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THE DUAL ROLE OF SOCIAL MEDIA IN SHAPING ADOLESCENT DIETARY KNOWLEDGE AND ATTITUDES: EVIDENCE FROM A SEMI-RURAL DISTRICT IN INDONESIA

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Abstract

Social media platforms have become dominant sources of food-related information among adolescents, shaping dietary knowledge, attitudes, and consumption behavior. However, evidence from semi-rural settings in Indonesia remains limited. This study aimed to examine the influence of social media exposure on adolescent dietary knowledge and attitudes in Pasarwajo District, a semi-rural area of Southeast Sulawesi, and to explore its implications for health promotion. A mixed-method cross-sectional design was employed involving 100 adolescents aged 15–18 years who were active social media users. Quantitative data were collected using structured questionnaires and analyzed using descriptive statistics and Fisher's exact test, while qualitative data from in-depth interviews with 15 adolescents were analyzed thematically. The results showed that daily social media use was significantly associated with higher nutritional knowledge ($p = 0.021$) and more positive attitudes toward healthy eating ($p = 0.039$). Female adolescents demonstrated more favorable attitudes than males ($p = 0.038$). Qualitative findings revealed a dual influence of social media, combining exposure to health-promoting content with frequent fast-food promotions, while family remained an important non-digital influence. This study offers contextual novelty by demonstrating that in a semi-rural Indonesian setting, social media may function not only as a risk factor but also as a complementary channel for strengthening adolescent nutritional awareness when supported by family and school environments. These findings highlight the importance of integrating digital and community-based strategies in adolescent health promotion.

Keywords: Adolescent health; Consumption pattern; Health promotion; Social media

INTRODUCTION

Adolescence is a critical developmental stage in which lifestyle behaviors, including dietary patterns, begin to solidify and strongly influence long-term health outcomes (1). The World Health Organization (WHO) reports that unhealthy diets and physical inactivity are among the leading risk factors for non-communicable diseases (NCDs), which are responsible for 71% of all global deaths annually (2). Poor dietary practices in adolescence, such as high consumption of ultra-processed foods and sugar-sweetened beverages, have been linked with an increased risk of overweight, obesity, diabetes, and cardiovascular disease later in life (3). Therefore, promoting healthy dietary behaviors among adolescents is an urgent public health priority both globally and nationally (4).

In Indonesia, adolescent nutrition problems have become increasingly alarming in recent years. The 2023 Basic Health Research (Riskesdas) survey reported that 13.5% of adolescents aged 13–18 years were overweight

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and 4.0% were obese, showing an upward trend compared to 2018 (5). Moreover, 61% of adolescents consumed sugar-sweetened beverages daily, while 40% reported consuming fast food at least once per week, indicating unhealthy dietary patterns (6). At the provincial level, the Indonesian Nutritional Status Survey (SSGI) reported that the prevalence of stunting in Southeast Sulawesi reached 22.7%, placing the province among those with relatively high nutritional problems. In Buton Regency, stunting prevalence was reported at 32.6% in 2022, reflecting persistent nutrition challenges that may originate during adolescence. In response, local authorities have implemented school-based initiatives such as the Aksi Bergizi program in Pasarwajo District to improve adolescent nutrition through education, supplementation, and healthy eating campaigns. These data highlight the urgent need for effective interventions, including digital nutrition education, to improve dietary adherence and eating behavior among adolescents in the region.

These behaviors reflect a nutrition transition where modern, energy-dense dietary choices are gradually replacing traditional food practices (7). The Indonesian Nutrition Status Survey (SSGI) 2023 also highlighted that adolescents are increasingly vulnerable to the double burden of malnutrition, where overweight and obesity coexist with micronutrient deficiencies (8). Such trends suggest that without proper intervention, the adolescent population may significantly contribute to the rising prevalence of NCDs in Indonesia over the coming decades (9).

The rapid expansion of social media use has further complicated adolescent dietary behaviors. Platforms such as TikTok and Instagram have emerged as dominant sources of information and inspiration, shaping how adolescents view food, body image, and lifestyle (10). Evidence from international studies indicates that exposure to digital food marketing and viral eating trends increases adolescents' preference for calorie-dense, nutrient-poor products (11). At the same time, social media has demonstrated potential as a tool for health promotion, with influencer-driven campaigns and peer-led digital challenges promoting healthier dietary choices such as reducing sugary drink intake or adopting plant-based diets. This dual role of social media presents both risks and opportunities, underscoring the need to critically examine how digital platforms influence adolescent consumption behaviors in diverse settings.

Despite the growing body of literature, research on the impact of social media on adolescent nutrition in Indonesia remains limited

and fragmented. Existing studies tend to focus on urban populations, where internet access and exposure to digital food marketing are more intensive (12). However, semi-rural areas are undergoing rapid digital transitions and may face unique challenges, as adolescents in these regions are simultaneously influenced by modern digital trends and entrenched cultural or familial dietary norms (13,14). The interaction between these influences is not yet fully understood, leaving a significant gap in evidence to inform culturally relevant health promotion strategies (15).

Pasarwajo District in Buton Regency, Southeast Sulawesi, represents one such semi-rural setting experiencing increased digital penetration while still retaining traditional dietary practices. Adolescents in this area are active social media users, but nutrition education and formal health promotion programs remain limited. This creates a complex environment where social media content may either reinforce or undermine existing dietary behaviors. Understanding how adolescents in semi-rural Pasarwajo navigate these influences is crucial for designing effective health promotion strategies that leverage digital platforms and integrate offline support from families, schools, and communities.

Therefore, this study aims to examine the impact of social media on adolescent consumption behavior in the semi-rural Pasarwajo District. Specifically, it examines the relationship between social media exposure, nutritional knowledge, and dietary attitudes, while also investigating adolescents' perceptions of digital food content. The findings are expected to contribute to the development of integrated health promotion strategies that address both the risks and opportunities of social media in shaping adolescent nutrition, ultimately supporting Indonesia's efforts to prevent NCDs and improve youth health outcomes.

RESEARCH METHODS

This study applied a mixed-methods cross-sectional design to examine the influence of social media on adolescent consumption behavior in Pasarwajo District, Buton Regency, Southeast Sulawesi. A total of 100 adolescents aged 15–18 years were selected using purposive sampling, with 15 participants chosen for in-depth interviews. Quantitative data were collected using structured questionnaires covering demographics, social media use, nutritional knowledge, and dietary attitudes, while qualitative data were obtained through semi-structured interviews exploring adolescents' experiences with food-related social media content. Data collection was conducted from July

to August 2025 through face-to-face surveys and interviews. Quantitative data were analyzed using descriptive statistics and Fisher's exact test with a significance level of $p < 0.05$ using SPSS version 25, while qualitative data were analyzed using descriptive thematic analysis.

RESULT AND DISCUSSION

Results

Table 1. Sociodemographic and Media Use

Variabel	n	%
Gender		
Famale	70	70
Male	30	30
Total	**100**	**100**
Daily Social media use		
Yes	91	91
No	9	9
Total	**100**	**100**
Main Social Media Platform		
TikTok	54	54
Instagram	24	24
Facebook	12	12
Youtube	3	3
Whatsapp	3	3
Others	4	4
Total	**100**	**100**

Source: Data Processing, 2025

Based on Table 1, most respondents were female, with 70 participants (70%), while male participants accounted for 30 respondents (30%). In terms of social media use, the majority of adolescents reported using social media daily, totaling 91 respondents (91%), whereas 9 respondents (9%) reported not using social media every day. Regarding the main social media platform used, TikTok was the most dominant platform with 54 respondents (54%), followed by Instagram with 24 respondents (24%) and Facebook with 12 respondents (12%). Meanwhile, YouTube and WhatsApp were each used by 3 respondents (3%), and other platforms were used by 4 respondents (4%). These findings indicate that adolescents in the study predominantly use social media daily, with TikTok as the most widely used platform.

Table 2. Nutritional Knowledge and Attitude Levels

Variabel	n	%
Knowladge		
Good	86	86.0
Poor	14	14.0
Total	**100**	**100**

Attitude		
Good	66	66.0
Poor	34	34.0
Total	**100**	**100**

Source: Data Processing, 2025

Based on Table 2, most adolescents (86%) demonstrated sufficient nutritional knowledge, while 14% were categorized as having poor knowledge. Regarding attitude, 66% of respondents had a positive attitude toward healthy eating behaviors, while 34% had a poor attitude.

Table 3. Association between Daily Social Media Use, Gender, and Nutritional Knowledge

Variable	**Knowledge**				***p-value***
	Good		**Poor**		
	n	**%**	**n**	**%**	
Social Media Use					
Yes	81	94.2	10	71.4	0.021
No	5	5,8	4	28,6	
Gender					
Female	63	90.0	7	10.0	0.114
Male	23	76.7	7	23.3	

Source: Data Processing, 2025

Based on Table 3, there is a significant relationship between social media use and knowledge level, with a p-value of 0.021 ($p < 0.05$). Respondents who use social media tend to have better knowledge, where 94.2% of social media users had good knowledge, compared to 71.4% among non-users. Meanwhile, gender was not significantly associated with knowledge level with a p-value of 0.114 ($p > 0.05$), although females showed a higher proportion of good knowledge (90.0%) compared to males (76.7%).

Table 4. Association between Daily Social Media Use, Gender, and Nutritional Attitude

Variable	**Attitude**				***p-value***
	Good		**Poor**		
	n	**%**	**n**	**%**	
Social Media Use					
Yes	63	95.5	28	82.4	0.039
No	3	4,5	6	17,6	
Gender					
Female	51	72.8	19	27.2	0.038
Male	15	50.0	15	50.0	

Source: Data Processing, 2025

Based on Table 4, there is a significant relationship between social media use and attitude, with a p-value of 0.039 ($p < 0.05$). Respondents who use social media tend to have

a better attitude, where 95.5% of social media users had a good attitude, compared to 82.4% among non-users. In addition, gender is also significantly associated with attitude, with a p-value of 0.038 ($p < 0.05$). Females showed a higher proportion of good attitudes (72.8%) compared to males (50.0%).

Discussion

This study revealed a distinctive pattern: adolescents in semi-rural Pasarwajo who reported daily social media use were more likely to demonstrate sufficient nutritional knowledge (86%) and positive attitudes toward healthy eating (66%), compared to their peers who used social media less frequently. Although most respondents demonstrated good nutritional knowledge, a smaller proportion showed positive attitudes toward healthy eating. This gap may reflect the influence of environmental and social factors such as taste preference, peer norms, and food availability, indicating that knowledge alone does not automatically translate into positive dietary attitudes. Contrary to the dominant narrative that social media encourages unhealthy eating behaviors (16), our findings suggest that, within this socio-cultural context, digital engagement may act as a reinforcing factor for health literacy.

One plausible explanation lies in the information ecology of semi-rural communities. Adolescents in Pasarwajo inhabit a setting where traditional influences from family and school remain strong (17). However, they also participate in digital networks that expose them to health-related campaigns, peer-shared experiences, and culturally resonant content on platforms such as TikTok and Instagram (18). This dual exposure may create a synergistic effect, where online messages about balanced diets and healthy lifestyles are interpreted through the lens of family norms and school-based education, thereby enhancing retention and internalization.

The qualitative data collected in this study reinforce this interpretation. Several participants described being motivated by short videos of healthy recipes, fitness challenges, and local influencers promoting healthier dietary practices, which provided not only information but also relatable role models. Rather than passively absorbing commercial food advertising, adolescents appeared to actively curate and select content that aligned with their emerging identity as health-conscious individuals (19). This agency underscores a shift from the stereotype of adolescents as vulnerable consumers to recognizing them as active co-creators of digital health cultures.

Moreover, the significant association between gender and nutritional attitudes where

females were more likely to adopt positive attitudes offers further nuance. Previous literature highlights that young women are generally more responsive to health-related content, often driven by body image concerns or social norms surrounding femininity and self-care (20). In Pasarwajo, this tendency may intersect with the proliferation of health-oriented content on social media, amplifying the positive effect among female adolescents. For male adolescents, however, the relatively lower positive attitude suggests that future interventions may need to tailor digital health promotion strategies differently by gender, leveraging male role models and culturally resonant content to bridge the gap.

Taken together, these findings highlight the context-dependent nature of social media's impact. In semi-rural Pasarwajo, where traditional health education and community structures remain influential, social media appears to complement rather than contradict these forces functioning as a vehicle for reinforcing positive nutritional knowledge and attitudes. This challenges the dominant global narrative of harm and underscores the importance of cultural and geographic context when interpreting the health implications of digital media use.

The broader literature reports mixed and context-dependent associations between social media and adolescent diet. Systematic reviews demonstrate substantial evidence that unregulated social media exposure and influencer marketing often increase the preference and intake of energy-dense, nutrient-poor foods, and are linked to skipping breakfast and higher consumption of sweets/SSBs (21). At the same time, multi-country analyses and recent reviews report heterogeneity: problematic (addiction-like) social-media use is frequently detrimental to diet, while non-problematic/excessive exposure may show mixed or even positive associations where health content or peer healthy-eating norms are present (22). Thus, our positive associations (daily use ↔ better knowledge & attitudes) fit within the "context matters" pattern. If adolescents in Pasarwajo are exposed to educational/peer health content, or if local campaigns and peer networks amplify healthy messages, social media can support the development of knowledge and attitudes, even though other contexts show harm from commercialized or unhealthy content.

Mechanistically, the literature warns that influencer marketing on platforms such as TikTok often lacks robust sponsorship disclosure and predominantly features branded, unhealthy products (23). This observation explains why

social media exposure sometimes promotes unhealthy consumption. At the same time, intervention studies demonstrate that social media can be harnessed for nutrition education when content is evidence-based, tailored, and leverages peer/social support (24). These two strands together explain why different studies (and regions) can produce apparently contradictory findings: the type of exposure (commercial vs. educational/peer) and use pattern (problematic vs. routine) determine the direction and magnitude of effect.

CONCLUSION AND RECOMMENDATION

This study found that adolescents who used social media daily tended to have better nutritional knowledge and more positive attitudes toward healthy eating, indicating that social media can support health education when reinforced by family and school influences. However, the study is limited by its cross-sectional design, small sample size, and reliance on self-reported data. Despite these limitations, the findings provide insight into the role of social media in promoting adolescent nutrition in semi-rural Indonesian settings and highlight the need for further research using stronger study designs.

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