



## SOCIO-DEMOGRAPHIC DETERMINANTS OF ALCOHOL CONSUMPTION AMONG YOUNG ADULTS IN INDONESIA: A CROSS-SECTIONAL ANALYSIS OF THE 2023 INDONESIAN HEALTH SURVEY

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### Abstrak

Konsumsi alkohol di kalangan dewasa muda di Indonesia merupakan masalah kesehatan yang dipengaruhi oleh faktor sosial demografi. Penelitian ini bertujuan untuk menganalisis karakteristik sosiodemografi dewasa muda di Indonesia dan hubungannya dengan konsumsi alkohol. Desain penelitian menggunakan cross-sectional dengan data dari Survei Kesehatan Indonesia (SKI) 2023. Sebanyak 16.325 dewasa muda berusia 18–25 tahun dimasukkan dalam penelitian ini. Variabel utama yang dianalisis adalah konsumsi alkohol. Karakteristik sosial demografi seperti usia, jenis kelamin, tingkat pendidikan, status pernikahan, wilayah, status pekerjaan, dan tempat tinggal. Uji chi-square dan regresi logistik multivariat digunakan untuk meneliti hubungan antara variabel independen dan konsumsi alkohol. Hubungan yang signifikan ditemukan antara konsumsi alkohol dengan jenis kelamin, tingkat pendidikan, status pernikahan, dan wilayah. Laki-laki yang memiliki tingkat pendidikan lebih rendah lebih cenderung mengonsumsi alkohol. Proporsi peminum tertinggi ditemukan di Jawa dan Bali, terutama di daerah perkotaan. Status pekerjaan tidak menunjukkan hubungan yang signifikan dengan konsumsi alkohol. Faktor sosial demografi secara signifikan memengaruhi konsumsi alkohol di kalangan dewasa muda di Indonesia. Temuan ini menyoroti perlunya strategi kesehatan masyarakat untuk mengatasi konsumsi alkohol. Pentingnya intervensi pendidikan dan program berbasis komunitas untuk mengurangi dampak buruk konsumsi alkohol.

### Abstract

*Alcohol consumption among young adults in Indonesia is a health problem that is influenced by sociodemographic factors. This study aims to analyze the sociodemographic characteristics of young adults in Indonesia and their association with alcohol consumption. The study design was cross-sectional with data from the 2023 Indonesian Health Survey (IHS). A total of 16,325 young adults aged 18-25 years were included in the study. The main variable analyzed was alcohol consumption. Sociodemographic characteristics such as age, gender, education level, marital status, region, employment status, and place of residence. The chi-square test and multivariate logistic regression were used to examine the relationship between independent variables and alcohol consumption. Significant associations were found between alcohol consumption and gender, education level, marital status and region. Men with lower education levels were more likely to consume alcohol. The highest proportion of drinkers was found in Java and Bali, especially in urban areas. Employment status showed no significant association with alcohol consumption. Socio-demographic factors significantly influence alcohol consumption among young adults in Indonesia. These findings highlight the need for public health strategies to address alcohol consumption. The importance of educational interventions and community-based programs to reduce the adverse effects of alcohol consumption.*

## **INTRODUCTION**

Alcohol consumption among young adults is a growing public health concern, particularly in developing countries, where rapid urbanization and sociocultural shifts influence drinking behaviors. Globally, alcohol use is a major risk factor for various health and social issues, including non-communicable diseases, mental health disorders, and injuries (Pramaunururut et al., 2022; Sudhinaraset, Wigglesworth, & Takeuchi, 2016). In Indonesia, where alcohol consumption is traditionally low owing to religious and cultural norms, recent trends indicate a shift, especially among young adults (Mola, de Araújo, Barbosa, Almeida, & Pitangui, 2023; Sudhinaraset et al., 2016). Understanding the sociodemographic determinants of alcohol consumption in this population is essential for developing targeted interventions and policies.

Urbanization and socioeconomic disparities play a significant role in shaping alcohol consumption patterns. Studies suggest that urban youth may have greater exposure to alcohol owing to increased accessibility, peer influences, and lifestyle changes (Collins, 2016; Dixon & Chartier, 2016). Conversely, some rural areas in Indonesia have long-standing local alcohol traditions, which contribute to varied consumption patterns across regions (Castro, Barrera, Mena, & Aguirre, 2014; Dixon & Chartier, 2016). Additionally, education level, employment status, and marital status may influence drinking behavior, with previous research indicating that higher education and employment can either increase or reduce alcohol use depending on cultural and economic contexts (Collins, 2016; Sudhinaraset et al., 2016).

Despite these factors, there is limited research on the association between sociodemographic characteristics and alcohol consumption among young Indonesian adults. Most existing studies have focused on alcohol use in older populations or specific high-risk groups, leaving a gap in understanding drinking behaviors among younger individuals, particularly across urban and rural settings. Given Indonesia's diverse sociocultural landscape, identifying the key determinants of alcohol consumption in young adults is crucial for informing public health strategies and policy development.

This study aimed to analyze the sociodemographic characteristics of young adults in Indonesia and their association with alcohol consumption. Specifically, we examined the differences between rural and urban populations, focusing on factors such as education level, marital status, employment, and regional distribution. By addressing this gap, our findings can contribute to evidence-based interventions to reduce harmful alcohol use and promote healthier behaviors among Indonesian youth.

## **METHODS**

### **Study Design and Sample**

This study employed a cross-sectional design, using data from the Indonesian Health Survey (SKI) 2023. The survey collected nationally representative data on various health and sociodemographic factors of young adults in Indonesia. A total of 16,325 respondents, aged 18–25 years, were included in the analysis. Participants were selected through multistage stratified random sampling to ensure diverse representation of both urban and rural populations.

### **Data Collection**

Data were collected through structured interviews conducted by trained enumerators using standardized questionnaires. The survey covered demographic characteristics, health behaviors, and lifestyle factors. Information on alcohol consumption and socioeconomic variables was self-reported by respondents. To ensure data accuracy and reliability, the responses were cross-verified with official records, where possible.

### **Variables and Measurements**

This study analyzed both independent and dependent variables to assess the sociodemographic determinants of alcohol consumption. Dependent Variable was Alcohol Consumption: Measured through a binary self-reported response ("Yes" or "No"). Independent Variables were Age: Categorized into four groups (18–19, 20–21, 22–23, and 24–25 years). Sex: male or female. Education level: No education, elementary school, junior high school, senior high school, or university. Marital Status: Categorized as unmarried, married, divorced/other. Region: Classified into Sumatra, Java, Bali, and other islands. Work Status: Divided into not working or working. Residence: Stratified into rural and urban areas.

### **Statistical Analysis**

All statistical analyses were conducted using STATA version 15.1. Survey weights (indicated by the variable “w\_final”) were applied to account for the complex survey design, including stratification, clustering, and unequal probabilities of selection. Descriptive statistics were used to summarize the sociodemographic characteristics of the study population, and chi-square tests were conducted to assess the associations between independent variables and alcohol consumption. Multivariable logistic regression analysis was performed to identify significant predictors of alcohol consumption after adjusting for potential confounders. A p-value <0.05 was considered statistically significant.

### **Ethical Approval**

The 2023 Indonesia Health Survey (SKI) adhered to strict ethical standards to ensure participants' safety, privacy, and well-being. The Indonesian Ministry of Health submitted a formal data request under ticket number 240675B7CC9C4327, along with a confidentiality agreement letter (reference no. FRM/SMKI-PUSDATIN/70/0108/2024). Researchers seeking access to the dataset can submit a formal request using the following link (<https://www.badankebijakan.kemkes.go.id/data-mikro-ski/>)

### **RESULTS**

Table 1 provides the frequency distribution of various characteristics and percentage of alcohol consumption among young adults in Indonesia. This study analyzed 16,325 young adults in Indonesia categorized by various demographic and behavioral characteristics. The age distribution showed that the majority of respondents were between 22 and 23 years, amounting to 4,210 people (27.87%). Regarding sex distribution, the sample was predominantly male, namely 16,111 people (99.11%). In terms of educational level, more than half of the respondents as many as 9,362 people (56.75%) had completed senior high school whereas 572 people or 3.21% had pursued university education. Marital status data indicated that the vast majority of participants were unmarried as many as 13,426 people (83.93%). In terms of geographic distribution, a number of 5,828 people or 35.70% of the respondents resided in Java and Bali. Employment status revealed that more than half of the young adults as many as 9,272 people (58.62%) were working. Finally, an analysis of alcohol consumption habits showed that the majority, namely 14,084 people (88.49%) of participants did not consume alcohol.

Table 1 Frequency distribution of characteristics among young adults in Indonesia stratified by residence (N=16.325)

Variable	n	Total	%
Age (Years)			
18~19	3,733		18.63
20~21	4,036		26.58
22~23	4,210		27.87
24~25	4,346		26.92
Sex			
Male	16,111		99.11
Female	214		0.89
Education Level			
No Education	1,170		6.23
Elementary School	1,870		11.85
Junior High School	3,351		21.96
Senior High School	9,362		56.75
University	572		3.21
Marital Status			
Unmarried	13,426		83.93
Married	2,810		15.6
Divorce and other	89		0.47
Region			
Sumatra	4,773		29.24
Java and Bali	5,828		35.70
Other islands	5,724		35.06
Work Status			
Not Working	7,053		41.38
Working	9,272		58.62
Alcohol consumption			
No	14,084		88.49
Yes	2,241		11.51

Source: Survei Kesehatan Indonesia, 2023

Table 2 presents the sociodemographic characteristics and alcohol consumption patterns among young adults in Indonesia, comparing the rural and urban populations. The age distribution was similar across both areas ( $p=0.441$ ), with the highest proportion aged 22–23 years both rural (12.58%) and urban (15.29%). A significant difference was found in the sex distribution ( $p=0.037$ ), as males dominated both rural (43.95%) and urban (55.16%) settings. The education level varied significantly ( $p=0.001$ ), with a higher proportion of individuals in rural areas having lower education levels, while urban residents had greater access to senior high school (34.99%) and university education (2.3%). Marital status differences were also significant ( $p=0.001$ ), with more unmarried individuals living in urban areas (48.4%) than in rural areas (35.53%). Regional distribution varied significantly ( $p=0.001$ ), with urban residents concentrated in Java and Bali (40.45%), while rural respondents were more common across Sumatra (11.67%) and other islands (11.93%). Employment status showed no significant difference ( $p=0.137$ ), with slightly more urban residents working (32.21%) than rural areas (26.42%). Alcohol consumption was significantly associated with residence ( $p=0.007$ ), with the majority abstaining (88.49%). Alcohol use was slightly higher in the rural areas (5.78%) than in the urban areas (5.73%).

**Table 2** The percentage of socio demographic characteristics and alcohol consumption among young adults in Indonesia stratified by residence (N=16.325)

Variable	Rural		Urban		P value
	n	(%)	n	(%)	
Age (Years)					0.441
18~19	1,618	7.88	2,115	10.76	
20~21	1,763	11.93	2,273	14.65	
22~23	1,872	12.58	2,338	15.29	
24~25	2,016	11.87	2,330	15.05	
Sex					0.037
Male	7,163	43.95	8,948	55.16	
Female	106	0.3	108	0.59	
Education Level					0.001
No Education	703	3.87	467	2.36	
Elementary School	1,056	6.5	814	5.35	
Junior High School	1,657	11.21	1,694	10.75	
Senior High School	3,669	21.77	5,693	34.99	
University	184	0.91	388	2.3	
Marital Status					0.001
Unmarried	5,642	35.53	7,784	48.4	
Married	1,585	8.51	1,225	7.09	
Divorce and other	42	0.21	47	0.26	
Region					0.001
Sumatra	2,516	11.67	2,257	7.85	
Java and Bali	1,252	20.65	4,576	40.45	
Other islands	3,501	11.93	2,223	7.45	
Work Status					0.137
Not Working	3,077	17.83	3,976	23.54	
Working	4,192	26.42	5,080	32.21	
Alcohol consumption					0.007
No	6,054	38.47	8,030	50.02	
Yes	1,215	5.78	1,026	5.73	

Source: Survei Kesehatan Indonesia, 2023

Note: \*  $p < 0.05$

## DISCUSSION

This study examined the sociodemographic characteristics and alcohol consumption patterns among young adults in Indonesia, stratified by rural and urban residences. The findings highlight significant differences in education level, marital status, regional distribution, and alcohol consumption between rural and urban populations, whereas age distribution and employment status showed no significant variations.

The age distribution was relatively balanced, with most respondents being aged 22–23 years. This is consistent with previous research indicating that individuals in this age range are typically in transition between education and employment, particularly in developing countries such as Indonesia, where socioeconomic factors influence career entry points (Rahmani & Groot, 2023).

A notable gender disparity was observed, with males overwhelmingly dominating the sample (99.11%). This imbalance may reflect survey participation bias or cultural factors where men are more likely to be available for such studies. Moreover, urban areas had a slightly higher proportion of males (55.16%) than rural areas (43.95%), which may be attributed to migration patterns, as men are more likely to relocate to cities for educational and employment opportunities (Aydemir, Kırdar, & Torun, 2022; Orkoh & Blaauw, 2025).

Education levels differed significantly between urban and rural populations, with rural respondents more likely to have no formal education or only elementary school, while urban respondents had greater access to higher education. This urban advantage aligns with national trends that show disparities in educational access due to infrastructure, economic status, and government investment in urban centers (Cattaneo et al., 2022). Limited access

to education in rural areas may contribute to employment challenges and lower economic mobility among the young adults in these regions.

Marital status also varied significantly between rural and urban areas. The higher proportion of married individuals in rural areas suggests that cultural norms and economic conditions influence early marriages. Previous studies have shown that in rural settings, marriage may be associated with traditional gender roles and economic security, whereas urban youth tend to delay marriage because of career aspirations and lifestyle preferences (Jones & Gu, 2024; Munro, Parker, Rahayuningtyas, Fithry, & Baransano).

Regional differences were pronounced, with most urban respondents residing in Java and Bali, Indonesia's economic hub. Conversely, rural respondents were more evenly distributed across Sumatra and other islands, reflecting the diverse geographical and economic landscapes of Indonesia. These regional variations could influence access to education, employment, and social services, further reinforcing urban-rural disparities (Guo & Li, 2024).

Employment status did not differ significantly between rural and urban populations, suggesting that economic participation among young adults is relatively balanced across regions. However, the nature of employment could vary, with rural jobs often being in the agriculture and informal sectors, whereas urban employment is likely dominated by formal and service-sector jobs. Future research should explore the quality and stability of employment among young adults to provide a more nuanced understanding of the economic disparities.

Alcohol consumption was significantly associated with residence, with urban respondents being more likely to abstain (50.02%) than rural respondents (38.47%). This finding contrasts with those of studies in Western countries, where alcohol use is typically higher in urban areas. However, in Indonesia, religious and cultural norms, particularly in urban centers with a higher Muslim population, may contribute to lower alcohol consumption. Rural areas, especially those with cultural or economic ties to alcohol production, may have higher consumption rates despite their overall low prevalence (Dixon & Chartier, 2016; Kumar, Kumar, & Singh, 2018).

### **Strengths and Limitations**

This study provides valuable insights into the sociodemographic distribution of young adults in Indonesia and their alcohol consumption behaviors. However, this study has some limitations. The overwhelming male dominance in the sample may limit generalizability, as the female representation is extremely low. Additionally, self-reported alcohol consumption may be influenced by social desirability bias, particularly in regions where alcohol use is stigmatized. Future studies should aim to obtain a more balanced sample and incorporate qualitative methods to explore the cultural context of alcohol consumption.

### **CONCLUSION**

The findings highlight significant sociodemographic disparities between rural and urban young adults in Indonesia, particularly in education level, marital status, and regional distribution. Differences in alcohol consumption suggest the influence of cultural and regional factors. Addressing disparities in education and employment opportunities, particularly in rural areas, could contribute to reducing socioeconomic inequality. Future research should further explore the underlying factors influencing these trends to inform targeted policy intervention.

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