

The Effect of Flipchart-Based Nutrition Counseling on Junk Food Knowledge and Attitudes Among Overweight Adolescents in Palangka Raya

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Abstract

Background: Frequent junk food consumption, characterized by high calorie, sugar, fat, and salt content with limited nutritional value, may increase the risk of overweight and unhealthy eating habits among adolescents. Nutrition education using attractive visual media, such as flipcharts, may improve adolescents' understanding and attitudes toward healthier food choices. **Objective:** This study aimed to determine the effect of nutrition counseling using flipchart media on knowledge and attitudes regarding junk food among overweight adolescents at SMP Muhammadiyah Palangka Raya. **Methods:** A pre-experimental one-group pretest-posttest design was employed. The population consisted of overweight students in grades 7, 8, and 9. A total of 31 respondents were selected through purposive sampling. Nutrition counseling was delivered using flipchart media, while respondents' knowledge and attitudes were assessed before and after the intervention. Differences between pretest and posttest scores were analyzed using the Wilcoxon signed-rank test. **Results:** Before counseling, 45.2% of respondents had poor knowledge regarding junk food. After counseling, 90.3% demonstrated good knowledge. Attitudes also improved: 74.2% of respondents had negative attitudes at pretest, whereas 71.0% demonstrated positive attitudes at posttest. Statistical analysis showed a significant difference in knowledge and attitudes before and after the intervention ($p=0.001$). **Conclusion:** Nutrition counseling using flipchart media significantly improved the knowledge and attitudes of overweight adolescents regarding junk food. Flipcharts can serve as an effective educational medium to help adolescents understand the health effects of junk food, limit its consumption, and make more informed and healthier dietary choices. This medium is practical, engaging, and suitable for school-based nutrition education.

INTRODUCTION

Adolescence is a transitional period toward adulthood involving physical changes, cognitive development related to thinking processes, and socio-emotional growth linked to psychosocial development (Hafiza, 2020). Indonesia is currently undergoing a modernization phase characterized by various internal and global influences. This shift gradually fosters a modern lifestyle that impacts public preferences toward fast food, which generally falls under the category of junk food (Sania, 2023).

The term junk refers to trash or refuse, while food refers to nourishment; therefore, junk food is defined as food lacking adequate nutritional value. Consuming junk food is considered less beneficial and poses health risks. Junk food typically contains high levels of fat, including chicken noodles, meatball

soup (bakso), fried chicken, French fries, hamburgers, pizza, potato chips, and various instant products (Sania, 2023).

A modern lifestyle tends to contribute to an increase in adolescent nutritional status beyond normal limits, ultimately triggering overweight conditions and obesity. Overweight is a condition caused by various factors, including environmental influences such as food choices, unbalanced dietary patterns, large portion sizes, and low physical activity levels (Mustofa S Nugroho, 2021). Nutritional knowledge plays a crucial role in shaping attitudes and food choices, particularly in selecting healthy, balanced options, and serves as the foundation for proper nutritional behaviors, including daily eating habits (Dewanti et al., 2023). Individuals with good nutritional understanding tend to be more selective and cautious in choosing and consuming food (Prawira et al., 2023).

Based on the 2023 Indonesian Health Survey (SKI) data, the prevalence of overweight adolescents in Indonesia reached 16.2%. In Central Kalimantan Province, the figure was slightly higher at 17.1%. Meanwhile, according to 2018 Basic Health Research (RISKESDAS) data, the prevalence of overweight adolescents in Palangka Raya City was recorded at 15.87%.

In response to these conditions, an intervention in the form of nutrition counseling is required to enhance adolescents' awareness and understanding of junk food consumption. Nutrition counseling is a two-way communication process between a counselor and a client aimed at facilitating the client in identifying, understanding, and determining appropriate steps to address nutritional issues (Rahmayanti, 2023). Educational methods can be delivered through lecture and interactive discussion approaches using tools such as flipcharts. A flipchart is a learning medium arranged in a series of pages containing educational messages regarding nutrition. In the context of health promotion, flipcharts are proven to be effective counseling aids, particularly for addressing public health issues. The use of this medium positively impacts knowledge enhancement, attitude formation, and behavioral changes related to nutrition and health issues (Sutrisno S Sinanto, 2022).

This study aims to evaluate the effect of nutrition counseling through flipchart media on knowledge and attitudes regarding junk food among overweight adolescents at SMP Muhammadiyah Palangka Raya.

METHOD

Study Design, Location, and Time

This study employed a pre-experimental method using a One-Group Pretest-Posttest design to measure the effect of the intervention on knowledge levels and attitudes toward junk food. The intervention consisted of nutrition counseling using flipcharts, accompanied by the administration of junk food questionnaires. The study was conducted at SMP Muhammadiyah Palangka Raya in May 2025.

Population and Research Subjects

The population comprised all 7, 8, and 9, grade male and female students at SMP Muhammadiyah classified as overweight. Sampling was carried out via purposive sampling, yielding a total of 31 respondents who met the inclusion criteria.

1. Inclusion criteria: Registered students of SMP Muhammadiyah, aged 12–16 years, overweight status, and not currently ill.
2. Exclusion criteria: Respondents who withdrew from the study or had normal nutritional status.

Data Collection Techniques

Primary data covered respondent characteristics such as age, sex, knowledge, and attitudes toward junk food. Secondary data included student population records, school profiles, nutritional status data, and activity documentation (e.g., photos during counseling sessions and during pre-test/post-test

administrations).

Bivariate analysis was conducted using the non-parametric Wilcoxon signed-rank test to evaluate differences in participants' knowledge and attitudes regarding junk food before and after the flipchart-based nutrition counseling intervention. The statistical significance level was set at $p < 0.05$. This study received ethical approval from the Ethics Committee of Universitas Sari Mulia, Banjarmasin, Indonesia, on April 17, 2025, under Decree No. 037/KEP-UNISM/IV/2025.

RESULTS AND DISCUSSION

Distribution of Respondent Characteristics

Table 1 indicates that the majority of respondents were aged 13–15 years (26 respondents, 83.8%), with a small proportion aged 16 years (2 respondents, 6.5%). In terms of sex, females accounted for 58.1% (18 respondents), while males comprised 41.9% (13 respondents). Regarding nutritional status, most participants were classified as overweight (30 respondents, 96.8%), while 1 respondent was classified as obese (3.2%).

In terms of weight, the majority weighed between 57–60 kg (13 respondents, 42.1%), followed by 62–65 kg (12 respondents, 38.8%), and 67–90 kg (6 respondents, 19.1%). Compared to the ideal body weight standards based on the 2019 Recommended Dietary Allowances (RDA/AKG), most respondents exceeded the recommended range, confirming a trend toward overnutrition. Height-wise, 18 respondents (58.2%) were 158–162 cm tall, 8 (25.7%) were 154–157 cm tall, and 5 (16.1%) were 164–167 cm tall, which generally aligns with ideal height ranges for adolescents.

Tabel 1. Distribution of Respondent Characteristics

No	Respondent Characteristics	n	%
1.	Age Category		
	10–12 years	3	9.7
	13–15 years	26	83.8
	16–18 years	2	6.5
	Total	31	100
2.	Sex Category		
	Male	13	41.9
	Female	18	58.1
	Total	31	100
3.	Body Weight Category		
	57–60 kg	13	42.1
	62–65 kg	12	38.8
	67–90 kg	6	19.1
	Total	31	100
4.	Body Height Category		
	154–157 cm	8	25.7
	158–162 cm	18	58.2
	164–167 cm	5	16.1
	Total	31	100
5.	Nutritional Status Category		
	Overweight	30	96.8
	Obese	1	3.2
	Total	31	100

Effect of Nutrition Counseling on Knowledge

Tabel 2. The Effect of Nutrition Counseling About Junk Food Using Flipchart Media on Attitudes of Overweight Adolescents

Attitude Category	Pre-Test (n)	Pre-Test (%)	Post-Test (n)	Post-Test (%)	Sig. (p-value)
Positive	8	25.8	22	71.0	< 0.001
Negative	23	74.2	9	29.0	
Total	31	100	31	100	

Table 2 shows that during the pre-test, 45.2% of respondents (14 people) were in the 'poor' knowledge category. Following the post-test, a significant increase was observed, with 90.3% (28 people) achieving a 'good' knowledge category. The Wilcoxon statistical test yielded a value of $p < 0.001$, indicating that nutrition counseling using flipcharts significantly affected changes in knowledge before and after intervention.

Nutritional knowledge plays a major role in guiding personal food choices. Adequate understanding of junk food is vital to prevent the negative effects of excessive consumption on health. The knowledge gain observed can be attributed to clear material delivery and engaging visual aids (Annisa et al., 2022). Flipcharts serve as visual tools that help respondents absorb and retain information more effectively (Lestari, 2021). These results mirror findings by Mulyanto S Isnaeni (2021), who reported a significant increase in student knowledge after a flipchart-based intervention ($p = 0.000$).

Effect of Nutrition Counseling on Attitudes

Tabel 3. The Effect of Nutrition Counseling About Junk Food Using Flipchart Media on Knowledge of Overweight Adolescents

Knowledge Category	Pre-Test (n)	Pre-Test (%)	Post-Test (n)	Post-Test (%)	Sig. (p-value)
Good	5	16.1	28	90.3	< 0.001
Moderate	12	38.7	3	9.7	
Poor	14	45.2	—	—	
Total	31	100	31	100	

Table 3 reveals that during the pre-test, 74.2% of respondents (23 people) exhibited a negative attitude toward junk food. Post-intervention results demonstrated a shift, with 71% (22 people) displaying a positive attitude. The Wilcoxon test yielded $p < 0.001$, confirming a statistically significant change in attitudes following counseling.

Attitudes toward junk food reflect an individual's feelings and behavioral tendencies regarding its consumption (Rahmawati, 2021). The visual appeal and clear messaging of flipcharts engaged students, thereby facilitating positive shifts in attitude. According to attitude change theory, interaction with structured educational materials exposes adolescents to new experiences and insights, fostering healthier perspectives on diet (Mulyanto S Isnaeni, 2021).

CONCLUSIONS AND RECOMMENDATIONS

Based on the research findings, it can be concluded that:

1. Nutrition counseling regarding junk food using flipchart media significantly influences the knowledge of overweight adolescents at SMP Muhammadiyah Palangka Raya ($p < 0.001$).
2. Nutrition counseling regarding junk food using flipchart media significantly influences positive

attitude changes among overweight adolescents at SMP Muhammadiyah Palangka Raya ($p < 0.001$).

REFERENCES

- Annisa, M., Atmadja, G. F. T., S Susilowati, E. P. (2022). Tingkat Pengetahuan dan Kebiasaan Konsumsi Junk Food dengan Status Gizi Pada Mahasiswa Program Studi Gizi Universitas Siliwangi. *Nutrition Scientific Journal*, 1(1), 21–29.
- Dewanti, R., Ishak, S., Rate, S., S Herman, H. (2023). Hubungan Pengetahuan Gizi dengan Sikap Dalam Pemilihan Makanan Sehat Pada Remaja di Area Pedesaan. *Jurnal Ilmu Kebidanan*, 13(2), 45–52.
- Hafiza, D. (2020). Hubungan Kebiasaan Makan Dengan Status Gizi Pada Remaja SMP YLPI Pekanbaru. *Jurnal Medika Utama*, 2(1), 332–342.
- Kemendes RI. (2023). Survei Kesehatan Indonesia (SKI) Tahun 2023. Kementerian Kesehatan Republik Indonesia, Jakarta.
- Kementerian Kesehatan RI. (2018). Hasil Utama Riskesdas 2018. Badan Penelitian dan Pengembangan Kesehatan, Jakarta.
- Laoli, J., Lase, D., S Waruwu, S. (2022). Analisis Hubungan Sikap Pribadi dan Harmonisasi Kerja pada Kantor Kecamatan Gunung Sitoli Alo’Oa Kota Gunung Sitoli. *Jurnal Ilmiah Simantek*, 6(4), 145–151.
- Lestari, I. P. (2021). Pengaruh Penyuluhan Gizi Melalui Media Animasi dan Leaflet Terhadap Pengetahuan dan Sikap Tentang Makanan Cepat Saji Pada Remaja Di Desa Binjai (Undergraduate thesis, UIN Sumatera Utara, Medan).
- Mulyanto, T., S Isnaeni. (2021). Efektivitas Pendidikan Kesehatan Menggunakan Lembar Balik Terhadap Pengetahuan dan Sikap dalam Pemilihan Jajanan Sehat Pada Anak SDN 05 Wanasari Kabupaten Bekasi. *Jurnal Antara Kebidanan*, 4(2), 1211–1222.
- Mustofa, A., S Nugroho, P. T. (2021). Hubungan Pengetahuan Gizi dan Junk Food dengan Kejadian Overweight pada Remaja. *Borneo Student Research*, 2(2), 1240–1246.
- Peraturan Menteri Kesehatan Republik Indonesia Nomor 28 Tahun 2019 tentang Angka Kecukupan Gizi Yang Dianjurkan Untuk Masyarakat Indonesia. (2019). Menteri Kesehatan Republik Indonesia, Jakarta.
- Prawira, S. E., Arundina, A., S Fitrianingrum, I. (2023). Hubungan Pengetahuan dan Sikap Mahasiswa Fakultas Kedokteran Universitas Tanjung Pura dengan Pola Konsumsi Junk Food Melalui Pemesanan Secara Daring. *Majalah Kedokteran Andalas*, 46(2), 443–451.
- Rahmawati, D. (2021). Hubungan Antara Pengetahuan dan Sikap dengan Perilaku Konsumsi Makanan Cepat Saji pada Remaja. *Jurnal Gizi Indonesia*, 44(2), 87–94.
- Rahmiyanti, E. N. (2023). Pengaruh Pemberian Konseling Menggunakan Media Lembar Balik Terhadap Pengetahuan dan Sikap Ibu Balita Stunting di Wilayah Kerja UPTD Puskesmas Kasongan (Undergraduate thesis, Politeknik Kesehatan Palangka Raya, Palangka Raya).
- Sania, R. U. (2023). Hubungan Pengetahuan dan Sikap Mahasiswa Prodi Gizi Universitas Islam Negeri Sultan Syarif Kasim Riau Terhadap Kebiasaan Konsumsi Junk Food (Undergraduate thesis, Universitas Islam Negeri Sultan Syarif Kasim Riau, Riau).
- Sutrisno, S Sinanto, A. R. (2022). Efektivitas Penggunaan Lembar Balik sebagai Media Promosi Kesehatan: Tinjauan Sistematis. *Jurnal Kesehatan Terpadu*, 13(1), 1–10.