

THE INFLUENCE OF HEALTH EDUCATION USING EMO-DEMO VIDEOS ON KNOWLEDGE OF SELECTING IRON-RICH FOODS AMONG ADOLESCENT GIRLS IN THE WORKING AREA OF COMMUNITY HEALTH CENTER

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ABSTRACT

In 2023, the Tanah Datar District Health Office reported a notable increase in cases of anemia among adolescent girls, totaling 228 cases in the region. These cases predominantly affected adolescent girls aged 10-14 years. Remarkably, no anemia cases were recorded in 2022. Specifically, the Tanah Datar District Health Office identified 35 cases of anemia among adolescent girls in the working area of Community Health Center Batipuh 1 .. The research method employed is quantitative, using a quasi-experimental design with a one-group pretest-posttest design. Sample selection was conducted through purposive sampling, consisting of 100 adolescent girls aged 10-14 years. The research instrument utilized a questionnaire consisting of 20 knowledge-related items. Data management and analysis were performed using the Wilcoxon signed-rank test. Univariate analysis revealed that before exposure to emotional demonstration videos, the level of knowledge was classified as good in 2% of respondents, sufficient in 20%, and insufficient in 78%. After exposure, the proportion of respondents with good knowledge increased to 20%, while those with sufficient knowledge reached 59%, and those with insufficient knowledge decreased to 21%. As a result, the research findings indicate a significant impact of emotional demonstration videos on the average knowledge level of adolescent girls ($p=0.00$). In conclusion, this study demonstrates the influence of health education using emotional demonstration videos on the knowledge of selecting iron-rich food among adolescent girls. Recommendations from this research suggest that emotional demonstration videos could serve as an effective educational tool to enhance adolescent girls' knowledge about nutritious food.

Keywords: Emotional Demonstration Videos; Knowledge; Anemia

INTRODUCTION

Adolescents at puberty are particularly at risk of iron nutritional anemia. This is due to the large amount of iron in adolescent girls that is lost during menstruation. In addition, it is exacerbated by the lack of iron intake, where iron in adolescent girls is needed by the body for accelerated growth and development (Nurazizah et al., 2022).

Iron deficiency anemia is a state of decreased hemoglobin levels below normal due primarily to lack of iron intake (Wicaksana & Rachman, 2018). Unhealthy food choices pose a greater risk to morbidity and mortality than unsafe sex, alcohol, drugs, and tobacco use (Rahmawati, 2022).

Knowledge about anemia and nutrition affects iron intake and the incidence

of anemia in adolescent girls (Iwan et al., 2017) The high rate of anemia in adolescent girls will have an impact on human resources due to impaired cognitive function, low academic ability, and decreased physical capacity) (Putra et al., 2019). The global prevalence of adolescent anemia ranges from 40-88%. According to the World Health Organization (WHO) (Laksmi & Yenie, 2018), the incidence of anemia in adolescent girls in developing countries is around 53.7% of all adolescent girls (Julaecha, 2020). Riskesdas data in 2018, recorded 26.8% of children aged 5-14 years suffering from anemia and 32% at the age of 15-24 years (Laksmi & Yenie, 2018). The prevalence of anemia in West Sumatra Province is above the national average prevalence of 14.8% according to the Minister of Health Decree reference, namely 29.8% in women and 27.6% in men (Ayu Lestari et al., 2023)

West Sumatra Province is the fourth highest province with anemia after Maluku, Southeast Sulawesi and Gorontalo (Pusdatin Kemenkes RI, 2019). The Tanah Datar Regency Health Office in 2021 had 104 cases of anemia among adolescent girls. In 2023 cases of anemia among adolescent girls in Tanah Datar Regency increased by 228 people. There were 79 adolescent girls with an age range of 10-14 years in 2022, which in the previous year there were no cases of anemia. The Tanah Datar District Office recorded 35 adolescent girls out of 79 people in the Tanah Datar district found in the Batipuh 1 Puskesmas working area.

So to prevent the incidence of iron deficiency anemia in adolescent girls, special attention needs to be given by being equipped with nutritional knowledge about iron deficiency anemia itself (Novita Sari, 2020) The choice of food ingredients that do not contain iron is one of the causes of anemia in adolescents (F. K. Putri, 2021).

Previous research by Anifah (2020) on the effect of health education through

video media on knowledge about anemia in adolescent girls found an increase in knowledge from 7 to 17 respondents after being given health education through video. There is a statistical difference in the average level of knowledge of respondents before and after being given health education through videos. In addition, the results of other studies show that there is an increase in the average score of knowledge and attitudes of adolescents about anemia before counseling with video media and without media (S. R. Putri et al., 2022)

Emo Demo intervention in several health studies obtained significant results on changes in health behavior (Kementerian Kesehatan Republik Indonesia, 2019) The BCD intervention model adapted by Emo Demo has been successfully used to change sanitation and nutrition behaviors. The results of a pilot intervention to improve five food hygiene behaviors among mothers of young children in rural Nepal. The intervention activities included demonstrations, games, rewards, storytelling, drama, competitions related to emotional drivers of behavior and menu changes. Substantially able to improve various food hygiene behaviors in Nepal (Ningtyas et al., 2019).

Judging from the phenomenon of increasing cases of anemia in adolescent girls in Tanah Datar Regency and according to the staff of the Health Center, the video approach with the emo-demo method has never been done in the Health Center working area, so that the renewal of this extension method can have an impact on anemia cases which are quite high in the Health Center working area. The purpose of this study was to determine the effect of health education with emo-demo videos on knowledge in the selection of foodstuffs containing iron in adolescent girls in the working area of the Batipuh 1 health center, Tanah Datar Regency in 2023.

RESEARCH METHODS

This type of research is a Quasy Experiment Design with a one group pretest posttest design. This research has been conducted in June-September 2023. The population in this study was conducted on rematriates aged 10-14 years in the month totaling 422 people, the sampling technique was purposive sampling with a total final sample of 100 people. The independent variable in this study is health education about anemia with the emo demo method and the dependent variable in this study is the ability of adolescent girls to choose food ingredients that contain iron. Education was conducted by researchers by providing health counseling in the form of experiments, lectures, and videos. The instrument used to assess the ability of adolescent girls is a questionnaire. This research was conducted by obtaining permission from the Health Center and the equivalent junior high school and asking for consent to the respondent using an informed consent sheet. To test the hypothesis using kolmogorov smirnov and Wilcoxon statistical test.

RESULTS

Level of Knowledge of Respondents Before Health Education with Emo-Demo Videos on Knowledge of Selecting Foodstuffs Containing Iron in Adolescent Girls in the Community Health Center Area

Table 1.
Level of Knowledge of Respondents Before Health Education

Knowledge level	Frequency	%
Good	2	2
Enough	20	20
Not enough	78	78
Amount	100	100%

Based on table 1, it can be concluded that the frequency distribution of the level of

knowledge of respondents before health education with emo-demo videos on the knowledge of adolescent girls in the Health Center area of 100 samples who had a good level of knowledge was 2 people (2%), as many as 20 people (20%) and less as many as 78 people (78%). This means that before being given treatment the level of knowledge of adolescent girls in the Health Center working area is still a lot of value less to answer questions from the questionnaire given.

Level of Knowledge of Respondents After Health Education with Emo-Demo Videos on Knowledge of Selecting Foodstuffs Containing Iron in Adolescent Girls in the Community Health Center Area

Table 2
Level of Knowledge of Respondents After Health Education

Knowledge Level	Frequency	%
Good	20	20
Enough	59	59
Not enough	21	21
Amount	100	100

Based on table 2, it can be concluded that the frequency distribution of the level of knowledge of respondents after health education with emo-demo videos on the knowledge of young women in the Community Health Center area of the 100-sample people with a good level of knowledge is 20 people (20%), only 59 people. (59%) and less by 21 people (21%).

Bivariate Analysis

Based on table 3, it can be concluded that the results of the Wilcoxon statistical test obtained a *p-value* of 0.00 0 ($p < 0.05$) which means H_0 is rejected and H_a is



Table 3
The Effect of Health Education Using Emo-Demo Videos on Knowledge of Choosing Foodstuffs Containing Iron in Adolescent Girls in the Community Health Center Working Area

Variable	Z	p-value
Posttest-Pretest	-7,674	0,000

accepted so it can be concluded that there is an influence of health education using emo-demo video media on the knowledge of young women in choosing foodstuffs containing iron in the working area of the Community Health Center.

DISCUSSION

Level of Knowledge of Respondents Before Health Education with Emo-Demo Videos on Knowledge of Selecting Foodstuffs Containing Iron in Adolescent Girls in the Community Health Center Area

Based on table 1, it can be concluded that the frequency distribution of the level of knowledge of respondents before health education with emo-demo videos on the knowledge of adolescent girls in the Health Center area of 100 samples who have a good level of knowledge is 2 people (2%), enough as many as 20 people (20%) and less as many as 78 people (78%). This means that before being given treatment the level of knowledge of adolescent girls in the Health Center working area is still a lot of value less to answer questions from the questionnaire given.

This is in line with previous research conducted by Saban (2017) that the average value of knowledge using video media was greater before the intervention of 15.76 while the average value of knowledge in the video group obtained a value of 18.57. Similar to research conducted by Asmawati, et al (2020) that the average value of

knowledge before being given counseling was 62.38 and after being given counseling with video media was 80.30.

Level of Knowledge of Respondents After Health Education with Emo-Demo Videos on Knowledge of Selecting Foodstuffs Containing Iron in Adolescent Girls in the Community Health Center Area

Based on table 2, it can be concluded that the frequency distribution of the level of knowledge of respondents after health education with emo-demo videos on the knowledge of young women in the Community Health Center area of the 100-sample people with a good level of knowledge is 20 people (20%), only 59 people (59%) and less by 21 people (21%). There was an increase in the frequency distribution of respondents' level of knowledge after health education with emo-demo videos on the knowledge of young women in the Community Health Center area. Of the 100 samples with a good level of knowledge, there were 20 people (20%), only 59 people (59%) and less by 21 people (21%).

The results of the analysis show that there is a significant difference in the level of knowledge of young women after being given intervention through emo-demo videos. According to Notoadmodjo, knowledge is the result of human sensing or the result of a person's knowledge of objects through their senses (eyes, nose, ears and so on). Most of a person's knowledge is obtained through the sense of hearing (ears) and the sense of sight (eyes). By itself, at the time of sensing until the production of this knowledge is greatly influenced by intensity of attention and perception of objects. One of the efforts promotions carried out in the context of preventing anemia and Changing teenagers' knowledge is by using media



learning to carry out educational activities about anemia.

Bivariate Analysis

Level significance $\alpha=0.05$ with taking decision If $P_a \leq 0.05 = H_0$ rejected, which means There is influence education health with the media Vidio emo demonstration on the knowledge of young women regarding the selection of foodstuffs containing iron in the working area of the Community Health Center. However, if $P_a \geq 0.05 = H_0$ fail rejected, which means No There is influence education health using emo video media as a demonstration on the knowledge of young women regarding the selection of foodstuffs containing iron in the working area of the Community Health Center.

Based on table 3, it can be concluded that the results of the Wilcoxon statistical test obtained a *p value* of 0.000 ($p < 0.05$) which means H_0 is rejected and H_a is accepted so it can be concluded that there is an influence of health education using emo-demo video media on the knowledge of young women in choosing foodstuffs containing iron in the Community Health Center working area.

This is in line with research conducted by Mahadewi (2019) shows that the value of Asymp. Sig (2-tailed) < 0.05 , namely 0.015, that H_a is accepted, and H_0 is rejected so it can be concluded that there is an increase in knowledge with counseling using video media and leaflets, where in the video media group showed better results towards knowledge.

The researcher assumes that there is an influence of health education using emo-demo video media on the knowledge of young women in choosing foodstuffs containing iron in the working area of the Community Health Center, due to an increase in knowledge. Before treatment, the level of knowledge of young women was

still very poor regarding anemia and knowledge of choosing foods containing iron. In contrast, after treatment there was an increase in knowledge. This is because after the treatment was given, young women whose previous level of knowledge was lacking in knowing what anemia was and how to choose foodstuffs containing iron began to understand health education with video demonstrations on knowledge of choosing foodstuffs containing iron. The use of demo videos makes it easy for young women to understand the material provided and attracts young women's interest in being aware of their own health. (Syakir, 2018)

CONCLUSION

Based on the results of the study "The Effect of Health Education with Emo-Demo Videos on Knowledge of Selection of Iron-Containing Foodstuffs in Adolescent Girls in the Health Center Working Area" it can be concluded that, before the use of education through emo-demo videos, most of them answered the questionnaire out of 100 samples whose level of knowledge was good as many as 2 people (2%), enough as many as 20 people (20%) and less as many as 78 people (78%). After the use of education through emo-demo videos, most answered the questionnaire from a sample of 100 people whose level of knowledge was good, namely as many as 20 people (20%), as many as 59 people (59%) and less as many as 21 people (21%). Based on the results of the Wilcoxon statistical test, the *p value* is 0.000 ($p < 0.05$), which means that H_0 is rejected and H_a is accepted so it can be concluded that there is an effect of health education with emo-demo video media on the knowledge of adolescent girls in the selection of iron-containing food ingredients in the Health Center.



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