






Research Article

Determinant Factors of Alcohol Consumption Among Indonesian Adolescents Through Parents' Attention: Findings from a National SurveyYoyok Bekti Prasetyo¹, Sri Sunaringsih Ika Wardojo¹, Agung Dwi Laksono², Yulis Setiya Dewi³, Titih Huriah⁴¹Departement of Community Nursing, University Muhammadiyah of Malang, Faculty of Health Sciences, East Java, Indonesia²National Institute of Health Research and Development, Indonesia Ministry of Health, Jakarta, Indonesia³Department of Emergency Nursing, Universitas Airlangga, Faculty of Nursing, East Java, Indonesia⁴Magister of Nursing, University of Muhammadiyah Yogyakarta, Yogyakarta, Indonesia**ORCID iDs of the authors:** Y.B.P. 0000-0001-8801-7760, S.S.I.W. 0000-0002-7321-0506, A.D.L. 0000-0002-9056-0399, Y.S.D. 0000-0003-4407-0433, T.H. 0000-0002-1750-0277.**Cite this article as:** Bekti Prasetyo, Y., Sunaringsih Ika Wardojo, S., Dwi Laksono, A., Setiya Dewi, Y., & Huriah, T. (2022). Determinant factors of alcohol consumption among Indonesian adolescents through parents' attention: findings from a national survey. *Florence Nightingale Journal of Nursing*, 30(3), 238-244.**Abstract****AIM:** The specific goals of this study were to investigate the determinant factors of alcohol consumption in Indonesian adolescents.**METHOD:** The research design used is a survey with a cross-sectional approach using data from Indonesia—Global School-Based Student Health Survey 2015. The sample consisted of adolescents aged 13–17 years who attended school in all regions of Indonesia. The total sample was 11 142 teenagers. For the data analysis, frequency distribution, percentage, chi-square, and multinomial logistic regression were used.**RESULTS:** Factors that affect alcohol consumption in adolescents in Indonesia were age, gender, and parental attention related to academics ($p < .001$). Early teens were 1.5 times more likely to consume alcohol (95% CI: 1.204–1.778) compared to late teens. Good parental attention to adolescent academics can inhibit alcohol consumption by 0.8 times (95% CI: 0.762–0.887) compared to parents who do not pay attention to academics.**CONCLUSION:** Factors that influence teenagers to consume alcohol are age, gender, and parents' who does not pay attention to adolescent academics. Involving the role of parents is a strategic part of the alcohol consumption prevention program in adolescents.**Keywords:** Adolescent, alcohol consumption, determinant factor, parenting**Introduction**

Alcohol use in adolescence needs serious attention because of its negative impact on adolescents' health and development (Riva et al., 2018). Alcohol abuse can lead to lack of concentration, skipping school, poor grades, and poor relationships with family and can also lead to drug addiction in adulthood (Yazdi-Feyzabadi et al., 2019). Early adolescent alcohol use is also linked to an increased risk of developing mental health disorders and alcohol-related problems later in life (Leal-López et al., 2020). Alcohol and drug use are also associated with increased risky behaviors such as early sex, unprotected sex, drunk driving, violence, and truancy (Arnaud et al., 2020).

Parents remain one of the most important social influences in preventing and reducing adolescent alcohol consumption (Hurley et al., 2019). Parents nurture and protect children and guide them in understanding and expressing appropriate feelings and emotions and educate and prepare children to adapt to the broader role and context of life (Culpin et al., 2020). Research has found that adolescents who use alcohol state that

the part of parents is very large (70%) in helping them to reduce alcohol consumption (Campbell et al., 2019). The role of parents in monitoring the activities and presence of adolescents and quality communication between parents and adolescents is related to preventing alcohol consumption in adolescents (Hurley et al., 2019). Previous studies identified several factors that cause alcohol abuse in adolescents. Among them is the provision of inappropriate information (Blower et al., 2019), weak parental control (Nilsson et al., 2021), more facilities and materials from parents, unstable personalities, the influence of friends (Yazdi-Feyzabadi et al., 2019), and the feeble mentality of teenagers (Meredith et al., 2018).

Data from 2014 found that adolescents' prevalence of alcohol consumption per week in various European countries differed between girls and boys. Girls had the lowest prevalence in Iceland (2%), Finland, Ireland, Norway, and Sweden (3%), and Latvia and Portugal (4%), while boys had the highest prevalence in Malta (26%), Hungary (18%), and Greece and Italy (17%). Boys in Iceland (3%), Norway (4%), Ireland (5%), and Sweden (5%) reported the lowest weekly drinkers, while Croatia (33%),

Malta (32%), Italy (31%), and Hungary (29%) reported the highest weekly drinkers (Inchley et al., 2018). Globally, most alcohol consumption among adolescents aged 12–13 years is 3.9%, and 51.6% among adolescents aged 18–20 years (Ben El Jilali et al., 2020). In Indonesia, 3.3% of adolescents begin drinking at the age of 10, and most adolescents (38.7%) consume traditional alcoholic beverages (Shaluhiyah et al., 2020). Traditional alcoholic beverages are a routine part of the social landscape for many in the population, viewed as socially useful and necessary (Sebunnya et al., 2020).

Research on the role of parents in reducing alcohol consumption behavior in adolescents has not been widely carried out in Indonesia. A study in Sweden found that family is an essential factor in reducing psychosocial problems in adolescents, such as emotional problems, behavioral problems, delinquency, and well-being (Kapetanovic & Skoog, 2021). Another study conducted in Ethiopia said that the role of parenting in an authoritative style where parents pay attention, communicate, and provide emotional support to adolescents could increase adolescents' confidence to behave positively toward their sexual and reproductive health (Yimer & Ashebir, 2019).

On this basis, the author carries out the research focusing on the role of parents in inhibiting alcohol consumption in adolescents. Another thing that distinguishes this research from other research is the use of national data. The extensive data from this national survey will be the strength of the generalizability of the findings of this study.

The specific goals of this study were to investigate the determinant factors of alcohol consumption in Indonesian adolescents

Research Question

1. What are the determinant factors that influence alcohol consumption among teenagers in Indonesia?

Methods

Study Design

This was a survey with a cross-sectional study.

Sample

The school response rate was 100%, the student response rate was 94%, and the overall response rate was 94%.

Data Collection

The Global School-Based Student Health Survey (GSHS) is a school-based survey that uses a self-administered questionnaire to obtain data on adolescent health behaviors and protective factors associated with the leading causes of morbidity and mortality among children and adults worldwide (World Health Organization, 2021). The internal consistency (Cronbach's alpha) of the whole GSHS instrument was .69 and test-retest reliability varied between .51 and 1.00 (Ziaei et al., 2014).

Data collection was conducted in 2015. Global School-Based Student Health Survey Indonesia 2015 used a three-stage cluster sampling design to recruit a nationally representative sample of grade 7–12 school students in Indonesia. Provinces in the first

stage and schools in the second stage are selected with probability proportional to the size of the enrolment. In the third stage, all the students in the randomly selected class were eligible for inclusion in the study. Students aged 13–17 years and those registered in public junior and high schools in selected areas were included in the study. From the list of schools obtained from the Office of the Education, a list of the number of students per junior and high schools registered up to 2015, with a total of 27 372 junior schools and 8205 high schools, was obtained. From the sample selection conducted by the American Atlanta CDC using the reference "PC Sample School Selection Algorithm," it was found that a total of 75 schools spread over 3 regions (Sumatra, Java-Bali, Outside Sumatra, Java-Bali) in 26 provinces and 68 districts/cities in Indonesia (Kusumawardani et al., 2018).

Indonesia GSHS form has three questions related to role of parents, including parental attention to free time, adolescent problems, and academics. The question related to free time is, "During the past 30 days, how often did your parents or guardians know what you were doing with your free time?" The question related to adolescent problems is, "During the past 30 days, how often did your parents or guardians understand your problems and worries?" Meanwhile, the question concerning parents' attention to academics for adolescents is, "During the past 30 days, how often did your parents or guardians check your homework?" The study categorized these three questions into 1=rare – always and 0=never. The study assessed alcohol use using four items that focused on the frequency of alcohol consumption. The study measured the frequency of alcohol use as "the number of days you drank at least one alcoholic beverage in the last 30 days" using a scale 1=1 or more days and 0=0 days (Table 1).

Statistical Analysis

The study used a primary sampling unit, stratum, and sample weight to perform complex sample analysis. For the data analysis, frequency distribution, percentage, chi-square, and multinomial logistic regression were used. Furthermore, the collinearity test was employed to ensure that the independent variables in the final regression model did not have a strong relationship. The odds ratio of the contribution of factors impacting alcohol consumption was determined using multinomial logistic regression with 95% CI. A significant effect between alcohol consumption and the independent variable is indicated by a *p* value of .05. The author conducted all statistical analyses using Statistical Package for the Social Sciences version 21.0 software (SPSS Inc., Chicago, Ill, USA).

Ethical Consideration

This research will be carried out through a research permit process at the Ministry of Home Affairs office and has been approved by the Ethics Commission of the Indonesian Health Research and Development Agency (Kusumawardani et al., 2018). The GSHS project provided permission to view the Indonesia data set. The data source was from: <https://www.cdc.gov/gshs/countries/seasian/indonesia.htm>, released on February 13, 2019. In addition, this study has received ethical approval from the Directorate of Research and the Community Services University of Muhammadiyah Malang (No.E.2.a/133/B AA-UMM/II/2021).

Table 1.
Description of the Independent and Dependent Variables in the Study

Variable	Question	Code
Age	What age are you?	1 = early adolescent (11–14 years) 2 = late adolescent (15–17 years)
Gender	What is your gender?	1 = boy 2 = girl
Class	In what class are you?	1 = 7–9 (junior high school) 2 = 10–12 (senior high school)
Parents' attention to youth's free time	How often did your parents or guardians know what you were doing in your spare time in the last 30 days?	1 = rare – always 0 = never
Parental attention to adolescent problems	How often did your parents or guardians understand your problems and concerns in the last 30 days?	1 = rare – always 0 = never
Parents' attention to academics	During the past 30 days, how often did your parents or guardians check your homework?	1 = rare – always 0 = never
Alcohol use	How many days did you have had at least one alcoholic drink in the last 30 days?	1 = 1 or more days 0 = 0 days

Results

Early teens (11–14 years) were more likely to consume alcohol than older teens (>15 years) with a percentage 67.7% and 23.3%, respectively. There are more girls than boys, namely 51.1% in girls and 48.9% in boys. Most of the youth at the middle

school level was 76.8%. The role of parents who pay attention to their children's free time, children's problems, and children's academics is more than parents who do not pay attention to this; the percentages are 80.2%, 76.9%, and 80.1%, respectively. The prevalence of alcohol consumption among teenagers in Indonesia in 2015 was 4.4% (Table 2).

Table 2.
Characteristics of Respondents

Variable	Unweighted Count	Weighted Count	Prevalence (%)	95% CI
Age				
Early teen (11–14 years)	7114	7927	67.7	57–76.9
Late teen (15–17 years)	4010	3801	32.3	23.1–43
Gender				
Boy	5090	5678	48.9	47.2–50.5
Girl	6020	6050	51.1	49.5–52.8
School level				
Middle school	8049	8969	76.8	63–86.5
High school	3032	2758	23.2	13.5–37
Parents' attention to youth's free time				
No	2226	2314	19.8	17.7–22.1
Yes	8699	9413	80.2	77.9–82.3
Parental attention to adolescent problems				
No	2544	2700	23.1	21.4–24.9
Yes	8421	9027	76.9	75.1–78.6
Parents' attention to academics				
No	2301	2316	19.9	18.1–21.8
Yes	8628	9411	80.1	78.2–81.9
Alcohol use				
Never	10,309	11,217	95.6	94.6–96.5
Once or more times a day	616	486	4.4	3.5–5.4

Table 3.
Determinants of Adolescents' Alcohol Consumption

Characteristics	Alcohol Use (%)		p	COR/95% CI	AOR/95% CI
	Never	Once or More Times a Day			
Age					
Early teens (11–14 years)	96.5	3.5	.015	1.75/1.11–2.76	1.02/1.00–1.05
Late teens (15–17 yers)	93.9	6.1			
Gender					
Boy	92.7	7.3	.000	0.21/0.14–0.31	0.94/0.92–0.95
Girl	98.4	1.6			
School level					
Middle school	96.1	3.9	.079	1.58/0.94–2.65	1.02/0.99–1.05
High school	94.0	6.0			
Parents' attention to youth's free time					
No	95.2	4.8	.227	0.86/0.67–1.10	0.99/0.98–1.00
Yes	95.8	4.2			
Parental attention to adolescent problems					
No	95	5	.049	0.79/0.63–1.00	0.99/0.97–1.00
Yes	96	4			
Parents' attention to academics					
No	93.8	6.2	.000	0.59/0.47–0.73	0.97/0.96–0.98
Yes	96.2	3.8			

Note: COR = Crude Odds Ratio; AOR= Adjusted Odds Ratio.

The factors influencing adolescent alcohol consumption were age ($p = .015$; COR/95% CI: 1.75/1.11–2.76), gender ($p < .001$; COR/95% CI: 0.21/0.14–0.31), parental attention on problems faced by adolescents ($p = .049$; COR/95% CI: 0.79/0.63–1.00), and parents' attention to academics ($p < .001$; COR/95% CI: 0.59/0.47–0.73). Factors that were not associated with alcohol consumption among adolescents were school level ($p = .079$; AOR/95% CI: 1.02/0.99–1.05) and parental attention to leisure time ($p = .227$; AOR/95% CI: 0.99/0.98–1.00) (Table 3).

Table 4 shows the collinearity test results of predictors affecting alcohol consumption, which includes age, gender, parental attention to adolescent problems, and parents' attention to

academics. This study shows that there is no strong relationship between the independent variables. Table 4 shows that the tolerance value for all variables is greater than .10 and the variance inflation factor value for all factors is less than 10.00. This study found no evidence of multicollinearity in the regression model, which indicates the basis for test decision-making.

Table 5 shows the factors that inhibit alcohol consumption in adolescents; age, gender, and parental attention related to academics (p value $< .001$). Early teens were 1.5 times more likely to consume alcohol (95% CI: 1.204–1.778) compared to late teens. Good parental attention to adolescent academics can inhibit alcohol consumption by 0.8 times (95% CI: 0.762–0.887) compared to parents who do not pay attention to academics.

Table 4.
Collinearity Test' Result of Predictors that Affect Alcohol Consumption

Predictor	Collinearity Statistics	
	Tolerance	VIF
Age	.958	1.004
Gender	.992	1.009
Parental attention to adolescent problems	.875	1.143
Parents' attention to academics	.852	1.173

Note: Dependent variable: alcohol consumption; tolerance > 0.10 or VIF < 10.00 .
VIF = variance inflation factor.

Discussion

The results showed that age is a determining factor in adolescents consuming alcohol. Several studies have shown that alcohol consumption before 15 is a strong predictor of later alcohol consumption (Campbell et al., 2019). Initiation of alcohol use at early teen had a higher risk than those of late teen (odds ratio: 1.463; 95% CI 1.204–1.778). Early teens have the characteristics of being brave and wanting to try new things, including consuming alcohol. Alcohol use is a symbolic behavior. Adolescents who drink alcohol strive to appear mature, strong, and courageous and attract the opposite sex and their peers (Shaluhiyah et al., 2020).

Table 5.
Predictive Model of Alcohol Consumption in Indonesian Adolescents

Predictor	B	SE	Wald	p	OR	95% CI	
						Lower	Upper
Age	.381	.099	14.651	<.001	1.463	1.204	1.778
Gender	-1.529	.117	171.875	<.001	.217	.172	.272
Parental attention to academics	-.201	.036	31.691	<.001	.818	.762	.877
Constant	-.979	.239	16.837	<.001	.376		

Note: SE = standard error; OR = odds ratio.

Another thing that determines early teens to consume alcohol is psychological problems and bad friendship. Alcohol consumption in early adolescence is a sign of psychosocial distress associated with several mental health problems such as depression, sensation-seeking behavior, conduct problems, and antisocial behavior (Isaksson et al., 2020). Alcohol consumption is mainly done in early adolescence because, in the adolescent phase, the frontal cortex responsible for making complex decisions is still developing. At the same time, the part of the brain that processes feelings of appreciation is more mature. This condition makes them vulnerable to making impromptu decisions, such as drinking alcohol, because of curiosity and social pressure (Mat Hassan et al., 2020).

Consuming alcohol is also an entry point for other bad behavior, becoming a drug user and addict. Courage to try a drink will continue with trying drugs when the courage to consume alcohol is no longer challenging (Tolou-Shams et al., 2021). Previous studies reported that alcohol consumption, tobacco, and illicit drugs in adolescents are interrelated. Drinking one of them ultimately increases the likelihood of using the other substance (de Veld et al., 2021). Concurrent use between alcohol and drugs has a more significant impact than using only one of these substances (Sokolovsky et al., 2020).

The results showed that gender is a determinant factor of alcohol consumption in adolescents. Girls usually start using alcohol and other drugs as a coping strategy to deal with depression, anxiety, and negative feelings (Fonseca et al., 2021). In contrast, boys typically start using drugs that are influenced by their peers or sensation-seeking (Fonseca et al., 2021). Boys drink not only when they are suffering from negative emotions but also in other situations, such as they drink when they are happy, showing respect for others, or simply showing their maturity (Li et al., 2020).

Alcohol use is based on the level of intake and drinking periods in women are shorter than in men but the medical consequences are more severe, including the incidence of hepatic cirrhosis (Fonseca et al., 2021). Men consuming more alcohol than women can be explained by social norms, cultural values, gender-specific roles, and biological differences between men and women (Tevik et al., 2019).

Parental attention to academic activities determines alcohol consumption in adolescents. In general, parental attention is the main factor influencing alcohol consumption in

adolescents. Parenting strategies and limiting or prohibiting alcohol consumption are important factors in determining alcohol consumption in adolescents (Johnson & Svensson, 2020). Parent-adolescent communication, supervision of the activities, and the presence of adolescents are factors that can reduce or prevent alcohol consumption in adolescents (Hurley et al., 2019). Two dimensions in the family determine alcohol consumption behavior in adolescents, namely the parenting model and family conditions. The authoritarian parenting model and omission will increase alcohol consumption behavior in adolescents. Family conditions include the existence of conflicts between parents and adolescents, and parental divorce will trigger adolescents' alcohol consumption behavior (Yazdi-Feyzabadi et al., 2019).

Parental monitoring of children's academics is an essential factor in reducing alcohol consumption in adolescents. Parental attention to children who experience stress related to school, such as conflicts with friends or bullying, school assignments will improve adolescent coping skills in dealing with academic stress (Nguyen et al., 2019; Pace et al., 2021). On the other hand, the lack of support from the family in adolescents who face pressure will lead children to carry out negative behaviors such as consuming alcohol (Boele et al., 2020; Culpin et al., 2020; Mak et al., 2019; Wong et al., 2021).

Study Limitations

Global School-Based Student Health Survey is an international survey that consents to adolescent issues. The GSHS lacks data regarding parenting styles. Future research may add different variables associated with family and test the more complex models to explore the determinant factors that inhibit alcohol use among adolescents in more details

Conclusion and Recommendation

The factors that influence adolescents to consume alcohol are age, gender, and parental attention to adolescent academics. Early teens with the characteristics of wanting to try new things, daring to take risks, and wishing to appear mature are the originators of alcohol consumption at this age. Parental attention is a crucial factor in inhibiting alcohol consumption in adolescents. Involving the role of parents is a strategic part of the program to prevent alcohol consumption in adolescents. This study outcome has a basis recommendation for the Government for developing strategies and policy controlling alcohol usage among young people which included parents control. It is also

needed to incorporate with educational support system including school and teacher which is while students at school, the teacher will give intensive counselling and promoting health program at school for minimalizing alcohol usage among teenage. Also, they might promote to parents for educating their children about this health program at their home.

Availability of data and material: The data supporting the findings of the article are available in the GSHS at <https://www.cdc.gov/gshs/counties/seasian/indonesia.htm>

Ethics Committee Approval: The WHO and the US Centers for Disease Control (CDC) Ethics Committees, as well as the Indonesian Ministry of Health, all authorized the initial survey. This research was based on an examination of existing public data that are readily available online but have been stripped of all identifying information. The GSHS project provided permission to view the Indonesia data set. Data source was from: <https://www.cdc.gov/gshs/countries/seasian/indonesia.htm>, released on February 13, 2019. In addition, this study has received ethical approval from the Directorate of Research and the Community Services University of Muhammadiyah Malang (No.E.2.a/133/BAA-UMM/II/2021).

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