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Original Article

Substance Use among Adolescent Higher Secondary School Students in Bhaktapur District in Nepal

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A R T I C L E   I N F O

A B S T R A C T

Background: Though the global burden of substance use is rising in developing countries like Nepal, the age of initiation is progressively falling. Use of substances by adolescents is harmful to the nation. Aim: This study aims is to determine the prevalence, biosocial determinants, attitudes and perception among adolescent students regarding substance use. Methods: A cross-sectional study was conducted among 392 higher secondary level (10+2) students in Bhaktapur, from August to November 2011. A structured questionnaire was used to collect data from a community school, a public school and a private school respectively. Epi Data version 3.1 and Microsoft Excel 2007 were used to enter data and SPSS 16.0 version was used in analysis, by both descriptive and inferential statistics. Results: Overall prevalence rate of substance use was 34.88%. About 22% had tried cigarettes and 7.9% had tried smokeless tobacco products. About 22.6% consumed alcohol and 14.1% had tried illicit drugs. The mean age of initiating tobacco was 12.96 (SD=3.142). Being male was strongly associated with substance use than female (OR = 7.314, 95% CI = 4.553 to 11.749). Students who had substance users among their family and friends were more likely to use them. Substance use was more in private schools and was statistically significantly (P value 0.028). Conclusion: The study reveals that three out of every ten adolescent is a substance user. The identification of the magnitude and influencing factors can improve scope for planning and preventive anti-substance use approaches for this vulnerable group.

1. Introduction

The use of licit (tobacco and alcohol) as well as illicit substances has become one of the major rising public health and socio-economic problem worldwide.[1] Globally, nearly six million persons die annually from tobacco-related illnesses, a figure expected to rise to more than 8 million by 2030.[2] Alcohol causes 2.5 million deaths yearly and a loss of 58.3 million of DALY.3 And at least 15.3 million persons have drug use disorders.4

There is a disproportionately higher mortality from substance abuse in developing countries like Nepal. Particularly alarming is the fact that the age of initiation of substance abuse is progressively falling to involve the adolescents.[3, 5] Adolescence is a time of physical, psychological and social transition, which can lead to various stressful life events.[6] Of this young segment of population, students are the most at risk of abusing substances. The increased opportunities, independence from family control, encouragement by peer groups, increasing academic pressures, ignorance about the negative health effects, the lure of popularity and easy availability of many substances like alcohol, tobacco and drugs make a teenager an easy prey.[7] The teenagers usually progress from experimental stage to regular usage and finally dependence, and it becomes difficult to return back.

Substance use during adolescence is associated with numerous undesirable short and long term consequences. Tobacco and alcohol consumption have been the main risk factors for chronic diseases such as cardiovascular disease, lung and other cancers, and it contributes to the severity of pneumonia, emphysema, and chronic bronchitis. Also, secondhand smoke may adversely affect the health of children and aggravate childhood

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illnesses.[8] Heavy consumption of illicit drugs like cannabis, heroin or cocaine is associated with euphoria, hyperactivity, anorexia, insomnia, lethargy and depression. In addition, it could lead to decreased academic performance, increased sexual risky behavior contributing to the spread of sexually transmitted diseases like AIDS and exposes students to legal repercussions, or jeopardizes their enrollment at the university.[9]

Though substance abuse has become common practices among high school and college/university students in Nepal, prevalence data for children and adolescent substance use are very few. The behavior of adolescents is a potential determining factor for characteristics and behavior of our adults in the future. Also in Nepal, adolescents comprise 22% of the population.[10] So, this group of population should be identified as a crucial group for preventing substance use. Therefore, it is important to understand the pattern of substance use among this population group.

Objective:

Keeping in view the above observations, the present study was designed with the objective to determine the prevalence of substance abuse among students, the frequency and pattern of use, and factors influencing use, their attitude and behavior, that may contribute to the preventive and control activities in the future as well as help in the implementation of an educational program in this group.

2. Material Methods

The study utilized an institution-based cross-sectional study design with quantitative data collection method. This study was carried out in August to November 2011 among students (male and female) studying in higher secondary level (10+2 level) in Bhaktapur district of Nepal. Three schools in Bhaktapur were selected purposive- two schools from Bhaktapur municipality and one from Thimi municipality. Out of the three schools selected first was a community school, second a public school and third a private school. The study population comprised 392 students.

A questionnaire was developed by reviewing relevant literature and previously used standardized instruments and protocols. It contained questions, most of which were closed-ended with pre-coded responses, divided into seven sections: (i) socio-demographic characteristics; (ii) factors influencing substances use; (iii) tobacco use; (iv) alcohol use; (v) use of drugs; (vi) attitudes; and (vii) perceptions.

The survey questionnaire was constructed and administered in English and Nepali.

The permission to conduct the study in these two schools was taken from the Heads of these schools well ahead of data collection after the Institutional ethics committee approved the study. The questionnaire was pre-tested amongst students of one class

selected randomly, and appropriate revisions were made before being used for actual data collection. Data were collected through self-administration of the questionnaires after gathering students in the classes and explaining the purpose of the study. Participation of the students in this study was voluntary and verbal informed consent was obtained from each participant before data collection. Students were informed that questionnaires were anonymous and confidential. Names of the students were not recorded anywhere on the questionnaire and measures were taken to ensure the respect, dignity and freedom of each student participating in the study. Appropriate measures were also taken to ensure confidentiality of information both during and after data collection. The students were given a choice to leave a question if they didn't feel comfortable to answer it. After the distribution of the questionnaire, the students were oriented on the questionnaire, the type of sections and the number of questions contained in it. Finally, instructions on how to properly fill the questionnaire, particularly how to follow skip patterns, were given to the students.

The questionnaires were then collected back after they were completed by the end of the session; and checked and edited for completeness. Different statistical tools like Epi-data (version 3.1) was used for defining the data. The collected data were thoroughly sorted and entered into Microsoft Excel 2007 spread sheets and analysis was carried out. The procedures involved were transcription, preliminary data inspection, content analysis, and interpretation. Statistical software SPSS version 16.0 for Windows was used to calculate proportions, and in the tests of significance Chi-square test was used in this study. The level of significance was set at P < 0.05 and confidence interval at 95%.

Working definitions:

Substance: The substances included in this study were cigarette, beedi, tobacco chewing, supari, pan, gutka, solvents, alcohol, cannabis, opium, heroin, cocaine, LSD, etc.

Substance user: In this study any subject who has tried (even once) cigarettes or alcohol or other substances mentioned rather than for its specified use were considered substance user.

3. Results:

The final sample included 392 high school students. But since the students had a choice to leave a question unanswered if they wished to, the response rate for different questions were different; so the proportion was calculated based on the response taking each as an independent event. Thus, the number may not match each other in some cases.

Figure 1 shows that most of the respondents were from the community school (62%) while lesser numbers were from the public school (17%) and private school(21%).

Figure 1: Respondents as per the type of school in the study
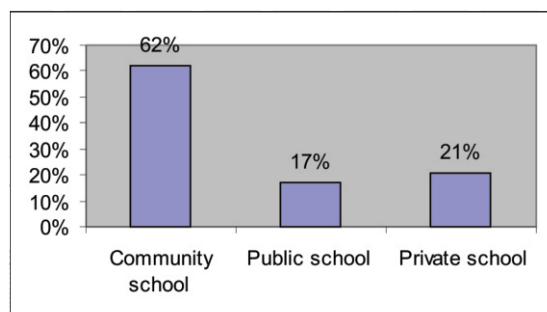
I. Socio-demographic characteristics of the sample by the type of school

Table 1 displays that in the study most of the respondents were between 15 to17 years of age (72.03%) with the mean age being 16.98 with standard deviation 0.984. The sample includes more women (55.90%) than men. A higher number of the respondents were Newar (55.24%), followed by Chhetri (16.62%), Brahmin (12.02%) and other caste group like Tamang, Magar, Gurung, Sherpa, Rai. Most of them were Hindus (84.06%) followed by Buddhists (12.60%).

Likewise most of the respondents belonged to the joint family (70.16%) and lived with parents (88.97%). The parental education of the respondents revealed that 28.39% of the mothers and 5.63% of the fathers were illiterate, with only 0.82% of the mothers and 2.2% of the fathers holding a Bachelor degree or above. Most of the mothers were housewives (61.18%) or farmers (20.82%), while most fathers were involved in business (37.40%) or farming (25.71%). Having explained the profile of the students the next aspect is devoted to substance use by the respondents.

Table 1: Socio-demographic characteristics of study sample

Characteristics	Type of school	Total		P value
	Public	Private	Community	
Age group				
15-17	31(53.45)	63(77.78)	179(74.58)	273(72.03) 0.002
18-20	27(46.55)	18(22.22)	61(25.42)	106(27.97)
Total	58(100)	81(100)	240(100)	379(100)
Sex				
Male	28(43.1)	56(69.1)	88(36.1)	172 0.000
Female	37(56.9)	25(30.9)	156(63.9)	218(55.90)
Total	65(100)	81(100)	244(100)	390
Caste				
Brahmin	7(10.6)	13(16)	27(11.1)	47(12.02%) 0.000
Chhetri	12(18.2)	13(16)	40(16.4)	65(16.62%)
Newar	20(30.3)	42(51.9)	154(63.1)	216(55.24%)
Magar/Tamang	17(25.75)	3(3.70)	14(5.74)	34
Others	10(13.6)	10(12.3)	9(3.7)	29
Total	66(100)	81(100)	244(100)	391

	Public	Private	Community	Total	P value
Religion					
Hindu	37(56.9)	63(77.8)	227(93.4)	327(84.06%)	-
Buddhist	23(35.4)	13(16)	13(5.3)	49(12.60%)	
Muslim	0	0	2(0.8)	2	
Christian	5(7.7)	5(6.2)	1(0.4)	11	
Total	65(100)	81(100)	243(100)	389	
Type of Family					
Nuclear	35(54.7)	59(74.7)	174(72.8)	268(29.84%)	0.012
Joint	29(45.3)	20(25.3)	65(27.2)	114(70.16%)	
Total	64(100)	79(100)	239(100)	382	
Mothers' education level					
Illiterate	16(50)	10(17.5)	43(27.9)	69(28.39%)	
Literate	3(9.4)	7(12.3)	19(12.3)	29	-
Primary	8(25)	10(17.5)	22(14.3)	40	
Secondary	5(15.6)	26(45.6)	49(31.8)	80	
Higher secondary	0	2(3.5)	15(9.7)	17	
Bachelor +	0	2(3.5)	6(3.90)	8	
Total	32(100)	57(100)	154(100)	243	

	Public	Private	Community	Total	P value
Fathers' education level					
Illiterate	4(11.8)	2(3.1)	9(5.2)	15(5.63%)	-
Literate	12(35.3)	5(7.7)	15(8.7)	32	
Primary	1(2.9)	4(6.2)	8(4.6)	13	
Secondary	15(44.1)	36(55.4)	90(52)	141	
Higher secondary	2(5.9)	10(15.4)	29(16.8)	41	
Bachelor+	0	8(12.31)	22(50.87)	24	
Total	34(100)	65(100)	173(100)	6	
Mothers' occupation					
Farmer	27(41.5)	14(17.3)	40(16.5)	81	-
Service	2(3.1)	3(3.7)	14(5.8)	19	
Business	6(9.2)	3(3.7)	18(7.4)	27	
Labor	1(1.5)	0	6(2.5)	7	
Housewife	29(44.6)	57(70.4)	152(62.6)	238	
Other	0	4(4.9)	13(5.3)	17	
Total	65(100)	81(100)	243(100)	389	
Fathers' occupation					
Farmer	32(49.2)	17(21.5)	50(20.7)	99	0.000
Service	5(7.7)	11(13.9)	60(24.9)	76	
Business	12(18.5)	30(38)	72(29.9)	114	
Labor	1(1.5)	2(2.5)	13(5.4)	16	
Other	15(23.1)	19(24.1)	46(19.1)	80	
Total	65(100)	79(100)	241(100)	385	

Who are 'you living with (N=390)	Public	Private	Community	Total	P value
Hostel	1(1.5)	1(1.2)	0	2(0.51%)	
With parents	45(68.2)	74(91.4)	228(93.8)	347(88.97%)	-
With relative	5(7.6)	4(4.9)	12(4.9)	21(5.38%)	
Alone	15(22.7)	2(2.5)	3(1.2)	20(5.13%)	
Total	66(100)	81(100)	243(100)	390	

a) # Chi-square value is not computed as the expected value 0 in some cells.

b) Value in the parenthesis indicates percentage.

Table 2: Substance use as per type of school

Substance Use	Type of school Public	Private	Community	Total	p-value
Yes	22(32.8)	38(47.5)	75(31.25)	135(34.88)	0.028
No	45(67.16)	42(52.5)	165(68.75)	252(65.12)	
Total	67	80	240	387	

Table 3: Association between substance use and characteristics of the respondents

	Substance Use Yes	No	Total	p-value	OR (C.I.= 95%)
Sex					
Male	99(73.88)	70(27.89)	169(43.90)	0.000	7.314
Female	35(26.12)	181(72.11)	216(56.10)		(4.553 to
Total	134	251	385		11.749)
Type of family					
Nuclear	97(74.05)	166(67.48)	263(69.76)	0.114	1.375
Joint	34(25.95)	80(32.52)	114(30.24)		(0.857 to
Total	131	246	377		2.207
Living with					
Hostel	1(0.75)	1(0.4)	2(0.52)	0.719	
With parents	122(91.04)	221(88.04)	343(89.10)		
With relatives	5(3.73)	15(5.98)	20(5.19)		-
Alone	6(4.48)	14(5.58)	20(5.19)		
Total	134	251	385		
Any substance user in the family					
Yes	56(47.06)	66(30.84)	122(36.64)	0.002	1.993
No	63(54.94)	148(69.16)	211(63.36)		(1.255 to
Total	119(100)	214(100)	333(100)		3.165)

Table 4: Ever tried cigarette smoking and any other form of smokeless tobacco products

Ever tried cigarette smoking	Type of School Public	Private	Community	Total	P-value
Yes	8(12.70)	25(32.46)	45(21.03)	78(22.03)	0.017
No	55(87.30)	52(67.54)	169(78.97)	276(77.97)	
Total	63	77	214	354	
Tried any form of smokeless tobacco products					
Yes	7(11.86)	9(11.39)	11(5.39)	27(7.90)	0.113
No	52(88.14)	70(88.61)	193(94.61)	315(92.10)	
Total	59	79	204	342	

Table 5: Frequency of alcohol intake and usage of any forms of drugs

How often do you drink alcohol	Type of school			Total	P-value
	Public	Private	Community		
Never	54(85.71)	47(63.52)	187(79.57)	288(77.42)	0.010
Less than or once a month	6(9.52)	24(32.43)	41(17.45)	71(19.09)	
More than once a month	3(4.76)	3(4.05)	7(2.98)	13(3.49)	
Total	63	74	235	372	

Table 6 Attitudes present among adolescent students regarding substance use.

1. If one of your best friends offered you a cigarette, would you smoke it?	Definitely not	Probably not	Probably yes	Definitely yes	Total
Substance user	78(59.09)	22(16.67)	19(14.39)	13(9.85)	132
Non substance user	223(89.92)	20(8.06)	5(2.12)	0	248

2. Do you think you will smoke a cigarette at any time during the next 12 months?	Definitely not	Probably not	Probably yes	Definitely yes	Total
Substance user	68(52.31)	36(27.69)	17(13.08)	9(6.92)	130
Non substance user	217(88.57)	21(8.57)	7(2.86)	0	245

3. Do you think it would be difficult to quit once someone has started smoking?

	Definitely not	Probably not	Probably yes	Definitely yes	Total
Substance user	28(21.21)	24(18.18)	35(26.52)	45(34.09)	130
Non substance user	54(22.59)	34(14.23)	100(41.84)	51(21.34)	245

4. Do any of your closest friends smoke cigarette?

	None of them	Some of them	Most of them	All of them	Total
Substance user	39(30)	53(40.77)	23(17.69)	15(11.54)	130
Non substance user	159(64.11)	76(30.64)	11(4.44)	2(0.81)	248

Table 7 The various perceptions among the adolescent students regarding substance use.

1. Adolescents who use substances have more friends.

	Strongly agree	Agree	Can't say	Disagree	Strongly disagree	Total
Substance user	34(27.2)	45(36)	36(28.8)	6(4.8)	4(3.2)	125
Non substance user	31(14.49)	55(25.70)	77(35.98)	25(11.68)	26(12.15)	214

2. Adolescents who use substance are more attractive

	Strongly agree	Agree	Can't say	Disagree	Strongly disagree	Total
Substance user	11(8.94)	20(16.26)	48(39.02)	32(26.02)	12(9.76)	123
Non substance user	10(4.69)	26(12.21)	65(30.52)	59(27.70)	53(24.88)	213

3. Smoking cigarette makes you lose weight

	Strongly agree	Agree	Can't say	Disagree	Strongly disagree	Total
Substance user	29(23.39)	54(43.55)	30(24.19)	7(5.64)	4(3.23)	124
Non substance user	50(23.47)	99(46.48)	40(18.78)	12(5.63)	12(5.63)	213

4. It is very difficult to resist peer pressure for substance use

	Strongly agree	Agree	Can't say	Disagree	Strongly disagree	Total
Substance user	14(12.07)	38(32.76)	48(41.38)	9(7.76)	7(6.03)	116
Non substance user	17(8.58)	62(31.31)	68(34.34)	25(12.63)	26(13.13)	198

5. The smoke from cigarette used by other people harms you

	Strongly agree	Agree	Can't say	Disagree	Strongly disagree	Total
Substance user	56(43.08)	52(40)	13(10)	3(2.31)	6(4.61)	130
Non substance user	146(60.58)	85(35.27)	5(2.07)	2(0.83)	3(1.24)	241

6. Smoking should be banned in public places

	Strongly agree	Agree	Can't say	Disagree	Strongly disagree	Total
Substance user	61(46.92)	42(32.31)	10(7.69)	12(9.24)	5(3.84)	130
Non substance user	176(72.42)	51(20.99)	8(3.29)	4(1.65)	4(1.65)	243

7. Adolescents who use substances should be counseled to stop using it

	Strongly agree	Agree	Can't say	Disagree	Strongly disagree	Total
Substance user	69(54.76)	36(28.57)	17(13.49)	1(0.79)	3(2.38)	126
Non substance user	159(69.74)	51(22.37)	13(5.70)	3(1.31)	2(0.88)	228

8. Cigarette should not be sold to minors (<16 years)

	Strongly agree	Agree	Can't say	Disagree	Strongly disagree	Total
Substance user	76(58.46)	35(26.92)	8(6.15)	5(3.85)	6(4.62)	130
Non substance user	175((75.11)	50(21.46)	6(2.57)	0	2(0.06)	233

9. Recently Government of Nepal have formulated the law regarding smoking like banning smoking in the public places do you agree with the law?

	Strongly agree	Agree	Can't say	Disagree	Strongly disagree	Total
Substance user	63(58.88)	29(27.10)	5(4.67)	7(6.54)	3(2.80)	107
Non substance user	144(68.90)	44(21.05)	12(9.91)	6(2.88)	3(1.44)	209

10. Do you know about health tax on cigarette?

	Yes	No	Total
Substance user	45(35.43)	82(64.56)	127
Non substance user	53(23.04)	177(76.96)	230

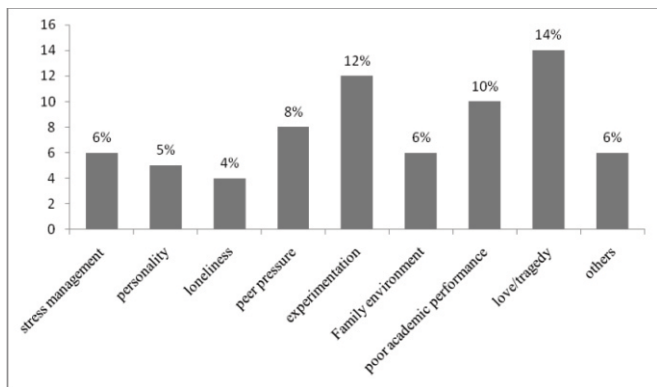**Figure 2: Influencing factors for substance use**

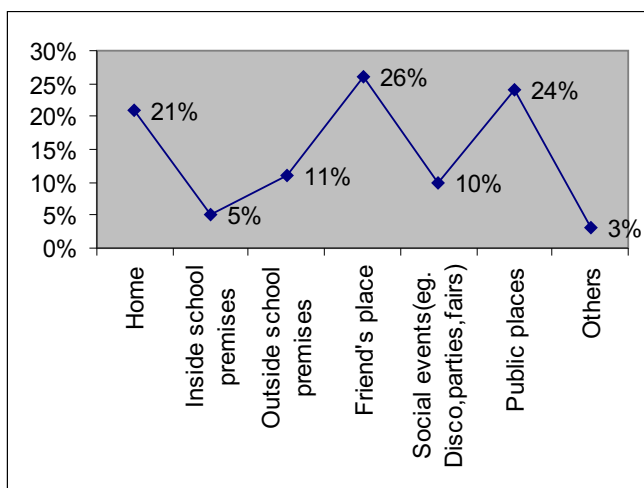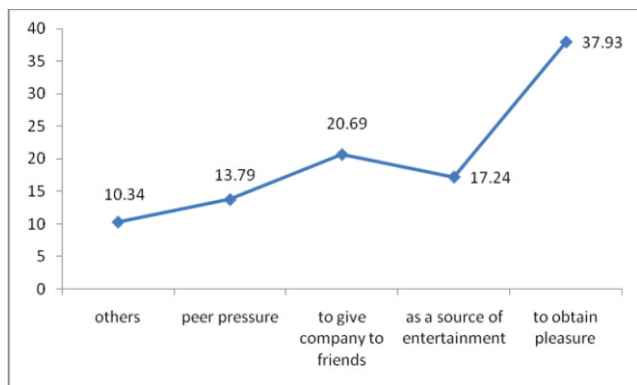**Figure 3: Places where adolescent students often smoke.**

Figure 4: Reasons for taking cannabis by adolescent students

II. Substance Use

Table 2 shows that in the study, 34.88% had used a substance at least once. Since the P-value is 0.028 which is less than the alpha it indicates that there is association between the substance use and type of school that the respondents go to.

Table 3 displays the association between substance use and characteristics of the respondents. There were significant differences between males and females with respect to substance use behavior (p<0.05). Also men are seven times more likely to use substance than women.

However, substance use is not associated with the type of family in which the respondent lives or whom the respondent is living with (p>0.05). There is association between the substance use and the presence of a substance user in the family (P<0.05). Also students who have family history of substance use were two times more likely to use substance than other respondents.

Figure 2 shows that among the total substance user (134), 14% of respondents were influenced by love/tragedy for its use, followed by experimentation and poor academic performance (12% and 10% respectively) while only 4% were influenced by the loneliness and personality development factors. The respondents also indicated the festivals and get together are some other reasons for their substance use.

III. Tobacco Use

Table 4 displays a significant difference between the type of school and the behavior of trying a cigarette (P-value 0.017) as 32.46% of the private school attendants had ever tried a cigarette while only 12.7% of the public school attendants had tried it. Also higher number of respondents of public school (11.86%) as compared to community school (only 5.39%) had tried any form of smokeless tobacco product. The mean age of the respondents when they first tried cigarette was found to be 12.96 years with 3.142 of standard deviation.

Among the 63 respondents who smoked, highest numbers of the respondents (26%) smoked at friends place while 24% of the respondents smoked in public places and 21% even smoked at home. (Figure 3)

IV. Alcohol Use and Use of Drugs

It is shown in table 5 that most of the respondents did not drink alcoholic beverages (77.42%), 19.09 took it once in a month or less, while only 3.49% took it more than once a month. Likewise among 368 respondents, 85.87% had never taken any form of drug, while 4.62% and 3.26% had taken it once or more respectively. Few respondents (6.25%) did not know the meaning of the cannabis, hashish or any other form of drugs.

Among the 29 respondents who had taken drugs, most of the respondents used it to obtain pleasure (37.93%) or to give company to friends (20.69%) or as a source of entertainment (17.24%) (Figure 4).

Among the total respondents, 55 had suffered from the problems due to substance use out of which 78.18% encountered health related problems (breathing difficulties, cough, nausea, headache, vomiting, stomach pain and heart problems), 61.82% had non-health problems (fight with friends, police arrest, affect on education, bad relationship with the family members and relatives and bad smell of mouth and clothes), while 40% of the 55 respondents had encountered both health related and non-health related problems.

V. Attitudes

Table 6 displays the attitudes of the respondents towards substance use. Most of the respondents(79.21%), had opted that they would definitely not smoke a cigarette if one of their best friends offered them. Most of respondents(91.2%) would not be smoking cigarette at any time during the next 12 months. However, 6.92% of the substance user said that they would definitely smoke a cigarette in the next 12 months.

Most non substance users(21.34%) thought probably it would be difficult to quit once someone has started smoking while most of the substance users(34.09%) were definite that it will be difficult. This shows that students realize the possibility of getting addicted to substances. Yet they smoke, may be because of their friends, as the study shows that most of the substance users had some friends who smoked a cigarette(40.77%).

VI. Perception

Table 7 shows that may be students look at smoking or taking alcohol as a means to make more friends and become popular, since most substance users (36%) and 25.7 % of the non substance users feel that adolescents who use substance have more friends. One-fifth of the total respondents(19.94%) agree that adolescents who use substances are more attractive.

Smoking was also looked upon as a means of losing weight by almost half(45.40%) the respondents. Many of the respondents feel that it is difficult to resist peer pressure for substance use (31.85%) while 9.87% strongly agree that is difficult to resist peer pressure.

Almost half of respondents(54.45%) knew that the smoke from someone else's cigarette harms them while rest of them were ignorant about it. Most of respondents (63.5%) have the strong perception that smoking should be banned in public places while very few (2.4%) strongly disagree on it. More than half of the respondents (64.22%) strongly agree that counseling can help adolescents who smoke, drink or use other substance to stop using it while negligible amount(1.4%) strongly disagree with the counseling of the adolescents.

Most respondents(92.56%), both the substance users and non users have same strong perception, that cigarette should not be sold to minors. The Government of Nepal has recently formulated a law regarding smoking, like banning smoking in the public places. More than half of the respondents (65.5%) strongly agree with the law formulated while very negligible amount(1.9%) strongly disagree with it. Many respondents (72.55%) do not have idea about the health tax on cigarettes.

Discussion

The Government of Nepal has included control of "substance abuse including alcohol and tobacco" as one of the main interventions in Essential Health Care Service (EHCS).11 This study would help the government of developing countries in focusing on areas requiring attention.

To our knowledge this is the first study among adolescents studying in different types of school (public, private and community). This study clearly indicates that substance use is becoming a concern among adolescent students. According to the study, in Bhaktapur district the total prevalence rate of substance Z

use was 34.88%, with a prevalence rate of 73.88% amongst male and only 26.12% among female. Our reported rate of prevalence was lower than that reported by Budhathoki N. et al among the medical students in Kathmandu, where the total prevalence rate was 49.6%, among which the male prevalence rate was 61.4% and female was 29.03%.11 This difference between the prevalence rates might be due to the easy availability and also due to the environment of the two districts, Kathmandu being the open place for the various type of people from the whole nation and Bhaktapur being the self centered district.

The study also revealed that 22.03% of the respondents had smoked a cigarette in the respondents' life. Cigarette smokers were found to be 33% in the study carried out by Aryal UR among the public health students.12 The prevalence rate of smoking was 47.1% in the study conducted by Paudel D among school going students in Pokhara valley.13 This contrast might be due to the reason that most of the students in Kathmandu or Pokhara are from outside the valley and they are independent of the restrictions, whereas in Bhaktapur where most respondents live with their parents they are bound in the norms, rules and regulation.

According to the study, the prevalence of alcohol was found to be 22.58% which is very less in comparison to a National Institute on Drug Abuse report which indicates that about three quarters of students (72%) have consumed alcohol before twelfth grade, and approximately half of youth in the United States have tried cigarettes (46%) and used an illicit drug (47 %) before the end of high school.14 Again this might be due to the difference between the eastern and western lives. In western parts of the globe children have the freedom to follow their will, while in Nepal the students have to follow the regulations set by family and society. With regards to the drug user prevalence, the study found it to be 7.88% which is less than the result of Malval which was 9.5%.15

According to the study carried out by Mr. Paudel in Pokhara, the average age of initiating tobacco use was 12.64 years,14 which was similar to the finding of the present study where the mean age of the respondents when they first tried a cigarette was 12.96 (SD=3.142). Students from private schools were more likely to use substances (47.5%) as compared to public (32.8%) or community schools (31.25%). Generally, students at private schools are more affluent than those at public or community schools, so have more money to purchase tobacco, alcohol and illicit drugs.

Results from this study provide important insights into the magnitude of substance use and its associated risk factors. The main influencing factor of the substance use among the respondents of the study was love/tragedy, experimentation, peer pressure, poor academic performances and to obtain pleasure. We found that those students who had users of alcohol, tobacco or drugs user among their family and friends were more likely to user either one or all of them than those students whose family members and friends were non-users. Also substance use was found to be higher among respondents living in a nuclear family (74.05%) than those living in the joint family (25.95%), which might be due to the lack of attention and care towards the adolescents in a nuclear family as the parents might be busy with their respective jobs.

In this study 60.61% of substance users and 63.18% of non users realized the addictive nature of tobacco. But the rest were unaware about substances addiction. It was seen that 16.92%

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substance users were unaware about passive smoking. Also almost three fourth respondents(72.55%) did not know about health tax on cigarettes. This reflects the need to spread awareness regarding substance use, addiction and passive smoking.

Perception towards tobacco control was generally positive with regards to legislative actions for control as 88.47% of the respondents were in favor of banning of smoking in public places and 92.56% were against the selling of cigarettes to minors (below 16 years). The study revealed that most of the substance users (83.33%) were in favor of counseling to stop usage. This displays the possibility of success that counseling and guidance programs could have.

This study is not free of limitations. First, the study used a descriptive single cross-sectional design that can not establish trends and causality between substance use and potential risk factors. Second, the lifetime report of substance use in the current study is not the most sensitive indicator. Third, the data was collected based on self-report of the students and may be subjected to recall bias and under-reporting of substance use due to social desirability bias. Finally, our sample may not be representative of the population since only three higher secondary schools were purposefully included in the study. The study does not cover all the higher secondary level schools of Bhaktapur, so it may not be possible to generalize the results. Despite the limitations, these findings indicate a need to educate adolescent students regarding substance use and its consequences.

Conclusion

This study has revealed that the magnitude of substance use among higher secondary school students was considerable. This study showed that three out of every ten respondent had abused a substance - one in every five respondent had smoked a cigarette, one in every five had taken an alcoholic beverage, and one in every ten had used any smokeless tobacco product or taken any form of drug.

This study also indicated that substance use is significantly associated with the type of school, the amount of care provided at homes and friends or parental use of substances.

Since adolescents are responsible for the future of the nation. It is of paramount importance that an environment be created and adequate support provided to enable adolescents to develop to their full potential and enjoy a healthy and responsible adulthood. Understanding factors influencing the use of substances is the first step for designing and implementing comprehensive anti-substance use interventions that simultaneously prevent multiple risk factors among adolescent students. There could be awareness programs in school, peer group oriented interactive learning or counseling programs to substance users. Awareness program should involve parents too since they can influence the young minds of children and adolescents. The adolescent students should realize their obligation to work towards the welfare and progress of the nation and join in the protecting the country against substance use. If these few thoughts are put into action the prevalence of substance use can definitely be reduced significantly, and adolescents can sustain right choices for healthy life and a better nation.

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