

Improving Knowledge and Attitudes on Obesity Prevention Through Emo-Demo at Lubuk Buaya Community Health Center

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ABSTRAK

Latar Belakang: Obesitas merupakan suatu keadaan terjadinya penumpukan lemak tubuh yang berlebih sehingga berat badan seseorang jauh di atas normal yang ditandai dengan IMT > 25. Data dari Puskesmas Lubuk Buaya menunjukkan prevalensi obesitas mencapai 10,2%. Rendahnya pengetahuan dan sikap masyarakat terhadap pencegahan obesitas menjadi salah satu penyebab utamanya. Salah satu metode edukasi inovatif yang dapat diterapkan adalah metode *Emo-Demo* (*Emotional Demonstration*), yang menggabungkan pendekatan emosional dan partisipatif. **Tujuan Penelitian:** untuk mengetahui peningkatan pengetahuan dan sikap masyarakat tentang pencegahan obesitas setelah diberikan edukasi menggunakan media *Emo-Demo* di wilayah kerja Puskesmas Lubuk Buaya. **Metode yang digunakan:** Penelitian ini berjenis *mixed method* dengan desain *quasi-experimental (one group pretest-posttest)* dan pendekatan studi kasus eksploratif. Sampel sebanyak 70 orang ditentukan menggunakan teknik *purposive sampling*. Data dikumpulkan melalui wawancara mendalam dan kuesioner. Analisis data dilakukan menggunakan menggunakan uji Wilcoxon. **Hasil penelitian:** Hasil penelitian telah dihasilkan media edukasi *Emo-Demo* dalam upaya pencegahan obesitas pada masyarakat, nilai median pengetahuan meningkat dari 14,00 menjadi 18,00, dan sikap meningkat dari 63,00 menjadi 81,00 setelah diberikan edukasi *Emo-Demo*. Hasil menunjukkan terdapat peningkatan bermakna pada pengetahuan dan sikap ($p\text{-value } 0,0001 < 0,05$). **Simpulan :** terdapat peningkatan pengetahuan dan sikap masyarakat tentang pencegahan obesitas melalui media edukasi *Emo-Demo* di wilayah kerja Puskesmas Lubuk Buaya Kota Padang. Media edukasi dengan metode *Emo-Demo* diharapkan dapat dikembangkan dan dimanfaatkan sebagai upaya pencegahan berbagai penyakit.

Kata kunci: Obesitas, *Emo-Demo*, Pengetahuan, Sikap

ABSTRACT

Background: Obesity is a condition characterized by excessive accumulation of body fat, resulting in a body weight far above normal, indicated by a BMI > 25. Data from Lubuk Buaya Public Health Center show that the prevalence of obesity has reached 10.2%. The low levels of community knowledge and attitudes toward obesity prevention are among the main contributing factors. One innovative educational method that can be applied is the *Emo-Demo* (*Emotional Demonstration*) method, which combines emotional and participatory approaches. **Purpose:** This study aimed to determine the improvement in community knowledge and attitudes regarding obesity prevention after being provided education using *Emo-Demo* media in the working area of Lubuk Buaya Public Health Center. **Methods:** This research used a mixed-method design with a quasi-experimental approach and an exploratory case study. A total of 70 respondents were selected using purposive sampling. Data were collected through in-depth interviews and questionnaires. Data analysis was performed using the Wilcoxon test. **Results:** The results of this study produced *Emo-Demo* educational media for community obesity prevention. The median knowledge score increased from 14.00 to 18.00, and the attitude score increased from 63.00 to 81.00 after the *Emo-Demo* education. Statistical tests showed a significant improvement ($p\text{-value } 0,0001 < 0,05$) in both knowledge and attitudes. **Conclusion:** In conclusion, there was an increase in community knowledge and attitudes regarding obesity prevention through *Emo-Demo* educational media in the working area of Lubuk Buaya Public Health Center, Padang. It is hoped that educational media using the *Emo-Demo* method can be further developed and utilized as an effort to prevent various diseases.

Keywords: Obesity, Emo-Demo , Knowledge, Attitudes

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INTRODUCTION

Obesity is a condition characterized by excessive accumulation of body fat, resulting in body weight that is significantly above normal. This occurs due to an energy imbalance in which energy intake exceeds energy expenditure.¹ According to the World Health Organization (WHO) in 2022, the number of adults aged 18 years and older who are overweight reached 2.5 billion, with more than 890 million living with obesity.² Data from the Provincial Health Office of West Sumatra in 2023 show that the highest prevalence of obesity in the region is in Padang City at 42.89%.³ Meanwhile, data from the Lubuk Buaya Community Health Center in 2024 indicate that 10.2% of the population is obese.⁴

The behavioral (lifestyle) factors contributing to obesity are highly complex and multifactorial. These include unhealthy dietary patterns such as high consumption of calorie-dense, sugary, and fatty foods, as well as low fiber intake, which are the primary causes. Genetic factors and socio-economic and environmental influences also contribute to obesity. Unhealthy eating patterns are often the main driver of obesity and are further exacerbated by low levels of knowledge regarding the risks of obesity.⁵

Obesity prevention can be carried out through health education aimed at increasing public awareness of risk factors, complications, and preventive strategies. Low levels of knowledge and negative attitudes toward obesity—such as poor understanding of balanced nutrition, risk factors, and the impacts of obesity—can increase the

likelihood of individuals becoming overweight.⁶

Emo-Demo (Emotional Demonstration) is a technique introduced by GAIN (Global Alliance for Improved Nutrition). This method is delivered through demonstration activities that incorporate emotional engagement. Emo-Demo can be used as an attractive educational approach to deliver health information to the community.⁷

Based on interviews conducted with the Non-Communicable Disease (NCD/PTM) program officer, it was found that the Lubuk Buaya Health Center had previously implemented obesity prevention efforts through counseling sessions combined with health screening activities. However, these efforts were not yet optimal. This is reflected in interviews with community members, which revealed low understanding of healthy eating patterns and physical activity for obesity prevention, partly because the educational delivery during counseling was not engaging. Therefore, the Emo-Demo method was selected as the main strategy for this intervention.

METHODS

This study used a mixed-method research design, which combines qualitative and quantitative approaches. In the qualitative component, an exploratory case study design was applied to obtain in-depth information regarding the development of Emo-Demo educational media for obesity prevention in the community.

In the quantitative component, a quasi-experimental design was used with a one-group pretest–posttest approach. A pretest was administered before the intervention, and a posttest was conducted after the implementation. This approach was used to ensure more accurate and reliable data.

The study involved five informants. Key informants consisted of two health workers, namely the person in charge of the Non-Communicable Disease (NCD/PTM) program and the person in charge of Health Promotion at the Lubuk Buaya Community Health Center.

Data Collection Techniques Qualitative data were collected through in-depth interviews with key informants, main informants, and supporting informants to obtain detailed information regarding the Emo-Demo educational media.

Quantitative data were collected using questionnaires by measuring the results of the pretest and posttest related to knowledge and attitudes regarding obesity prevention

RESULTS AND DISCUSSION

A. Characteristics of Informant

The intervention for obesity prevention was delivered through Emo-Demo educational media in the community. Questionnaire data were collected by distributing structured questionnaires containing questions and statements designed to measure community knowledge and attitudes before and after the Emo-Demo educational intervention on obesity prevention.

Table 1. Distribution of Informants

Research Code	Name	Age	Occupation
Informants			
Main IU01	FS	24	Student
Informant IU02	SHY	31	Wiraswasta
Key IK01	SJY	57	Pj Promkes
Informant IK02	DR	55	Pj PTM
Supporting IP01	MH	27	Ahli Desain
Informant			

B. Research Results

1. Design of Emo-Demo Educational Media for Improving Community Knowledge and Attitudes on Obesity Prevention

Data collection was conducted through in-depth interviews with several informants, consisting of two community members as main informants, the Non-Communicable Disease (NCD/PTM) program officer, the Health Promotion officer at Lubuk Buaya Community Health Center, and a graphic design expert.

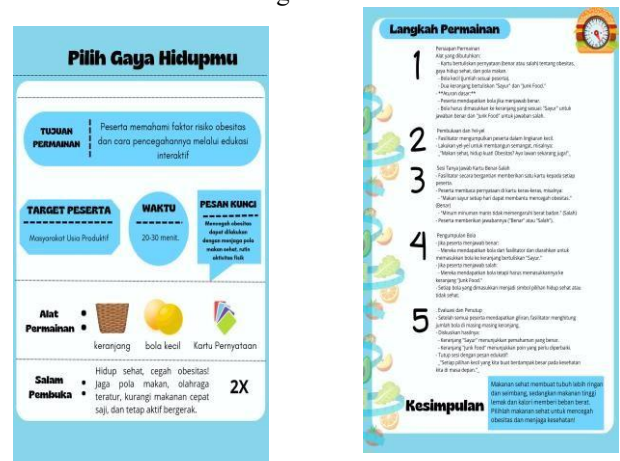
The development of the Emo-Demo educational media also involved input from a graphic design expert. The interviews explored feedback regarding educational content, visual design of the media, and the most attractive and easily understood methods of information delivery for the target audience. This study.

The Emo-Demo educational media was developed based on the Behavior Centered Design (BCD) theory, resulting in a product that was produced in accordance with suggestions and input obtained from informants through in-depth interviews.

Community Health Center, and a graphic design expert.

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Gambar 1. Rancangan Awal Media Edukasi



2. Median Knowledge Score of the Community Before and After Receiving Education Using Emo-Demo Educational

Pengetahuan	Pengetahuan	Pengetahuan
	sebelum	sesudah
	edukasi	edukasi
Median	14,00	18,00
Minimum	7	16
Maximum	18	20

Media

Emo-Demo media was conducted with individuals outside the study sample. The development of Emo-Demo educational media was based on the Behavior Centered Design (BCD) theory, resulting in a final.

3. Median Attitude Score of the Community Before and After Receiving Education Using Emo-Demo Educational Media on Obesity Prevention in the Working Area of Lubuk Buaya Community Health Center, Padang City

The statistical results of community attitudes before and after receiving education using Emo-Demo educational media can be seen in Table 3.

Before	70	14,00	0,0001
After	70	18,00	

Table 3. Median Attitude Score of the Community Before and After Emo-Demo Educational Intervention on Obesity Prevention

	Attit Befo educ	Attitu After educat
	63,00	8
	5	7

Based on Table 3, the median attitude score before the intervention was 63.00, while after the intervention it increased to 81.00. Therefore, it can be concluded that there was an improvement in community attitudes before and after the intervention using Emo-Demo educational media on obesity prevention, with an increase of 18.00 points.

The statistical results of community knowledge before and after receiving education using Emo-Demo educational media can be seen in Table 2.

Table 2. Median Knowledge Score Before and After Emo-Demo Educational Intervention on Obesity Prevention

Based on Table 2, the median knowledge score before the intervention was 14.00, while after the intervention it increased to 18.00. Therefore, it can be concluded that there was an increase in knowledge before and after the intervention using the educational media Using Emo-Demo educational media on obesity prevention, with a difference of 4.00 points.

4. Increase in Community Knowledge Before and After Receiving Education Using Emo-Demo Educational Media on Obesity Prevention in the Working Area of Lubuk Buaya Community Health Center, Padang City.

The statistical results of the improvement in sample knowledge before and after receiving education using Emo-Demo educational media can be seen in Table 4. 5

aximum	79	91
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Knowledge n Median p-value

Increase in community Knowledge Before and After Emo-Demo Educational Intervention on Obesity Prevention

Based on Table 4, the median knowledge score of the sample before receiving education using Emo-Demo educational media was 14.00, while the median knowledge score after the intervention increased to 18.00. A p-value of 0.0001 was obtained, indicating a statistically significant improvement in community knowledge before and after receiving education using Emo-Demo educational media ($p < 0.05$). Therefore, it can be concluded that there was an increase in community knowledge before and after the Emo-Demo



PROMKES. 20xx; x(x) : xxx-xxx

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educational intervention in the working area of
Lubuk Buaya Community Health Cen

Based on Table 3, the median attitude score before the intervention was 63.00, while after the intervention it increased to 81.00. Therefore, it can be concluded that there was an improvement in community attitudes before and after the intervention using Emo-Demo educational media on obesity prevention, with an increase of 18.00 points.

4. Increase in Community Knowledge Before and After Receiving Education Using Emo-Demo Educational Media on Obesity Prevention in the Working Area of Lubuk Buaya Community Health Center, Padang City.

The statistical results of the improvement in sample knowledge before and after receiving education using Emo-Demo educational media can be seen in Table 4.

Table 4. Increase in community Knowledge Before and After Emo-Demo Educational Intervention on Obesity Prevention

Knowledge	n	Median	p-value
Before	70	14,00	0,0001
After	70	18,00	

Based on Table 4, the median knowledge score of the sample before receiving education using Emo-Demo educational media was 14.00, while the median knowledge score after the intervention increased to 18.00. A p-value of 0.0001 was obtained, indicating a statistically significant improvement in community knowledge before and after receiving education using Emo-Demo educational media ($p < 0.05$). Therefore, it can be concluded that there was an increase in community knowledge before and after the Emo-Demo educational intervention in the working area of Lubuk Buaya Community Health Cen

Table 5. Increase in Community Attitudes Before and After Receiving Education Using Emo-Demo Educational Media on Obesity Prevention.

Attitude	n	Median	p-value
Before	70	63,00	0,0001
After	70	81,00	

Berdasarkan tabel 5 menunjukkan bahwa median nilai sikap sampel sebelum diberikan edukasi menggunakan media edukasi Emo-Demo sebesar 63,00 sedangkan median nilai pengetahuan sampel sesudah diberikan edukasi menggunakan media edukasi Emo-Demo sebesar 81,00, dan didapatkan p-value sebesar 0,0001 yang berarti ada peningkatan yang bermakna antara nilai sikap masyarakat sebelum dan sesudah diberikan edukasi menggunakan media edukasi Emo-Demo ($p < 0,05$), sehingga dapat disimpulkan bahwa terdapat peningkatan sikap masyarakat sebelum dan sesudah diberikan edukasi menggunakan

media edukasi Emo-Demo di wilayah kerja puskesmas Lubuk Buaya.

C. Discussion

1. Design of Emo-Demo Educational Media for Improving Community Knowledge and Attitudes on Obesity Prevention

The development of Emo-Demo educational media in this study used the Behavior Centred Design (BCD) approach, which consists of four main stages: formative research, creative design, implementation, and evaluation. This approach was used to ensure that the educational media developed was aligned with the needs, characteristics, and context of the target community, and could encourage positive behavior change in obesity prevention.⁸

The interview results showed that understanding of the long-term impacts of obesity was still low. Most main informants only associated obesity with fatigue or physical discomfort, without understanding that obesity can increase the risk of chronic diseases such as hypertension, diabetes, and cardiovascular disease.

This finding is in contrast with a study by Rusyda (2025), which reported a significant positive relationship between obesity and the prevalence of non-communicable diseases such as diabetes, cardiovascular disease, hypertension, and chronic kidney disease. This confirms that obesity is a major risk factor contributing to non-communicable diseases that affect quality of life and increase the health burden in society.⁹

The researcher assumes that the low level of community understanding about obesity is influenced by the fact that many people have never received obesity-related health education, and also because previous educational methods were still one-way and not engaging enough to actively involve the community.

This is consistent with Almunawa (2024), who developed an educational game combining attractive visual elements, clear verbal instructions, and interactive activities to deliver balanced nutrition messages in a more communicative and engaging way. Similarly, Anggina (2025) emphasized the use of bright colors, thematic illustrations, and simple but attractive layouts to improve understanding and engagement. The “Pilih Gaya Hidupmu” educational design also integrates visual, verbal, and physical elements harmoniously, adjusted with appropriate colors, fonts, and illustrations related to obesity themes to make it more attractive and participatory for the productive-age population.^{10, 11}

2. Median Knowledge Score Before and After Emo-Demo Educational Intervention on Obesity Prevention

Based on the study results on improving community knowledge and attitudes regarding obesity prevention using Emo-Demo educational media, the statistical analysis showed that the median knowledge score before the intervention was 14.00, and after the intervention it increased to 18.00.

The researcher assumes that the use of Emo-Demo educational media was able to improve community knowledge on obesity prevention, with an increase of

4.00 points in the median score. This indicates that the intervention had a positive impact on community knowledge. The improvement suggests that Emo-Demo provides effective information delivery through an interactive approach, leading to better understanding of obesity prevention.

These findings are consistent with Pratiwi et al. (2023), who reported an increase in knowledge among obese adolescents from 8.8% to 85.3% after Emo-Demo education.¹² Similar findings were reported by Nindy et al. (2023), where knowledge among Posyandu cadres and mothers of toddlers also increased after Emo-Demo education.¹³ Triana et al. (2023) also reported an increase in maternal knowledge scores from 4.76 to 5.46 after education.¹⁴

The researcher assumes that this increase occurred because respondents were willing to pay attention to the Emo-Demo messages, allowing them to better understand the information delivered.

3. Median Attitude Score Before and After Emo-Demo Educational Intervention on Obesity Prevention

Based on the study results, the median attitude score before the intervention was 63.00, while after the intervention it increased to 81.00.

The researcher assumes that Emo-Demo educational media was able to improve community attitudes toward obesity prevention, with an increase of 18.00 points in the median score. This indicates that the intervention had a positive impact on community attitudes. The improvement shows that Emo-Demo effectively delivers information in an interactive way that enhances understanding of obesity prevention.

This finding is consistent with Muyassaroh and Fatmayanti (2021), who reported improved attitudes after Emo-Demo

Yulia et al. (2024) also reported that Emo-Demo improved memory retention among productive-age individuals by up to 90%.¹⁶

4. Increase in Community Knowledge Before and After Emo-Demo Educational Intervention on Obesity Prevention

The statistical analysis showed that the median knowledge score before intervention was 14.00 and increased to 18.00 after intervention.

This finding is supported by Nadira et al. (2023), who reported a 26.27% increase in knowledge among Posyandu cadres and mothers after Emo-Demo education ($p = 0.0005$).¹³ This indicates that the emotional demonstration approach can be effectively applied both in community settings and primary health centers.

Palupi et al. (2024) also found that before education most mothers had moderate knowledge (51.6%), which increased to a good category (64.5%) after intervention.¹⁷

The researcher assumes that Emo-Demo is an effective educational media because respondents were able to understand and respond correctly after the intervention. The improvement in both knowledge and attitude scores indicates that Emo-Demo is effective in promoting obesity prevention behavior.

5. Increase in Community Attitudes Before and After Emo-Demo Educational Intervention on Obesity Prevention

The statistical analysis showed that the median attitude score before intervention was 63.00 and increased to 81.00 after intervention. The Wilcoxon test also showed a p -value of 0.000, indicating a statistically significant improvement in community attitudes toward obesity prevention in the working area of Lubuk Buaya Community Health Center, Padang City.

(2024), who reported a significant increase in adolescent attitudes toward obesity prevention from 73.91 to 77.42 ($p = 0.000$). Afidah et al. (2022) also reported a significant improvement in attitude scores ($p = 0.001$). Lisna et al. (2023) further confirmed significant improvements in adolescent attitudes after Emo-Demo intervention.^{18, 19, 20}

The researcher assumes that the improvement in attitudes occurred because respondents were able to better understand and respond to the information provided after the Emo-Demo intervention. Additionally, increased knowledge contributed to improved attitude scores, resulting in better obesity prevention behavior.

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The author realizes that this journal is still far from perfect; therefore, constructive criticism and suggestions are highly welcomed for future improvement.

It is hoped that this journal can contribute positively to the development of knowledge, particularly in the field of health promotion

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