style="list-style-type: none"> <li>Mean age of 1261 student is <math>14.57\pm 4.0</math> year</li> <li>Knowledge level of consumption of tobacco products is different with another products</li> <li>Around 86.4% were using tobacco in cigarette.</li> <li>Around 87.3% are taking tobacco in gutka form.</li> <li>Around 74.1% are taking tobacco in bidi.</li> <li>About 3% of students feel that using tobacco make them smart &amp; cool.</li> </ul>
Mahanta, Beauty PK Mohapatra, N. Phukan, and J. Mahanta <sup>[12]</sup>	2016		Questionnaire	Alcohol	<ul style="list-style-type: none"> <li>The result of the study shows that 36% students have used homemade alcoholic drinks and 12.3% use commercial alcohol.</li> <li>Minimum age of initial use of commercial alcohol was seven years which of Homemade alcohol was four years</li> <li>Parent's behavior of taking tobacco and/or alcohol influenced the habit of their youngsters.</li> </ul>
Sharma Vasudha, Hiremath S.S, Gupta Kumar Vinay, Puranik Manjunath, <sup>[8]</sup>	2016	Simple random sampling	Questionnaire	Cigarette Smokeless tobacco	<ul style="list-style-type: none"> <li>307 (12.8%) subjects reported use of cigarette among whom 176 (7.3%) reported current use.</li> <li>240 (10%) reported ever use of smokeless tobacco.</li> <li>41 (1.7%) were daily smokers.</li> <li>Students of government institution had less awareness related to harmful effects of passive smoking.</li> </ul>
Matariya R. Zalak, Namera K. Harshida, Patel V. Umed <sup>[9]</sup>	2016	Multistage sampling	Questionnaire	Tobacco	<ul style="list-style-type: none"> <li>77.3% of participants were aware that tobacco consumption lead to death.</li> <li>15.9% of participants were aware of tobacco legislation.</li> </ul>
Ibrahim A, Mathew SB, Arekal SS, Kundapur R, Swathi, Santhosh <sup>[10]</sup>	2016	Universal sampling	Questionnaire	Smoking	<ul style="list-style-type: none"> <li>About 78.23% adolescent and young adult were aware of effects of smoking on health.</li> <li>From them 39.83% to 14.78% think it would lead to lung it would lead to lung to heart disease.</li> <li>About 3.08% said that it would lead that it would lead to impotence respectively.</li> <li>Around 70.63% students planned to be a nonsmoker in future.</li> </ul>

### Qualitative Synthesis

The aim of the qualitative synthesis was to discuss the about harmful effects of tobacco and alcohol use among adolescent students.

Pratik K, Jasani, *et al.* (2019)<sup>[3]</sup> study finding reveals that prevalence of substance abuse was higher in community as compared to adolescent belong to urban area. Janeswar A, Kumar G, *et al.* (2019)<sup>[4]</sup> study suggest as during the time

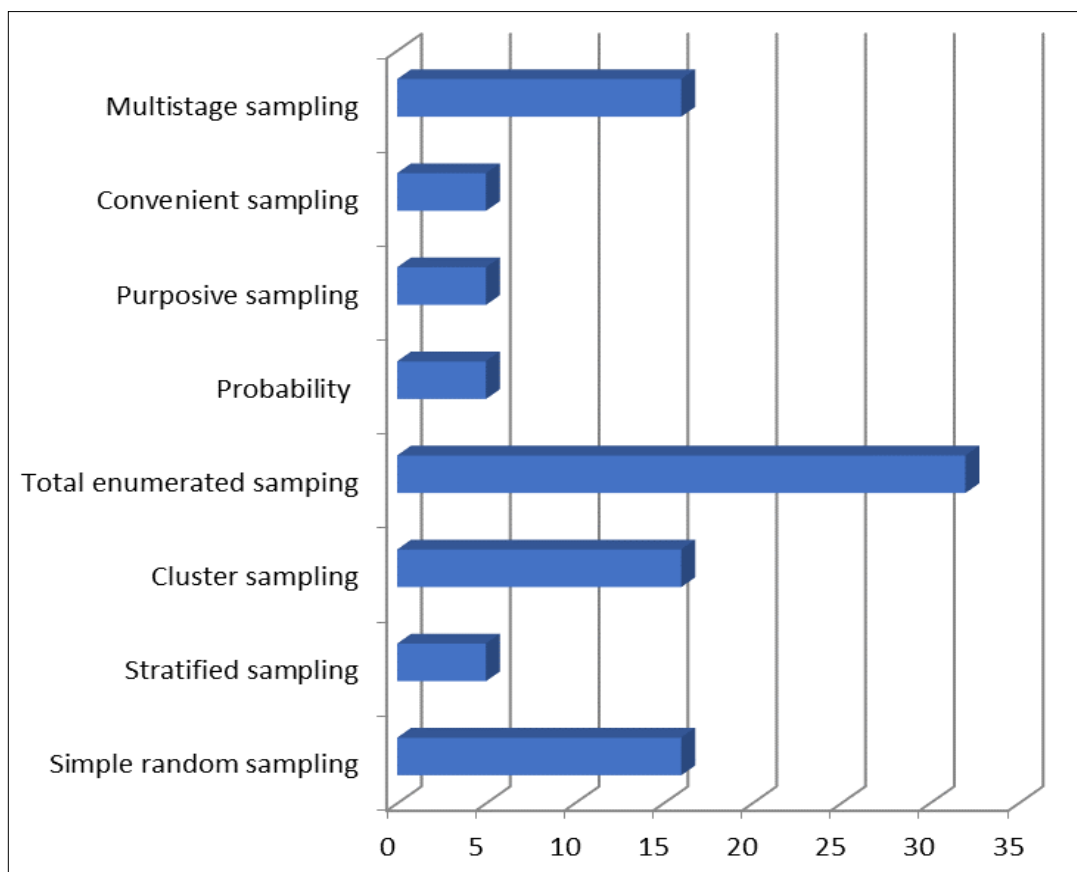
period of survey none of the participants used tobacco in any form. Hence it is very important to enable the teachers to motivate the students regarding maintenance of good habits. Teacher should conduct an educational programme on ill effect of tobacco on life style on regular basis to help the student to maintain healthy life. Singha AS, Malandia B, Rema H, Mor K, Aier AP (2019) [5] Singha AS, Malandia B, Rema H, Mor K, Aier AP (2019) [5] study conclude that tobacco use is health risk behavior and more prevalent among high school students. Early intervention should be taken prevent the further complications. Regular and systematic education should be used to reduce the prevalence of substance abuse. George R.M, Thomas T; *et al.* (2018) [6] study conclude that even though the participants were aware of harmful effects but most of them were using tobacco and tobacco products which cannot be ignored. Deepika N Sakore, Malangori, A. Parande, Vinay S. Tapare, Susmita bhattacharya (2017) [11] knowledge level of student's towards consumptions of tobacco is adequate. The habit of tobacco consumption is higher among adolescent students. The prevention programme can be effective to improve knowledge and attitude of the students. Singh M, Bala N, Garg P.D, Bansal S, Bumrah S, Attri A (2017) [7] study implies that the study conclude that there is a need of counseling for young children and adolescents regarding ill-effects of tobacco and alcohol consumption. Study finding suggest that the knowledge level of student's towards consumptions of tobacco is adequate. Kirthinathballal, Mualidhar Kulkarni Kulkarni, Ayushi Agrawal, Ashakamath, Mutheskumar (2016) [13] study finding suggests that the knowledge of study participants were inadequate. Thus lead to unfavorable attitude toward tobacco use. It is needed to counsel the study participants

regarding prevention of them from taking up these habits in the future. Mahanta, Beauty, P. K. Mohapatra, N. Phukan, and J. Mahanta (2016) [12] result of the study suggest that minimum age of initial use of commercial alcohol was seven years which of Homemade alcohol was four years; the length varied from one to eight years and 1-15 years, respectively in male and female participants. Parent's behavior of taking tobacco and/or alcohol influenced the habit of their youngsters. Sharma Vasudha, Hiremath, S.S Gupta Kumar Vinay, Puranik, Manjunath (2016) [8] study found that the prevalence of smoking was much higher among the private institution students as compared to student of government institution. Study observed that the percentage of smokeless tobacco was higher in daily smokers. Matariya R. Zalak, Namera K Harshida Patel V Umed (2016) [9] study concludes that there is a need to provide awareness regarding tobacco legislation. Ibrahim Study finding suggest that adolescent & young adult were aware about the effect smoking and tobacco use on health.

**Table 2:** Frequency and percentage distribution of research study publication

S. No.	Years of Publication	Frequency	Percentage (%)
1	2019	3	16
2.	2018	1	5
4.	2017	2	11
5.	2016	5	26

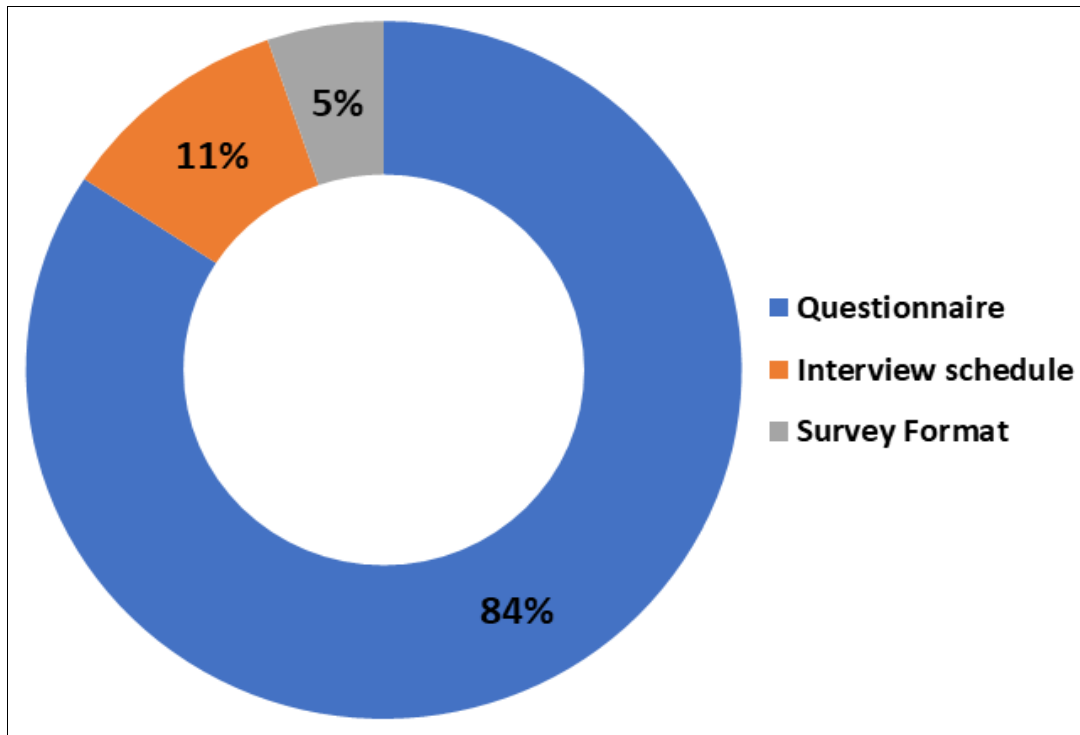
Represent that majority studies selected were of year 2016 i.e. 26%. This is followed by year 2014 (21%). In year 2019 16% of the studies were selected and 11% studies were from 2017. The 5% of studies were from year 2018, 2015, 2012, 2011 and 2010.



**Fig 1:** Percentage distribution of studies based on type of sampling methods used

Figure 1. Represent that variety of sampling methods were used to recruit the sample. Out of 19 studies, 06 (32%) studies used total enumerated sampling. This is followed by multistage sampling (16%), cluster sampling (16%) and

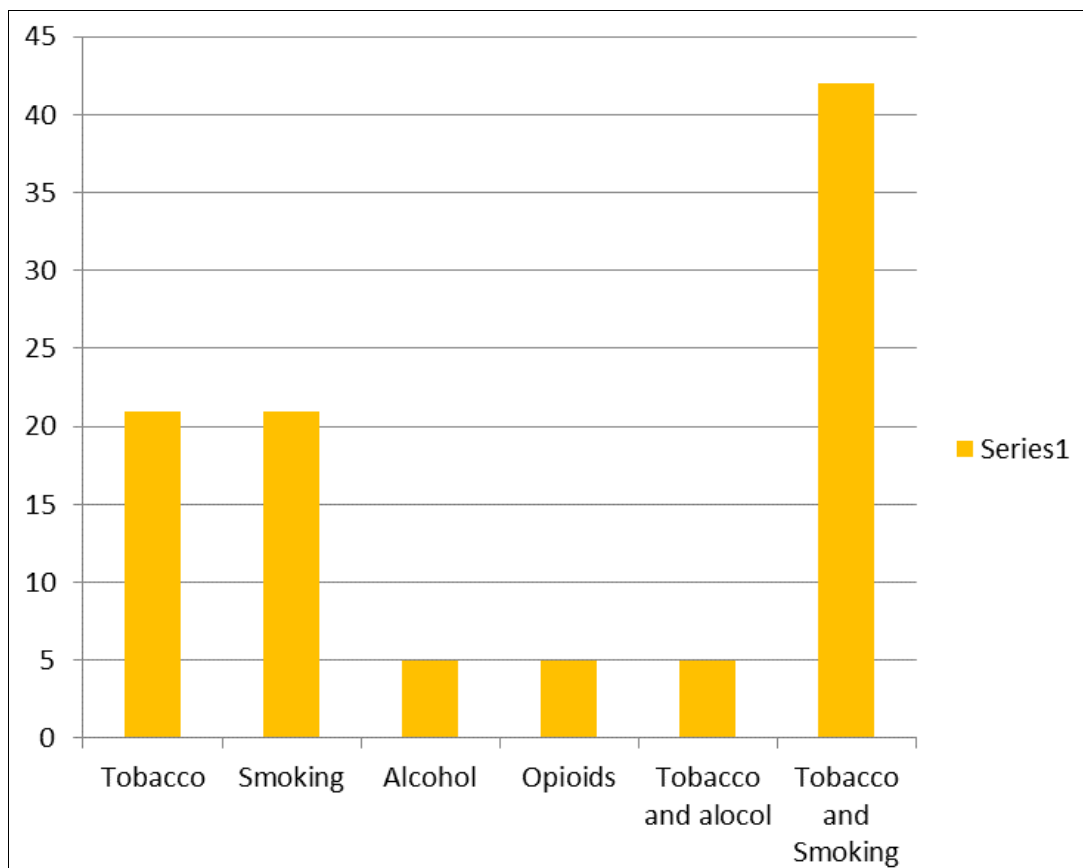
simple random sampling (16%). The percentage of purposive sampling, stratified sampling and probability sampling were 5%.



**Fig 2:** Percentage distribution of studies based on data collection methods

Figure 2. Represent the data collection methods. Out of 19 studies, 16 (32%) studies used questionnaire method to

collect the data. Out of 19 studies, 02 (11%) use interview schedule, this is followed by survey format (5%).



**Fig 3:** Percentage distribution of studies based on substance abused



Figure 3. Represent the data collection methods. Out of 19 studies, 08 (22%) studies reveals that both tobacco and smoking were prevalent among adolescents. This is followed by prevalence of tobacco (21%) and smoking (21%). Other substance used was alcohol (5%), tobacco and alcohol (5%) and opioids (5%).

#### Other findings

1. The prevalence of substance abuse was higher in rural community as compared to urban community.
2. The prevalence rate of smoking was found to higher in the private institution students as compared to student of government institution
3. The minimum age of initial use of smoking was between 11 to 15 years of age.
4. The main factors leading to substance abuse were the private institution students as compared to student of government institution family conflict, poor economic condition, peer groups influence combined efforts were the major contributing factors.
5. A substance abuse among adolescent was found to be associated with smoking habits of father and peer pressure.

#### Implication

- The school health nurses can conduct the teaching programme to impart knowledge about harmful effects of tobacco and alcohol use in the schools and colleges or universities.
- In community, the community health nurse should educate the community regarding tobacco and alcohol abuse and its effects on family, occupation, economic conditions and their health.
- The School curriculum should give importance to the topic substance abuse and its preventive aspect. It helps the students to increase knowledge on tobacco and alcohol use and its harmful effects.
- Research can also be conducted to assess the learning needs of the adolescents and the general public in order to increase the awareness regarding harmful effects of tobacco and alcohol use.

#### Recommendation

- Adolescent health and wellbeing must be recognized as an important area.
- On basis of evidences action plans needs to be developed for the prevention of substance abuse.
- Provision of counselling services can significantly reduce the adolescent health issues

#### Conclusion

This dissertation provides an overview of knowledge and attitude of adolescents towards ill-effects of tobacco and alcohol. This review shows that the prevalence substance abuse was very common adolescent. The dissertation includes studies mainly focuses on cross sectional and retrospective studies. A variety of sampling methods were used. Majority of studies used questionnaire to collect the data. There is scope to prevent, recognize and manage adolescent illness. Hence it is important to promote adolescent health and wellbeing. This can be done by

conducting awareness and educational programme.

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