



## **Scrolling for Health: Analyzing University Students' Health Literacy Regarding Sugar-Sweetened Beverages, Consumption Habits, and the Influence of Social Media Health Content**

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### **ABSTRACT**

This study examined the relationship between health literacy, social media influence, and sugar-sweetened beverages (SSBs) consumption patterns among university students. Using a mixed-method approach that integrated quantitative data, qualitative analysis, and word cloud visualization, the research involved 309 students from the Faculty of Education at Universitas Negeri Jakarta. Findings revealed that while 87.7% of respondents demonstrated "good" knowledge about SSBs and their health impacts, a significant disconnect existed between knowledge and behavior, with 89.3% consuming SSBs occasionally. Social media was the primary information source (92.5%), particularly TikTok and Instagram, although credibility varied across platforms. Emotional factors such as stress and habitual patterns emerged as the main drivers of consumption, proving stronger than health considerations in influencing consumption decisions. Despite understanding general health risks such as diabetes, sore throat, or acne, students showed limited comprehension of technical details like the recommended daily sugar intake limit (4 teaspoons) or how to read nutrition labels. The research highlighted that students preferred visual and concise content on social media platforms, with many stating they would skip lengthy text-based information. This study underscores the critical gap between theoretical health knowledge and practical application among university students, emphasizing the need for educational strategies that align with students' digital consumption preferences and address specific knowledge deficiencies in SSB-related health literacy.

**Keywords:** Sugar Sweetened Beverages, Health Literacy, Social Media, Health Education, Health Behavior.

### **INTRODUCTION**

The excessive consumption of sugar-sweetened beverages (SSBs) has become a significant public health concern globally, with documented associations to various non-communicable



diseases (WHO, 2015). In Indonesia, the consumption pattern of sweetened beverages shows alarming trends, with an average consumption reaching 20.23 liters/person/year, making Indonesia the third-highest consumer of sweetened beverages in Asia (Badan Penelitian dan Pengembangan Kesehatan, 2020). University students represent a critical demographic for studying this phenomenon as they are in a developmental stage where lifelong dietary habits are formed (Kühn et al., 2022).

Previous research indicates that students often demonstrate a disconnect between health knowledge and actual consumption behavior, despite their educational background (Aranis et al., 2024). The emergence of social media as a primary information source has significantly shaped young adults' health-related decisions, with studies showing that students increasingly rely on digital platforms for health information (Satpathy et al., 2021). Health literacy, defined as "the cognitive and social skills which determine the motivation and ability of individuals to gain access to, understand and use information in ways which promote and maintain good health" (Nutbeam, 1998), plays a crucial role in health behavior determination. In the digital age, this concept has expanded to include digital health literacy the ability to navigate, evaluate, and apply health information from electronic sources (Norman & Skinner, 2006).

This research addresses a critical gap by exploring how university students' health literacy regarding sugar-sweetened beverages interacts with their consumption habits and the influence of social media health content. While previous studies have examined these dimensions separately, few have integrated them to understand the complex relationship between knowledge, digital information exposure, and actual behavior among university students in Indonesia (Chaabane et al., 2021).

## RESEARCH METHODS

This research employed a mixed-methods design to comprehensively investigate students' health literacy regarding sugar-sweetened beverages, their consumption patterns, and the influence



of social media content. The study was conducted at the Faculty of Education, Universitas Negeri Jakarta, with a total of 309 undergraduate students participating. Participants were selected through a combination of purposive and convenience sampling techniques, with inclusion criteria specifying that participants must be currently enrolled undergraduate students aged 18-25 years who provided informed consent.

Data collection involved multiple instruments to capture a holistic view of the research questions. An online questionnaire administered via Google Forms gathered demographic information, assessed SSB knowledge through multiple-choice questions, documented consumption patterns including frequency and contexts, and evaluated social media usage and exposure to health content. Additionally, semi-structured interviews were conducted to explore their perceptions, decision-making processes, and experiences regarding SSB consumption and health information seeking. To identify common themes and patterns in students' language, openended responses about SSB perceptions and health information sources were analyzed using word cloud visualization. Quantitative data was analyzed using SPSS version 26 for descriptive and inferential statistics, while qualitative data was analyzed using NVIVO version 12.

## RESULTS AND DISCUSSION

### Results

Based on research conducted using a mixed-method approach that integrated quantitative data, qualitative analysis, and word cloud visualization, a comprehensive understanding of public knowledge, attitudes, and behaviors regarding sugar-sweetened beverage (SSB) consumption was obtained.

#### Knowledge about Sugar-Sweetened Beverages (SSBs)

**Table 1. Knowledge Level Regarding Sugar-Sweetened Beverages**

Knowledge Level	Frequency	Percentage (%)
Poor	5	1.6



Sufficient	33	10.7
Good	271	87.7
Total	309	100.0

The majority of respondents demonstrated good knowledge about sweetened beverages, with 271 individuals (87.7%) falling into the "good" knowledge category, 33 individuals (10.7%) in the "sufficient" category, and only 5 individuals (1.6%) in the "poor" knowledge category. While respondents generally understood that SSB consumption could cause negative health impacts such as diabetes, sore throat, or acne, their understanding of technical details like the recommended daily sugar intake limit (4 teaspoons) or how to read nutrition labels remained limited. Some respondents acknowledged awareness of the need to limit consumption but were uncertain about the exact safe consumption amounts. This knowledge was typically acquired through personal experiences, such as having experienced illness after consuming sweetened beverages, or from information circulating on social media platforms.

**Sources of Information about Nutrition and Sweetened Beverages Table 2.  
Information Regarding Sugar-Sweetened Beverages**

Information Exposure	Frequency	Percentage (%)
No	6	1.9
Yes	303	98.9
Total	309	100.0

According to Table 2, the vast majority of respondents (98.9%) had encountered information about sugar-sweetened beverages, compared to only 1.9% who had never been exposed to such information. Social media emerged as the primary information source for the public, particularly platforms like TikTok and Instagram, which were mentioned by nearly all respondents as their main information channels. The concise, visual, and direct presentation format of health content on social media made it more easily digestible, especially for younger generations. Besides social media, other information sources included family members, friends, school education, and health seminars from community health centers. However, trust levels in



information sources varied; content from doctors or nutrition experts was considered more credible, while information from anonymous accounts or those frequently using provocative statements like "this can kill you" was often disregarded as unreliable. Some respondents reported verifying information through official websites such as Halodoc or the Ministry of Health to confirm its accuracy.

**Consumption Habits of Sweetened Beverages Table 3. Sweetened Beverage Consumption Habits**

Consumption Frequency	Frequency	Percentage (%)
Often	31	10.0
Occasionally	276	89.3
Never	2	0.6
Total	309	100.0

The majority of respondents (89.3%) consumed sweetened beverages occasionally, while 10% consumed them frequently and only 0.6% never consumed them. The most commonly consumed beverages included sweetened iced tea, instant coffee, milk tea, Thai tea, and full-cream milk and chocolate-flavored milk. Many respondents admitted to frequently consuming sweetened beverages despite being aware of the associated health risks, citing taste preferences, habitual patterns, or emotional reasons such as stress relief or mood stabilization. Some respondents, particularly those with surgical histories, family members with diabetes, or skin issues like acne, had begun reducing their consumption by choosing "less sugar" options or switching to plain water. However, these reduction efforts were not yet fully consistent, as they remained influenced by situational and emotional factors.

According to the interview results, the most dominant words are "beverage," "sweet," "like," "again," "usually," "often," "sugar," "coffee," "tea," and "diabetes." The following provides a detailed explanation of the dominant words that emerged during in-depth interviews:



### **1. Largest Words: "beverage," "sweet," "like," "again"**

These words occupy the most prominent positions, indicating that sweetened beverages are an integral part of daily life. Respondents did not refer to them merely as health-related objects but also as emotional needs and habits. Phrases such as "like" and "again" confirm personal attraction and repetitive tendencies even when they are aware of the risks.

"I like sweet beverages... almost every day in the past month..." "I'm currently trying to reduce my sugar intake... but I still like them."

This illustrates the conflict between knowledge and behavior: despite knowing the dangers, habits and the feeling of "liking" still dominate consumption decisions.

### **2. Other Important Words: "often," "usually," "have experienced," "already"**

These words indicate frequency and normalization of consumption. The words "often" and "usually" confirm that drinking sweetened beverages is not extraordinary but rather a routine activity already integrated into lifestyle. The words "have experienced" and "already" reflect personal experiences, both positive and negative, that shape their perceptions.

"I often honestly repeat... milk tea... only five thousand rupiah." "I already know there are side effects... but my body feels like 'whatever, it's fine'."

This shows that real-life experiences (such as illness or symptoms) have a stronger influence on behavior change than theoretical information.

### **3. Health-Related Words: "diabetes," "sugar," "illness," "cholesterol," "inflammation"**

Although smaller in size compared to "like" or "sweet," the presence of these words is very important. They indicate that awareness of health risks already exists, but is not yet strong enough to change habits. The words "diabetes" and "sugar" appear because many respondents mentioned having family members or themselves with metabolic disease histories.

"If I drink it often, it's definitely dangerous, Mom, because I used to drink it often and then I got inflammation." "My family honestly has a history of diabetes."

However, these words are rarely mentioned in the context of solutions or prevention—they more often serve as reasons "why to be cautious" rather than "why to stop."



#### **4. Emotional & Social Words: "mood," "stress," "friends," "family," "school"**

These words indicate that sweetened beverage consumption is influenced not only by health factors but also by psychological and social factors. Sweetened beverages are often used as an escape during stress or as part of social interaction.

"When my mood is bad, I prefer to drink sweet beverages to neutralize my mood." This confirms that health interventions must consider emotional and social dimensions, not just medical facts and theoretical education.

#### **5. Information & Education Words: "social media," "TikTok," "read," "info," "education"**

These words show that social media, especially TikTok, is the primary source of information. However, the words "read" and "info" are smaller in size, indicating that information delivery through lengthy text is less appealing. Respondents prefer visual and concise content. "Usually social media like TikTok... the presentation goes straight to the point... maybe it's effective." "Students like me are more interested in visual content. If it's in the form of lengthy text, I usually skip it."

This indicates that educational strategies must adapt to the preferences of young people using short videos, infographics, or personal narratives.

### **Discussion**

The research findings indicate that despite the majority of respondents (87.7%) having good knowledge about the dangers of sugar-sweetened beverages (SSBs), their consumption behavior remains high, with 89.3% consuming SSBs occasionally. This finding reflects a discrepancy between knowledge and action, a phenomenon commonly observed in health behavior studies. Behavioral change is influenced not only by information but also by complex psychological, social, and environmental factors (Gao, 2024). In this context, although respondents are aware of risks such as diabetes and obesity, habits, taste preferences, and emotional factors like stress serve as the main barriers to behavioral change. Health literacy refers to the cognitive and social skills that



influence an individual's motivation and capacity to access, understand, and use health information to improve and maintain good health. Research in Saudi Arabia revealed that most health students have inadequate health literacy. Although health students are expected to have better health understanding, only about 18.6% achieve adequate health literacy levels (Alqahtani et al., 2024).

The primary source of information about nutrition and SSBs comes from social media, particularly TikTok and Instagram, used by 92.5% of respondents. This aligns with global trends among students, where digital platforms have become the most accessible and preferred sources of health education (Elkarima, Edna; Abihail, Chrysoprase Thasya; Priambudi, Dicky Andhyka; Mahmudiono, Trias; Megatsari, Hario; Indriani, Diah; Pratama, 2023; Gao, 2024). However, information credibility is a concern, as not all content comes from healthcare professionals or official sources. Some respondents expressed skepticism about information from anonymous accounts, though they remained interested due to its visual and concise presentation. This underscores the need for collaboration between nutrition experts and influencers to disseminate accurate yet engaging health messages for young people (Bawadi et al., 2019). A study on adolescents also found that application-based and infographic learning materials were highly effective in improving nutritional literacy among teenagers, supporting the importance of digital approaches in health education (Oktafiani, Dyah Ayu Lirista; Astuti & Ningtyias, 2025).

SSB consumption is also influenced by emotional and social factors. Many respondents reported using sweetened beverages as an escape during stress or when in a bad mood. These findings are supported by research stating that high-sugar foods and beverages are often associated with short-term emotional regulation, despite potentially damaging long-term health (Higgins et al., 2010). Additionally, the normalization of consumption through social environments such as purchasing with friends or family reinforces this habit. The WordCloud from interview transcripts showed dominance of words like "like," "often," and "again," illustrating how deeply sweetened beverages are embedded in daily routines, despite awareness of the risks. Research on the Relationship between Sociodemographic and Behavioral Factors with Sugar Intake in Adults in America also reported that added sugar intake from SSBs correlates strongly with age, ethnicity,



and physical activity status, indicating that SSB consumption patterns are influenced by demographic and lifestyle factors (Park et al., 2020).

Although knowledge about government regulations regarding SSBs remains low (only 44.8% are aware), respondents showed interest in health education when delivered in an engaging and interactive manner. This presents a significant opportunity for educational institutions and healthcare professionals to utilize digital platforms in health campaigns. Edna et al. (2023) suggested that nutritional education should be packaged in short videos, infographics, or group discussions (focus group discussions) relevant to students' lifestyles (Elkarima, Edna; Abihail, Chrysoprase Thasya; Priambudi, Dicky Andhyka; Mahmudiono, Trias; Megatsari, Hario; Indriani, Diah; Pratama, 2023). Additionally, interventions should incorporate personalization aspects, such as personal experience stories or long-term impact simulations, to emotionally resonate and motivate change. A similar intervention conducted at SMK Negeri 1 Tenggara significantly improved students' nutritional literacy after implementing mission-based education and interactive media, proving that innovative approaches can change adolescents' perceptions and behaviors toward SSB consumption (Simatupang & Wisnuwardani, 2025).

Overall, these findings demonstrate that one-way education is insufficient without a holistic approach that considers emotional, social, and technological dimensions. To change SSB consumption behavior, multi-sectoral strategies combining public policy, digital innovation, and evidence-based interpersonal communication approaches are needed. The roles of families, schools, and social media should be maximized as change agents, especially in cultures with strong traditions of sweetened beverage consumption. By building a relevant, engaging, and sustainable education ecosystem, existing knowledge can be transformed into concrete actions toward achieving a healthy lifestyle free from excessive sugar consumption.



## CONCLUSION

The majority of respondents (87.7%) have good knowledge about the dangers of sugarsweetened beverages (SSBs), yet their consumption behavior remains high, with 89.3% consuming them occasionally. Social media is the primary information source (92.5%), particularly TikTok and Instagram, although its credibility varies. Emotional factors such as stress and habits are the main drivers of consumption, stronger than health considerations. Only 44.8% of respondents are aware of government policies regarding sugar-sweetened beverages, indicating low regulation awareness.

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