ISSN. 2338-7475
E-ISSN. 2620-7869
Hearty
Jurnal Kesehatan Masyarakat
Beriman, Tulus, Sepenuh Hati,Berbesar Hati, Jujur, Sehat dan Kuat
Vol. 13 No. 3, June 2025, Hal. 778-784

EFFECTIVENESS OF LEAFLET, FAN, AND VIDEO TIKTOK ON KNOWLEDGE AND ATTITUDE ABOUT CHRONIC ENERGY DEFICIENCY (CED) AMONG PREGNANT WOMEN IN KADEMANGAN VILLAGE, SUKABUMI DISTRICT

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Abstract

Chronic Energy Deficiency (CED) is a long-term nutritional deficiency caused by an imbalance in energy and protein intake, characterized by a body mass index (BMI) <17.00 in adults. In reproductive-age women, including pregnant women, CED is characterized by a body weight <40 kg, a thin appearance, and an upper arm circumference (UAC) <23.4 cm. This research seeks to ascertain the effectiveness of educational materials in the form of leaflets, fans, and TikTok videos on improving knowledge and attitudes of pregnant women toward CED. The method used was a pretest-posttest design that's quasi-experimental approach, involving 30 pregnant selected through purposive sampling. The Paired Sample T-Test was used for data analysis via SPSS version 27. The results showed that all educational media significantly influenced the improvement in attitudes and knowledge of the respondents. The leaflet gave a p-value of 0.01 for knowledge and p = 0.00 for attitude. The fan and TikTok video media gave a p-value of 0.00 for both aspects. Thus, all three media are effective as educational tools to increase pregnant women's awareness and attitudes toward CED. Innovative media such as TikTok videos have also proven to have a positive impact in health education.

Keywords: CED, Leaflat, Tiktok

Introduction

Chronic energy deficiency (CED) is a condition where nutritional intake (energy and protein) is not balanced for a long time, resulting in a body mass index (BMI) below <17.00 for adults. Chronic energy deficiency is also a state of malnutrition that can occur in women of childbearing age (WUS), especially in pregnant women. CED is categorized based on body weight less than 40 kg with a thin-looking body and LiLA less than 23.4 cm (1). Pregnant women who experience persistent dietary inadequacies are also referred to as having chronic energy deficiency (CED) (2). According to estimates made by the World Health Organization (WHO) in 2017, between 35 and 75 percent of pregnant women worldwide suffer from chronic energy deficit (CED). The WHO also reported that CED is responsible for 40% of maternal fatalities in underdeveloped nations. According to the Health Research and Development Agency's 2018 basic health research data, 17.3% of Indonesian pregnant women have CED (3). According to data from the West Java Health Office, the prevalence of CED among expectant mothers is 14.1%. Meanwhile, according to data from the Sukabumi District Health Office in 2022, 16 out of 703 pregnant women experienced chronic energy deficiency (CED) (4).

The nutritional status of pregnant women is said to be deficient if they have a Body Mass Index (BMI) <18.5 kg/m2 and must have a weight gain in the range of 12.5-18 kg, Normal pregnant women (18.5-24.9 kg/m2) must gain 11.5–16 kg, and obese women (25.0–29.9 kg/m2) must gain 7–11.5 kg and have a BMI of ≥30.0 kg/m2. 5–9 kg of weight gain (5).

Submitted: May-2025 Received: May-2025 Available Online: June-2025

One of the factors that influence the intake of nutrients during pregnancy is the attitudes and knowledge of expectant mothers. Pregnant women's ignorance and attitude will prohibit them from understanding how to correctly meet their nutritional needs in an attempt to avoid chronic energy deficiency (CED) (6).

Another effort that can be made is health promotion. This is expected to gain knowledge and attitudes about the prevention of CED in pregnant women. One form of health promotion according to Taufiqoh (2022) is the creation of leaflet media, fans, and tiktok videos as nutrition communication media (7). Adfar's research (2022) showed that the presence of media is one of the success factors of nutrition education and counseling, most of which is obtained by means of the visual sense (eyes) which is 83% as well as auditory perception (ears) which is 11%, The remaining 1% comes from the sense of taste, 2% from the sense of touch, and 3% from the sense of smell. One could argue that a person learns through their five senses (8). This needs to be done considering the health of pregnant women must be considered properly because it greatly affects the development of the fetus that is conceived, this is also the reason why pregnant women really need to be given education about preventing chronic energy deficiency (CED) (9).

Considering the findings of in-depth interviews carried out at Kademangan Village for prospective respondents, the use of media related to efforts to prevent chronic energy deficiency (CED) is very necessary. The suitability of the media context, the efficiency of media use must be considered so that the use of media is still conveyed and able to provide benefits for pregnant women (10).

The researcher aims to determine the impact of leaflet media, fans, and tiktok videos on pregnant women's knowledge and attitudes regarding chronic energy deficiency (CED) based on the above description.

Method

This study used an intervention research approach using a pretest-posttest quasi-experimental design. The population consisted of all residents residing in Sukabumi Regency, Surade District, Kademangan Village, who had agreed to be respondents by signing an informed consent form. The purpose of this study design was to ascertain the sample's baseline knowledge and attitudes as well as whether knowledge and attitudes before and after the intervention differed. The research period from the media design to the pretest-posttest was from February 1, 2024, to April 8, 2024, for two months. In this study, the population consisted of all residents residing in Sukabumi Regency, Surade District, Kademangan Village, who had agreed to be respondents by signing an informed consent form. The purpose of this research design was to ascertain the sample's pre-intervention knowledge and attitudes as well as whether there were any changes following the intervention. The research period from the media design to the pretest-posttest was from February 1, 2024, to April 8, 2024, for a total of two months. In this study, the population consisted of pregnant women aged 18-43 years at the Kademangan Village Health Center, Surade Subdistrict, Sukabumi District. Sampling in this study used purposive based on predefined inclusion exclusion criteria. Pregnant women between the ages of 18 and 43 met the inclusion requirements, completing the pretest and posttest questionnaires, and participating in the research activities until completion. The exclusion criteria were subjects who only completed one of the questionnaires. There were 30 respondents selected as the sample. The statistical test used is the Paired Sample T-Test using SPSS Version 16. In this study, the researcher used leaflets, fans, and TikTok videos about the definition and prevention of chronic energy deficiency (CED) in pregnant women in Kademangan Village, Sukabumi Regency.

Conclusion

Study findings based on field data collected by questionnaires, surveys, documents, interviews, observations, and other data collection methods are presented in the contents of the study results. Whether the data has been processed (not raw data), presented in the form of tables or graphics (choose one), descriptive study, and easily comprehensible information are all at least included in the results. Don't discuss the discussion here; instead, write down the results..

Results

Table 1 Frequency Distribution of Characteristics Respondents

Characteristics	N (30)	%
Age		
19-31 years old	22	73,3
32-43 years old	8	36,7
Nutritional Status		
Underweight	0	0
Normal	7	23,3
Obese	23	76,7
Education		
SD	10	33,3
SMP/MTs	9	30,3
SMA/SMK	1	36,7
Knowledge		
Good	18	60
Adequate	9	30
Poor	3	10
Attitude		
Good	14	46,7
Adequate	15	50
Poor	1	3,3

Table 1 shows that the characteristics of respondents in this study aged 19-31 was 73.3%. The nutritional status of obese pregnant was 76.7%. Majority of respondents' education was high school/vocational school graduates at 36.7%. Knowledge of chronic energy deficiency was 60%. Attitudes towards chronic energy deficiency were 46.7%.

Table 2 Frequency Distribution of Pretest and Posttest Knowledge About CED

Group	n	knowledge intervention	Mean	Standard Deviation	Min-Max
Leaflet	10	Pretest	42	15,492	20-70
	10	Posttest	72	14,757	50-90
Kipas	10	Pretest	51	15,238	30-40
	10	Posttest	86	12,649	60-100
TikTok Video	10	Pretest	50	11,547	30-70
	10	Posttest	72	13,165	50-90

Table 3 Frequency Distribution of Pretest and Posttest Attitudes Towards CED

Group	n	knowledge intervention	Mean	Standard Deviation	Min-Max
Leaflet	10	Pretest	59	12,867	40-80
	10	Posttest	81	13,703	60-100
Kipas	10	Pretest	43	14,181	30-70
	10	Posttest	73	9,487	60-90
TikTok Video	10	Pretest	44	15,776	20-70
	10	Posttest	71	13,703	50-90

Table 4 Results of the Effectiveness Test of Providing Media Leaflets, Fans, TikTok Videos on Pregnancy Knowledge of CED

Knowledge	p-value (<0,05)
Media	
Leaflet	0,01*
Fan	0,00*
TikTok Video	0,00*

Desc: *significant

Table 4 shows that leaflets with a p-value of 0.01 (<0.05), fans with a 0.00 p-value (<0.05), and TikTok videos with a 0.00 p-value (<0.05), which means that the provision of leaflets, fans, and TikTok videos effectively increased pregnant women's knowledge about CED.

Table 5 Results of the Effectiveness Test of Providing Media Leaflets, Fans, TikTok Videos on the Attitudes of Pregnant Women Towards CED

Attitude	p-value (<0,05)
Media	
Leaflet	0,00*
Fan	0,00*
TikTok Video	0,00*

Desc: *significant

Table 5 shows that leaflets with a p-value of 0.00 (<0.05), fans with a 0.00 p-value (<0.05), and TikTok videos with a 0.00 p-value (<0.05), which means that the provision of leaflets, fans, and TikTok videos effectively improved pregnant women's attitudes toward CED.

Discussion

Effectiveness of Leaflet Distribution on Knowledge and Attitudes About CED in Pregnant Women

Table 4 shows that there is effectiveness in the distribution of leaflets on the knowledge of pregnant women about CED. Table 5 also shows the effectiveness of distributing leaflets on the attitudes of pregnant women toward CED. Thus, it can be said that there is an increase in the knowledge and attitudes of pregnant women toward CED. This is in line with Hartati's (2022) on improving the knowledge of pregnant women's families about CED, in which the leaflet was found to be effective in increasing knowledge because it is easy to understand and can be read anywhere. Thus, pregnant women and their families can easily understand the information (11). This is not in line with research by Anggi Dwi Yanti (2022), which states that giving leaflets to pregnant women does not significantly increase knowledge about CED (12).

According to Soekidjo Notoatmodjo (2002), Knowledge is the outcome of "knowing" which happens when someone feels a certain object. The five human senses are used for sensing. (eyes, nose,

ears, and so on) (13). According to Rachmawati (2017), Predisposing factors (age, education, occupation, parity, knowledge, and attitude), enabling factors (distance from home, family income, and access to information media), and reinforcing factors (spousal support, family support, and supportive attitudes from healthcare workers) are some of the factors influencing pregnant women's health behavior (14). Notoatmodjo's theory (2007) also states that before an individual acts, they first have attitudes and perceptions gained from previous experiences and knowledge. These serve as the foundation and paradigm for action, making the level of knowledge urgent in determining attitude determinants (15).

Effectiveness of Fan Distribution on Knowledge and Attitudes About CED in Pregnant Women

Table 4 shows the effectiveness of providing fan media on pregnant women's knowledge about CED. Table 5 also shows the effectiveness of providing fan media on pregnant women's attitudes towards CED. Therefore, it may be concluded that pregnant women's attitudes and knowledge have increased towards CED with fan media.

This study aligns with Hayati's (2023) research, which claims that pregnant women's knowledge can be increased by the usage of printed media about CED prevention (16). This study is similar to that conducted by R. Wulandari (2021), who stated that the use of printed media increases attitudes toward CED prevention (17).

The improvement in pregnant women's knowledge and attitudes can occur due to the provision of nutrition education using specific media (18). Media has the function of facilitating pregnant women in understanding the information being intervened, which aligns with the purpose of nutrition education, namely the improvement of knowledge and the occurrence of changes in attitudes or behavior (19). Similarly, the study conducted by Ratih (2021) states that the use of attractive media can increase desire and new interest, stimulating motivation to make changes. Attractive media helps improve the efficiency of message delivery (20).

Effectiveness of TikTok Video Distribution on Knowledge and Attitudes About CED in Pregnant Women

Table 4 shows the effectiveness of providing TikTok video media on the knowledge of pregnant women about CED. Table 5 also shows the effectiveness of providing TikTok video media on the attitudes of pregnant women towards CED. It can be said that providing TikTok video media effectively improves the knowledge and attitudes of pregnant women about CED.

This study aligns with Elsanti's research (2023), which states that the use of video media enhances pregnant women's knowledge about CED (21). According to L. Artikasari's research, the use of TikTok videos significantly improves pregnant women's attitudes toward maintaining balanced nutrition to prevent CED (22).

The advancement of technology today has brought about various educational media that can provide knowledge to the public (23). Knowledge is acquired through the five senses. The more senses involved, the clearer the knowledge obtained (24). The increase in knowledge is determined by the type of media that stimulates more than one sense (25). Knowledge determines attitude, and this shows the relationship between changes in knowledge and attitude. The higher a person's knowledge, the better their attitude becomes (26).

Conclusion

The findings demonstrated that pregnant women's knowledge and attitudes about chronic energy deficiency (CED) improved with each piece of media used as an intervention tool.

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