

Prevalence of Substance Use and Associated Factors Among High School Adolescents in Rithepani, Lekhnath-2, kaski, Nepal

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ABSTRACT

Background: Substance use is a major public health concern in global settings, and is very common during adolescence period leading to physical and/or mental health complications. This study assessed the prevalence of substance use and associated factors among high school adolescents in Rithepani 2, Lekhnath, Kaski, 2073.

Objectives: The study was designed to provide estimates of substance use by school-going adolescents in Lekhnath and to identify risk factors associated with.

Methods: A school based cross-sectional study was conducted from 17th October to 21st October, 2016 among eighth to 12th grade high school students in the Rithepani-2, Lekhnath. Participants were selected by purposive sampling techniques, and data were collected using questionnaire. Frequency, percentage, means, SD and chi-square test was performed to identify factors associated with substance use.

Results: Majority of the respondents 93 (56.4%) belonged to the age group 15 - 18 years. Majority of the respondents 88 (53.3%) were males and 50 (30.3%) were studying in grade 11. Majority of the respondents 140 (84.8%) were Hindus and 104 (63%) of the respondents belonged to upper caste group. In terms of education of the respondents' parents, majority of the respondents' mothers 68 (41.2%) had completed their secondary education and similarly, majority of the respondents' fathers 78 (47.3%) had completed their secondary education. Majority of the respondents' mothers 129 (78.2%) were housewives and majority of the respondents' fathers 48 (29.1%) were businessmen. Majority of the respondents 136 (82.5%) belonged to nuclear family and 93 (56.4%) had per month family income more than Rs 15,000. Among 165 respondents prevalence of substance use was found to be 10 (6%).

Regarding the associated factors majority of the respondents 162 (98.2%) had good relation with their parents, 101 (61.2%) respondents' family members do not use substance, 128 (77.6%) respondents reported that substance use was not accepted in their culture. the prevalence of substance use by the respondents is 6.1% in which five (50%) respondents consume alcohol, eight (80%) take cigarette, one (10%) use tobacco and two (20%) take ganja. Among the substance users, four (40%) reported imitating parents and four (40%) reported curiosity as the cause for them to initiate substance use. Regarding the accessibility of the substances among the respondents who use substances, three

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(30%) respondents said that it's very difficult whereas one (10%) said that it's very easy for them to have access to the substances. Majority of the respondents who use substances 6 (60%) avail the substance/s from their friends.

Regarding the Association, there is a significant association between prevalence of substance and substance use by family members with the χ^2 value of 7.61 and p-value 0.006 which is less than 0.05 significant level. There is also a significant association between the prevalence of substance use and its cultural acceptance with the χ^2 value of 4.65 and p-value of 0.031 which is less than 0.05 significant level.

There is a significant association between the prevalence of substance abuse and ethnicity with the χ^2 value of 11.81 and with the p-value 0.037 which is less than 0.05 significant level.

Conclusions: The prevalence of substance use among high school adolescent students in selected higher secondary school was found to be 6.1%. There was significant association between prevalence of substances use and cultural acceptance of participants, ethnicity and use of substances by the family members. Based on the findings of the study researcher suggests to initiate awareness and co-ordination program between the school and parents.

INTRODUCTION

The World Health Organization defines addiction as the state of physiological or psychological addiction to any psychoactive substance; the state is characterized by changes in behavior and other psychological reactions, always including the compulsive need for occasional or regular substance use, guided by the pleasant psychological effect of the substance or avoiding the symptoms of abstinence¹.

Adolescence is marked by considerable existential conflicts as well as exposure and vulnerability to substance abuse². Young people have greater problems regarding alcohol intake³. Moreover, early initiation in alcohol use is one of the most important predictors of future health, socio-cultural and economic problems⁴. The following factors are considered facilitators of alcohol use among adolescents: lifestyle, high levels of stress and anxiety, low self-esteem, depressive symptoms, susceptibility to peer pressure and problems associated with school⁵.

Adolescents are particularly susceptible to involvement in substance use due to the underdeveloped state of the adolescent brain, which can lead to reduced decision-making ability and increased long-term effects of drugs and alcohol. Understanding the causes of adolescent substance use is vital for successful prevention and intervention programs.

Data from the National Institute on Drug Abuse (NIDA) and the Centers for Disease Control and Prevention (CDC) reveal high numbers of adolescent substance use in the

United States. Substance use among adolescents can lead to increased risk of transmission of sexually transmitted infections, vehicular fatalities, juvenile delinquency, and other problems associated with physical and mental health.

About 230 million people, or five percent of the world's adult population, are estimated to have used an illegal drug at least once in 2010. Alcohol and other drug (Khat and tobacco) users number about 27 million, which is 0.6 percent of the world adult population. What is more surprising is that, alcohol alone kill around 0.2 million people each year, shattering families and bringing misery to thousands of other people. Similarly, reported that, alcohol and drug use undermines economic and social development and contributes to crime, instability, insecurity and the spread of HIV. Not only that, alcohol and drug abuse is major burdens to society; causing economic costs, health cost, crime-related costs and losses in productivity⁶.

Use of substances such as different alcohols, chewing khat leaves and smoking cigarette has become one of the rising major public health and socio-economic problems worldwide. Recent trends indicate that the use of substances, mainly alcohol, chewing khat and smoking cigarette have dramatically increased particularly in developing countries. Alcohol, especially in high doses, or when combined with khat or tobacco, continues to claim the lives of many people. It is estimated that 9% of the global population aged 12 or older are classified with

dependence on psychoactive substances such as alcohol. Heavy consumption of alcohol when shared with chewing khat is associated with many psychological problems including euphoria, hyperactivity, anorexia, insomnia, lethargy and depression. In addition, the combined use of alcohol and khat increase sexual risky behavior contributing to the spread of HIV infection⁷.

The problem of alcohol and drug abuse among College or University students remains an important area of research due to the implications of early substance dependence on the future of the youth⁸.

Alcohol and drug abuse is a common public health risk that peaks in persons between 18 and 25 years of age and is highly prevalent among University and college students. There have been limited studies in developing countries like Nepal⁹.

This study therefore sought to assess the prevalence and factors associated with drug abuse among high school students.

OBJECTIVES

- To determine the demographic characteristics of participants
- To assess the prevalence of substance use among high school adolescents in Rithepani-2, Lekhnath, Kaski, Nepal
- To explore the prevalence of substance use and associated factors among high school adolescents in Rithepani-2, Lekhnath, Kaski, Nepal

METHODS

A high school based cross-sectional study was conducted from 17th to 21st October, 2016 amongst 8th to 12th grade high school students in Rithepani-2 Lekhnath, Kaski, Nepal. Participants were selected by purposive sampling techniques, and data were collected using a semi structured questionnaire related to substance use. The study sample was recruited from grade 8 to 12 adolescent students in Triveni Public Higher Secondary School, Rithepani-2, Lekhnath, Kaski, Nepal. Three part structured questionnaire were developed to cover the entire aspects of study.

Part I: This part included demographic characteristics of the participants: Age, gender, religion, ethnicity, education of father and mother; occupation of mother and types of family.

Part II: This part included the associated factors of drug use, like: Economic factors, social factors, family factors, which are the key influencing indicators of substance use.

Part III: It included association between the prevalence of substances use and demographic variables, as well as the prevalence of substances use and the associated factors.

I. Demographic variables of the respondents

Table 1: Demographic variables of the respondents (n=165)

Demographic variables	Frequency	Percentage
Age(in years)		
<13	9	5.5%
13 - 15	52	31.5%
15 - 18	93	56.4%
>18>18	11	6.7%
Gender		
Males	88	53.3%
Females	77	46.7%
Grade		
8	15	9.1%
9	31	18.8%
10	23	13.9%
11	50	30.3%
12	46	27.9%
Religion		
Hindu	140	84.8%
Christian	3	1.8%
Muslim	1	0.6%
Buddhist	21	12.7%
Ethnicity		
Dalit	8	4.8%
Disadvantaged janjatis	2	1.2%
Disadvantaged non-dalit terai caste group	1	0.6%
Religious minorities	10	6.1%
Relatively advantaged janjatis	40	24.2%
Upper caste group	104	63.0%
Education of mother		
Illiterate	15	9.1%
Primary	55	33.3%
Secondary	68	41.2%
Higher secondary	19	11.5%
Graduate and above	8	4.8%
Education of father		
Illiterate	8	4.8%
Primary	32	19.4%
Secondary	78	47.3%
Higher secondary	31	18.8%
Graduate and above	16	9.7%

Demographic variables	Frequency	Percentage
Occupation of mother		
Housewife	129	78.2%
Service	3	1.8%
Business	19	11.5%
Agriculture	11	6.7%
Others	3	1.8%
Occupation of father		
Self employee	27	16.4%
Service	19	11.5%
Business	48	29.1%
Agriculture	26	15.8%
Others	45	27.3%
Types of family		
Nuclear	136	82.5%
Joint	24	14.5%
Extended	5	3%
Monthly family income		
≤5000	14	8.5%
5001 - 10,000	23	13.9%
10,001 - 15000	35	21.2%
≥15000	93	56.4%

Table 1 shows that majority of the respondents 93 (56.4%) belonged to the age group of 15 - 18 years. Likewise, majority of the respondents 88 (53.3%) were males and 50 (30.3%) were studying in grade 11. The table also depicts that majority of the respondents 140 (84.8%) were Hindus and 104 (63%) of the respondents belonged to upper caste group. In terms of education of the respondents' parents, majority of the respondents' mothers 68 (41.2%) had completed their secondary education and similarly, majority of the respondents' fathers 78 (47.3%) had completed their secondary education. Majority of the respondents' mothers 129 (78.2%) were housewives and majority of the respondents' fathers 48 (29.1%) were businessmen. Majority of the respondents 136 (82.5%) belonged to nuclear family and 93 (56.4%) had family income more than Rs 15,000.

Fig 1: Prevalence of substance use (n=165)

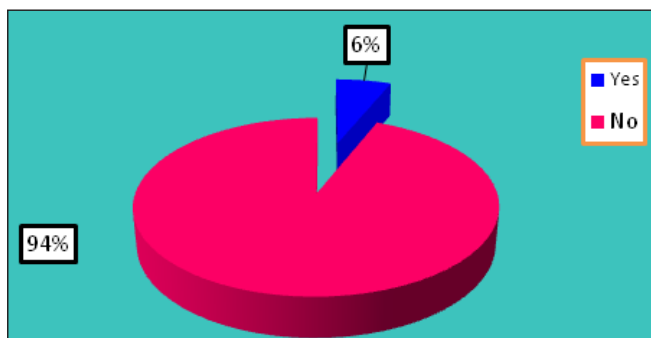


Figure 1 shows that the prevalence of substances use among the respondents was 6%.

II. Associated factors of substances use among adolescents

Table 2: Associated factors of substance use among adolescents

Associated factors	Frequency	Percentage
Relation with parents		
Good	162	98.2%
Poor	3	1.8%
Substance use by family members		
Yes	64	38.8%
No	101	61.2%
Cultural acceptance of substance use		
Yes	37	22.4%
No	128	77.6%
Types of substances used by the students		
Alcohol	5	50%
Cigarette	8	80%
Tobacco	1	10%
Ganja	2	20%
Cause for initiating the use of substances		
Imitating parents	4	40%
Peer pressure	2	20%
Curiosity	4	40%
Accessibility of substances		
Impossible	2	20%
Very difficult	3	30%
Fairly difficult	2	20%
Fairly easy	2	20%
Very easy	1	10%
Access to the substances		
Friends	6	60%
Pocket money	3	30%
Other	1	1%

Table 2 shows that majority of the respondents 162 (98.2%) had good relation with their parents; 101 (61.2%) respondents' family members do not use substance, 128 (77.6%) respondents reported that substance use was not accepted in their culture. Fig 1 also shows that the prevalence of substance use by the respondents is 6.1% in which five (50%) respondents consume alcohol, eight (80%) take cigarette, one (10%) use tobacco and two (20%) take ganja. Table 2 shows that among the substance users, four (40%) reported imitating parents and four (40%) reported curiosity as the cause for them to initiate substance use. Regarding the accessibility of the substances among the respondents who use substances, three (30%) respondents said that it's very difficult

whereas one (10%) said that it's very easy for them to have access to the substances. Table 2 also depicts that the majority of the respondents who use substances 6 (60%) avail the substance/s from their friends.

III. Association between the prevalence of substance abuse and the demographic variables.

Table 3: Association between the prevalence of substance abuse and the demographic variables

Variables	χ^2 value	df	p value
Grade	6.82	4	0.145
Age	4.99	3	0.172
Gender	0.19	1	0.663
Religion	7.25	3	0.064
Ethnicity	11.81	5	0.037*
Education of mother	6.96	4	0.138
Education of father	3.11	4	0.540
Occupation of mother	4.40	4	0.354
Occupation of father	2.34	4	0.672
Type of family	2.27	2	0.518

*Significant

Table 3 shows that there is a significant association between the prevalence of substance abuse and ethnicity with the χ^2 value of 11.81 and with the p-value 0.037 which is less than 0.05 level of significance.

IV. Association of the prevalence of substance use and the associated factors

Table 4: Association between the prevalence of substance use and the associated factors

Associated factors	χ^2 value	df	p-value
Monthly family income	5.42	3	0.143
Relation with parents	0.19	1	0.657
Substance use by family members	7.61	1	0.006*
Cultural acceptance of substance use	4.65	1	0.031*
Difficulty in the access to substances	3.60	4	0.463

*Significant

Table 4 shows that there is a significant association between prevalence of substance and the substance use by family members with the χ^2 value of 7.61 and p-value 0.006 which is less than 0.05 level of significance. There is also a significant association between the prevalence of

substance use and its cultural acceptance with the χ^2 value of 4.65 and p-value of 0.031 which is less than 0.05 level of significance.

DISCUSSION

The study was aimed to provide estimates of substance use, and to identify associated factors associated with by school-going adolescents in Rithepani-2, Lekhnath, Kaski, Nepal at selected higher secondary school.

Majority of the respondents 93 (56.4%) belonged to the age group 15 - 18 years. Likewise, majority of the respondents 88 (53.3%) were males and 50 (30.3%) were studying in grade 11. Majority of the respondents 140 (84.8%) were Hindus and 104 (63%) of the respondents belonged to upper caste group. In terms of education of the respondents' parents, majority of the respondents' mothers 68 (41.2%) had completed their secondary education and similarly, majority of the respondents' fathers 78 (47.3%) had completed their secondary education. Majority of the respondents' mothers 129 (78.2%) were housewives and majority of the respondents' fathers 48 (29.1%) were businessmen. Majority of the respondents 136 (82.5%) belonged to nuclear family and 93 (56.4%) had per month family income more than Rs 15,000.

Among the 165 respondents prevalence of substances use was found to be 10 (6%).

Similar study was conducted in Thailand, 2012, to assess the prevalence of alcohol use and associated factors among adolescent students in Thailand. The prevalence was found to be 14.8%.

Associated factors

Majority of the respondents 162 (98.2%) had good relation with their parents, 101 (61.2%) respondents' family members do not use substance, 128 (77.6%) respondents reported that substance use was not accepted in their culture. the prevalence of substance use by the respondents is 6.1% in which five (50%) respondents consume alcohol, eight (80%) take cigarette, one (10%) use tobacco and two (20%) take ganja. Among the substance users, four (40%) reported imitating parents and 4 (40%) reported curiosity as the cause for them to initiate substance use. Regarding the accessibility of the substances among the respondents who use substances, three (30%) respondents said that it's very difficult whereas one (10%) said that it's very easy for them to have access to the substances. Majority of the respondents who use substances six (60%) avail the substance/s from their friends.

Similar study was conducted in Thailand, 2012, to assess the prevalence of alcohol use and associated factors among adolescent students in Thailand⁷. Efforts to prevent and control substances use may need to address a cluster of risk behaviors including cigarette smoking, and illicit drug use, easily accessibility of substances, parental behavior to initiate it and friends. A parent school co-ordination and co-operation could support parents and/or guardians to become more understanding and caring of their children.

Association between the prevalence of substance use and demographic variables as well as associated factors

The study found that there was a significant association between prevalence of substance and substance use by family members with the χ^2 value of 7.61 and p-value 0.006 which is less than 0.05 level of significance. There was also a significant association between the prevalence of substance use and its cultural acceptance with the χ^2 value of 4.65 and p-value of 0.031 which is less than 0.05 level of significance. There was a significant association between the prevalence of substance abuse and ethnicity with the χ^2 value of 11.81 and with the p-value 0.037 which is less than 0.05 level of significance.

Similar study was conducted in Ethiopia in 2014, to assess the prevalence of substance use and associated factors among high school adolescents⁸. The finding showed that there was significant association between prevalence of substance use and family history of substance use.

CONCLUSIONS

The prevalence of substance use among high school adolescent students in selected higher secondary school was found to be 6.1%. There was significant association between prevalence of substance use and cultural acceptance of participants, ethnicity and use of substances by the family members. Based on the above findings of the study researcher suggests to initiate awareness and co-ordination program between the school and parents.

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