



Influence of Parental Alcohol Consumption among Schooling Adolescent Students

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Abstract

Alcohol consumption among school students is a growing concern worldwide. Parental influence plays a crucial role in shaping the alcohol consumption behavior of adolescent students. This study aimed to explore the influence of parental alcohol consumption, monitoring, and communication among adolescents' alcohol consumption. This study followed a descriptive research design and employed a cross-sectional survey to collect quantitative data. The study population for this research included school students studying at the secondary level in the public secondary schools of Banke District. The researcher selected 422 students by using multistage sampling. The self-administered questionnaire was used as the tool for quantitative data collection. The collected quantitative data were entered into the computer and analyzed subsequently using SPSS version 27. Descriptive statistics were used to analyze data, e.g., frequency and percentage analysis, and important study findings were presented. Binary logistic regression was used to analyze the effects of parents' monitoring, parent-student communication, parents' alcohol consumption, and alcohol consumption among school students. The results of the study showed that parental alcohol consumption (both mother and father) is significantly associated with lower adolescent alcohol consumption. Likewise, parental monitoring decreases adolescent alcohol consumption. Furthermore, parental communication with their children about alcohol is not significantly related to adolescent alcohol consumption. The findings suggest the necessity of anti-alcohol educational interventions for controlling alcohol consumption among school students as well as minimizing parental influence on adolescent alcohol consumption.

Keywords: Communication, parents drinking, monitoring, quantitative, school



Introduction

Adolescence is a transitional period from childhood to adulthood characterized by teleological, psychosexual, social, and intellectual changes. These changes lead to identity searches, rebellion, sexual emergence, and a desire for love, understanding, independence, and health-risk behavior, including alcohol consumption (Bansal, 2022). Alcohol consumption among school-going adolescent students is a growing concern worldwide, with potential short-term and long-term effects on their physical, mental, and social well-being (Luecha et al., 2019; Oppong Asante & Kugbey, 2019). It is a leading cause of morbidity and mortality worldwide. Adolescent alcohol exposure can hinder brain development and cognitive abilities, leading to negative adult outcomes like alcohol dependence, academic struggles, and risky behaviors (Lees et al., 2021; Tapert & Eberson-Shumate, 2022). Parents play crucial roles as educators, role models, and influencers in their children's lives (Kearney & Levine, 2020). Parental influence plays a vital role in shaping the alcohol and consumption behavior of adolescent students (Calonia, 2023). The alcohol consumption patterns of parents influence the likelihood of adolescents engaging in alcohol use (Berglund et al., 2022). Parents' attitudes, beliefs, and behaviors related to alcohol use can significantly impact how their children perceive and engage with alcohol (Ennett et al., 2013). Binge drinking among adolescents is associated with their parents' parenting styles as well as parental alcohol-drinking behavior (Zuquette et al., 2019).

On the other hand, adolescents whose parents demonstrate a more restrictive and authoritative parenting style provide clear rules and expectations regarding alcohol use and actively discourage underage drinking. They are less likely to consume alcohol and engage in risky behaviors (Hurley et al., 2019; Sarwar, 2016). Likewise, parental (Frojd et al., 2007) alcohol consumption among adolescents (Bray et al., 2022; Carroll et al., 2016; Latendresse et al., 2017). Furthermore, Goswami and Thompson (2020) found that adolescents whose parents monitored their daily activities had lower alcohol consumption. In addition, Mehanovic et al. (2020) found that there was a strong relationship between parental alcohol use, low parental monitoring, and alcohol use among adolescents. The previous study results show that the relationship between non-drinking parents and youth remains a protective factor for young people. Relationships between parents and youth who drink alcohol increase the likelihood of youth alcohol use (Yang et al., 2023). Likewise, students' perceptions of their parents' support for their drinking were not related to parent-student communication about alcohol use (Messler & Emery, 2016). Furthermore, an important tactic for assisting young people in creating and maintaining a positive relationship with alcohol is excellent parental communication (Sawyer et al., 2021).

This article aims to explore the relationship between parental drinking behavior and alcohol consumption among school students. Likewise, it also analyzes the association between parents' monitoring and parent adolescents' communication regarding the alcohol use among school students. The various dimension of parental influence and its potential impacts on alcohol consumption among school-going adolescent students aimed to provide valuable insights for policymakers, educators, parents, and researchers in developing effective strategies to address this pressing issue. In these contexts, the present study aimed to address the following research questions:

1. What is the relationship between parental alcohol consumption and adolescent student drinking behavior?
2. What is the relationship between parental monitoring and alcohol consumption among school-going adolescent students?
3. What is the association between parent–adolescent communication about the effects of alcohol use and adolescent students' alcohol consumption?

Methods and Procedures

This study uses quantitative data. The study employed a cross-sectional research design. The study population included secondary school students (class 9 to 12) in the public secondary schools of Banke Districts. The researcher was determined the sample size by using Cohran's sample size calculating formula, which is used for calculating sample size in a cross-sectional study (Singh & Masuku, 2014).

$$n_0 = \frac{Z_{1-\alpha/2}^2 P(1-P)}{d^2}$$

$$= \frac{1.96^2 \times 0.5 \times (1-0.5)}{0.05^2}$$

$$= 384.16 \cong 384$$

Where, α = Significance Level = 5% = 0.05

$Z_{1-\alpha/2}^2$ = Critical Value of Z at level of significance = 1.96

P = estimated proportion = 50% = 0.50

d = desired error = 5% = 0.05

No previous studies have examined parental influence on alcohol consumption among adolescent students. It is common practice to use a 50% estimate proportion (p) (Singh & Masuku, 2014; Verma & Verma, 2020). So, the researcher used 50 = 0.50 as the estimated proportion.

Here, the population size is huge, and the ratio of $\frac{n}{N}$ is minimal, so n_0 is the final sample size. However, if there is a 10% non-response rate then we have to collect 10% more

samples from the (Suresh & Chandrashekara, 2012). The minimum sample size was:

$$\begin{aligned}n &= 384 + 10\% \text{ of } 384 \\&= 384 + 38.4 \\&= 422.43 \approx 422\end{aligned}$$

At first the researcher was randomly chosen one province from the seven province of Nepal. Then one district was randomly selected from the twelve districts in the Lumbini province. After that, four secondary schools were conveniently chosen from the lists of Banke Districts. Among those selected four secondary schools 106 students were chosen from per school. Classes were chosen randomly using a lottery method. Student roll numbers were drawn from a box to finalize the student selection.

The self-administered questionnaire was used as the tool for quantitative data collection. This questionnaire was pre-tested among a 10 percent representative sample population. After collecting pre-test data, the researcher entered the responses into a spreadsheet and cleaned the data. The researcher examined the data thoroughly and employed a technique known as principal components analysis to identify the key components or patterns by clustering related variables. The researcher calculated Cronbach's alpha to measure the internal consistency of the questionnaire. Before conducting this study, the researcher contacted with the head teachers and requested permission to visit the classroom and conducted the study. Then, the investigator explained the research objectives and provided instructions for completing the questionnaires. The researcher also obtained verbal and written consent from the students before distributing the questionnaires. After that, it was distributed. The researcher requested the students to fill out the questionnaire. The researcher then collected the completed questionnaires filled by the students.

The collected quantitative data were entered into the computer and analyzed subsequently using SPSS version 27. The descriptive statistics was used to analyze data, e.g., frequency and percentage analysis, and then essential findings of the study were presented. Bivariate analysis, including the chi-square test, assessed the relationship between the dependent and independent variables. Additionally, binary logistic regression analysis indicating the adjusted odds ratio was performed to examine the effects of parents monitoring, parent-adolescent students' communication about alcohol consumption, parents' drinking behavior (father and mother drinking behavior), and alcohol consumption among school students.

The researcher followed the ethical guidelines by obtaining verbal and written consent from the participating students. Students were assured that their information would be protected, that their beliefs would be respected, that the data would be used only for research purposes, and that their identities would be kept confidential.

Results

Socio-Demographic Characteristics

A total of 422 adolescent students were included in the study. Among them, 52.10 percent of the respondents were female, and 47.40 percent of them were male. More than two-thirds (69.7%) of the respondents were in the 15-19 age group. The mean age for the eligible participants was 15.59 ± 1.57 years. In terms of religion, 167 (39.60%) were Hindu, 96 (22.70%) were Buddhist, 83 (19.70%) were Muslim, and 76 (18%) were Christian. The demographic analysis of participants reveals a range of representation: the highest representation is found among the Terai caste at 33.9 percent. In comparison, the lowest representation is observed in Thukari at 6.6 percent. Regarding parental education, the highest level completed by fathers is secondary education at 37.2 percent, and the lowest is master's level at 15.2 percent. For mothers, the highest level is basic education at 41.7 percent, and the lowest is master's degree at 3.8 percent. The highest engagement for fathers is in business at 37.9 percent, while the lowest is in daily wage work at 15.2 percent. Mothers are primarily engaged in agriculture at 43.4 percent, with the lowest participation in government jobs at 5.7 percent (Table 1).

Table 1

Socio-Demographic Characteristics of Adolescent Students

Demographics		Number	Percentage
Age of the respondents	10-14	128	30.3
	15-19	294	69.7
Mean age		15.59 ± 1.57	
Sex of the respondents	Female	222	52.1
	Male	200	47.4
Religion of the Respondents	Hindu	167	39.6
	Buddhist	96	22.7
	Muslim	83	19.7
	Christian	76	18.0
	Brahmin	52	12.3
	Chhetri	47	11.1
Caste of the Respondents	Janajati	112	26.5
	Thukari	28	6.6
	Dalit	40	9.5
	Terai Caste	143	33.9

Respondents' Father education	Basic Level	116	27.5
	Secondary Level	157	37.2
	Bachelor Level	85	20.1
	Masters and above	64	15.2
Respondents Mother Education	Basic Level	176	41.7
	Secondary Level	150	35.5
	Bachelor Level	80	19.0
	Masters and above	16	3.8
Respondents Fathers' Occupation	Agriculture	76	18.0
	Business	160	37.9
	Government Job	122	28.9
	Daily Wages	64	15.2
Respondents Mothers' Occupation	Agriculture	183	43.4
	Business	116	27.5
	Government Job	24	5.7
	Daily Wages	99	23.5

Alcohol Consumption Pattern

This study examines the adolescent students' responses regarding alcohol consumption in the past 3 months. In the last 3 months, a large majority of the adolescents (78.43%) reported that they had not consumed alcohol. Likewise, a small minority of the adolescents (21.57%) reported that they consumed alcohol in the past three months. The average age for initiating alcohol consumption among adolescents was about 13.03 ± 0.941 years, indicating that adolescents experienced an early onset of alcohol consumption (Table 2).

Table 2

Alcohol Consumption Patterns among Adolescent Students

Characteristics	Responses	Number	Percentage
alcohol consumption past 3 months	No	331	78.43
	Yes	91	21.57
Mean age of starting alcohol consumption 13.03 ± 0.941			

Parental Influence on Alcohol Consumption among Adolescent Students

The researcher employed the chi-square test to analyze the associations between parental factors, including fathers' drinking behavior, mothers' drinking behavior, and communication with adolescents about alcohol effects, and parental monitoring and

alcohol consumption among adolescent students. Results indicated a strong relationship between these parental factors and teenage alcohol consumption ($P < 0.001$ for all factors aspect). The study revealed that adolescents with drinking fathers had a higher drinking rate (19.67%) compared to those with non-drinking fathers (1.9%). Similarly, those with drinking mothers drank more (19.19%) than those with abstaining mothers (2.37%). Discussing alcohol with parents was linked to lower rates (7.11% vs. 14.45%). Increased parental monitoring also reduced alcohol use (9.72% vs. 11.85%) (Table 3).

Table 3

Associations between Parental Drinking Behavior, Communication, and Monitoring the Drinking Behavior of Adolescents

Variables	Responses	Alcohol consumption past 3 months		Chi-square	P-value
		No	Yes		
Fathers drinking Behavior	No	265(62.8%)	8(1.9%)	158.72	0.001*
	Yes	66(15.64%)	83(19.67%)		
Mothers drinking Behaviors	No	291(68.96%)	10(2.37%)	206.52	0.001*
	Yes	40(9.48%)	81(19.19%)		
Parent-Adolescent communication about alcohol	No	77(18.25%)	61(14.45%)	63.13	0.001*
	Yes	254(60.19%)	30(7.11%)		
Parents Monitoring	No	94(22.27%)	50(11.85%)	22.37	0.001*
	Yes	237(56.16%)	41(9.72%)		

*Significant at $p < 0.05$.

The findings from the binary logistic regression analyses explored the relationships between adolescent students' alcohol consumption within the past three months and parental factors. The binary logistic regression revealed that father drinking behavior (AOR = 0.036, $P = 0.001$) and mother drinking behavior ($P = 0.001$) were found to be significant risk factors for alcohol use within the past three months by adolescents. This suggests that adolescents whose parents consume alcohol are significantly less likely to abstain from drinking, with adjusted odds ratios of 0.036 and 0.031, respectively, indicating a strong protective effect against adolescent drinking when parents do not consume alcohol. In contrast, parent monitoring turned out to be a significant (AOR = 4.594, $P = 0.001$) protective factor for alcohol consumption within the past three months among adolescents. This indicated that those parents who constantly monitor their children's daily activities were less likely to consume alcohol among those children than those parents who do not monitor their daily activities. Furthermore, no significant association (AOR = 1.712, $P = 0.204$) was found between parent-adolescent communication about the effects of alcohol consumption and alcohol

use within the past three months among adolescents. This means that communication about the impact of alcohol consumption between parents and adolescents does not have an apparent effect on adolescent drinking behavior in this sample (Table 4).

Table 4

Likelihood of Alcohol Consumption among Adolescent Students

Variables	Category	AOR	95% CI	P- Value
Father drinking behavior	No (Ref.)			
	Yes	0.036	0.014-0.095	0.001*
Mother drinking behavior	No (Ref.)			
	Yes	0..31	0.012-0.079	0.001*
Parent-Adolescent communication about alcohol	No (Ref.)			
	Yes	1.712	0.747-3.921	0.204
Parents Monitoring	No (Ref.)			
	Yes	4.594	1.927-10.95	0.001*
Constant		2.138		0.060

*Significant at $p < 0.05$.

Discussion

This study aims to examine the relationship between parents' drinking behavior, parental monitoring, and communication about alcohol effects on adolescents' alcohol consumption within the past three months. Findings from the present study revealed that 21.57 percent of the adolescents consumed alcohol in the previous 3 months. The average age of first alcohol consumption was around 13.03 ± 0.941 years, highlighting early drinking behavior among participants. These results are also strongly supported by the previous study conducted in Ghana by Oppong Asante and Kugbey (2019) who found that the prevalence of alcohol use among adolescents was reported to be 11.1 percent for lifetime instances of intoxication and 12.6 percent for current alcohol use. Likewise, these results are consistent with the previous study results by Luecha et al. (2019) not showing that 31.01 percent of the early adolescents had some experience with alcohol consumption. However, among these, only 10.94 percent of the early adolescents were currently indulging in drinking. Another similar study conducted in Dharan, Eastern Nepal, Chapagain et al. (2020) revealed that the proportion of adolescents who have consumed alcohol at some point in their lives was 37.58 percent. In comparison, 15.20 percent of those were identified as current users. In addition, a similar previous study conducted in Nawalpur District, Nepal, found that 16.3 percent

of the adolescent consumed alcohol (Sapkota & Paneru, 2021). The findings of the current study are consistent with those from previous studies conducted in Ghana and Nepal. The similarities in study population, research tools, data collection methods, and analytical techniques contribute to the alignment of results across these different contexts.

The present study found that fathers drinking behavior ($\chi^2=158.72$, $P= 0.001$) and mothers' drinking behavior ($\chi^2=206.52$, $P= 0.001$) are significantly associated with adolescent students' alcohol consumption within the past three months. Likewise, findings from the binary logistic regression also reveal that the father's drinking behavior (AOR = 0.036, $P = 0.001$) and the mother's drinking behavior ($P=0.001$) significantly influenced adolescent alcohol use over the past three months. Adolescents whose parents consumed alcohol are much less likely to abstain alcohol consumption, reflecting strong odds ratios of 0.036 and 0.031. These results are consistent with the results of the previous study, by Murphy et al. (2016) indicating a correlation between a father's engagement in risky drinking habits and a higher likelihood of hazardous alcohol consumption among adolescents. Likewise, the previous study conducted by Mahedy et al. (2018) showed a significant relationship between maternal alcohol use and increased alcohol intake in young adults, predicting both moderate and high-risk drinking. Similarly, another previous study conducted by Mehanovic et al. (2020) showed that parental alcohol consumption had a more substantial impact on the alcohol use of adolescents in schools located in middle and low socioeconomic status (SES) areas. In the same way, another previous study revealed that parental alcohol consumption impacts adolescent alcohol use. Higher parental drinking increases the likelihood of alcohol use among adolescents, with maternal intake strongly linked to inebriation rates (Berglund et al., 2022). Likewise, a similar study conducted Bohm and Esser (2023) confirmed that approximately 6.6 percent of adolescents consumed alcohol, with a higher likelihood of alcohol use among those whose parents frequently drank or engaged in binge drinking. Furthermore, another similar study, by Ksinan et al. (2023), revealed that there was a statistically significant association between parental drinking and adolescent alcohol consumption.

The results from the chi-square test in this study indicated a statistically significant ($\chi^2=63.13$, $P= 0.001$) relationship between parent-adolescent communication about the effects of alcohol consumption and alcohol consumption among adolescents within the past three months. However, multivariate analysis shows no significant association (AOR = 1.712, $P= 0.204$), indicating that such communication does not significantly impact adolescent drinking in this sample. The result is inconsistent with the previous study results, which Reimuller et al. (2011) found that parental communication about alcohol consumption may influence

adolescent drinking behavior independently of the broader parenting approach and the drinking habits of the parents. Messler and Emery (2016) have shown that the extent of communication between parents and students about alcohol consumption does not correlate with the perception of parental approval towards drinking. In the same way, a similar study found that a higher frequency of discussions specifically about alcohol was linked to more positive perceptions of alcohol consumption among adolescents. This association was especially pronounced among those adolescents who had previously consumed alcohol (Brittner et al., 2017). Likewise, another study by Jones et al. (2020) demonstrated that there are primarily negative correlations between young individuals' risk behaviors and various discussions between parents and children. Furthermore, the prior research conducted Saukuma and Rungule (2023) indicates that communication between parents and adolescents regarding alcohol use does not have a statistically significant impact on the likelihood of alcohol use among adolescents. The present study results shows that parental alcohol consumption greatly influences adolescent alcohol consumption, aligning with past studies. However, communication between parents and children about alcohol lack significant impact, suggesting home environment behaviors are more crucial in reducing underage drinking.

The present study presents that parent monitoring their children's daily activity is significantly associated ($\chi^2=22.37$, $P= 0.001$) with adolescent students' alcohol consumption within the past three months. Likewise, multivariate analysis also confirms this association. Parent monitoring emerged as a significant protective factor (AOR = 4.594, $P =0.001$); adolescents with monitored activities were less likely to consume alcohol. These results are also strongly supported by Carroll et al. (2016) those who found that parental monitoring significantly reduces alcohol consumption among adolescents. In the same way, a similar previous study revealed that parental monitoring significantly influenced adolescents' perception regarding alcohol use. Higher parental monitoring correlated with increased perceptions of binge drinking as dangerous and reduced perceptions of drinking as incredible (Brittner et al., 2017). Similarly, these findings are by previous research showing that lack of parental monitoring was significantly associated with a higher likelihood of alcohol consumption (Mehanovic et al., 2020). Likewise, these results are consistent with the results of the previous study conducted, which Bray et al. (2022) revealed that adolescents with little maternal monitoring were more likely to consume alcohol moderately. Furthermore, a similar study in the United States found that most students (86.4%) reported their parents knew their whereabouts most of the time. High parental monitoring protects against risk behaviors, considering factors like sex, race, and grade (Dittus et al., 2023). The different contextual studies show the same results. The reason may be the similarity in the study population, universal psychological, biological, and

social factors, and similarity in research methodology. The above discussion points out that adolescent students' drinking behavior is shaped by parental drinking behavior, parental monitoring, and parental communication about alcohol consumption.

Conclusion

Alcohol consumption among adolescent students serves as a public health concern. This study's main aim was to examine parental factors' influence on alcohol consumption among adolescent students. The study indicates that alcohol consumption is a significant problem among school-going adolescents. The study found a significant relationship between parental (Father and mother) drinking behavior and alcohol consumption among school adolescents. Even though parent-adolescent communication regarding the effects of alcohol use had limited influence. Parental monitoring was linked to lower consumption and served as a protective factor. This study was constrained by its cross-sectional research design, which involved a restricted sample size and a small geographical area, focusing exclusively on adolescent students as respondents. This limitation affects the capacity to demonstrate the impact of parental influence on alcohol consumption among adolescents. Consequently, it is essential to conduct experimental research to establish a cause-and-effect relationship. This study highlights the effects of parental behaviors on adolescents' drinking habits, stressing the need for prevention through parental engagement and education. Further exploration of the link is suggested.

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