

Original Article

Relationship between Peer Influence and Consumption of Sugar-Sweetened Beverages in Adolescents

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Abstract

Background: Consumption of Sugar-Sweetened Beverages (SSBs) in Indonesia among adolescents is high at 72%. Nevertheless, identical adolescent behaviour is to be accepted by the peer group. Peer groups have a high probability of influencing the consumption of adolescents. **Objective:** To determine the relationship between peer influence and consumption of SSBs in adolescents. **Methods:** The study employed an observational design with a cross-sectional approach. The sample consisted of 115 senior high schools students in the Surakarta area. Peer data collection and consumption of SSBs were conducted by filling out online questionnaires independently by adolescents. After data collection, analysis was done using Chi-square test. **Results:** Our data showed that there is a relationship between peer influence and consumption of SSBs with value ($p=0.000$). **Conclusion:** Peer influence is an important factor in consumption of SSBs in adolescents.

Keywords: Sugar-Sweetened Beverages, obesity, peer influence, Indonesia

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Introduction

Obesity is the most severe health problem in society and can increase morbidity. Obesity is associated with chronic diseases, including cardiovascular disease, hypertension, dyslipidemia, type 2 diabetes, mood disorders, and chronic kidney disease¹. One of the causes of obesity among adolescents is the consumption of sugar-sweetened beverages (SSBs). SSBs are beverages with added sugar, including high-fructose corn syrup (HFCS), sucrose, and fruit juices with added sugar intentionally. Consumption of SSBs is currently more common in middle-income countries². A survey conducted in Indonesia indicated that SSBs were consumed at least once per day with 41% of adolescents, 33% of adults, and 24% of children. Hence, SSB products were consumed by adolescents 72%, followed by children 62%, and adults 61%³. Adolescence is a period of transition physically and psychologically. In this period, many habits are formed, especially in food habits⁴.

Furthermore, adolescents are identical to desiring to be accepted by the group, especially their peer group. This peer group also has a high probability of influencing adolescents' consumption⁵. Based on the reality, the present study aims to identify the relationship between peer influence and the consumption of SSBs in adolescents.

Methods

This cross-sectional, analytical study was conducted in high schools in Surakarta, including SMAN 2, SMAN 4, and SMAN 7 Surakarta, Indonesia. The research sample was 115 high school students selected by a simple random sampling technique. The inclusion criteria were adolescents in 11th and 12th grade, while the exclusion criteria were adolescents who had moved from SMAN 2, SMAN 4, and SMAN 7 at the study time. Data collection was completed by filling out an online questionnaire in a google form. Furthermore, the data will be analyzed using Chi-square test with SPSS software (Version

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23.0, Chicago, IL, USA). The value is considered significant if $P\text{-value} < 0.05$.

Results

Respondents' characteristics ranged from 17-18 years old, including 25.2% male and 74.8% female. Most of the respondents (57.4%) had peer groups, and some respondents (52.2%) consumed high SSBs (Table 1). 73.3% of adolescents had strong peer influence and high consumption of SSBs. The chi-square test results showed that there is a relationship between peer influence and consumption of SSBs. Adolescents had 4.125 times the probability of consuming SSBs based on peer influence ($p=0.000$, $OR=4.125$, 95% CI) (Table 2).

Table 1. Characteristics of respondents (n=115)

Variables	Value (%)
Gender	
Male	25.2
Female	74.8
Age (Years)	
17	67.8
18	32.3
Peer Influence	
Low	42.6
High	57.4
SSBs consumption	
Sufficient	47.8
High	52.2

Table 2. Relationship between Peer Influence and Consumption of Sugar-Sweetened Beverages in Adolescents

	SSBs consumption				P	OR
	Sufficient		High			
	n	%	n	%		
Peer Influence						
Low	33	60	16	26.7	0.000	4.125
High	22	40	44	73.3		

Discussion

Our results showed that 73.3% of adolescents had strong peer influence and high consumption

of SSBs. Peer influence is like a friend who likes SSBs, they always buy SSBs while hanging out with friends, and friends always invite them to purchase SSBs. The bivariate analysis results obtained a value ($p=0.000$), which means that there is a relationship between peer influence and SSB consumption in adolescents. It is in line with other studies, which stated that there is a relationship between peer influence and consumption of foreign fast food such as french-fries with a value ($p=0.016$), waffles with a value ($p=0.014$), beef burgers ($p=0.029$), and chicken burgers ($p=0.025$)⁵. Another study also mentioned that individuals consumed high levels of snacks and soft drinks when close to peers who had high combined consumption with snacks at school and soft drinks at vending machines⁶. Consumption of unhealthy food friends is associated with unhealthy consumption of individuals, especially adolescents who are more favored will tend to consume unhealthy foods. Therefore, a friend's total energy intake correlates with an individual's total energy intake⁷.

Conclusion

The results of the research and analysis concluded that there is a relationship between peer influence and consumption of SSBs in adolescents ($p=0.000$), and adolescents have 4,125 times the probability of consuming SSBs based on peer influence.

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Authors' contribution: Concept and design: DP; Data collection, analysis: DP, S, S; Critical review, manuscript writing and final revision: DP, S, S.

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