

THE INFLUENCE OF HEALTH EDUCATION USING MEDIA E-BOOK ON NUTRITION FULFILLMENT KNOWLEDGE IN BREASTFEEDING MOTHERS

Nurul Azizah Jihad Fisabillillah^{1*}, Gita Kostania², Herawati Mansur³

^{1,2,3} Politeknik Kesehatan Malang, Jl. Besar No.77C, Malang 65115, Indonesia

ARTICLE INFORMATION:

Article history

Accepted date: April 2023

Revision date: April 2023

Publication date: April 2023

Key Word : E-book, nutrition, breastfeeding mothers, health education, knowledge

ABSTRAK

Produksi ASI yang kurang salah satunya diduga karena kurangnya pengetahuan ibu dalam memahami pentingnya konsumsi gizi pada masa menyusui, hal ini disebabkan karena kurangnya informasi tentang konsumsi gizi sehingga mempengaruhi pola makan ibu. Salah satu upaya untuk meningkatkan pengetahuan ibu yaitu dengan melakukan upaya preventif dengan pemberian pendidikan kesehatan, komponen keberhasilan upaya tersebut yaitu berupa penggunaan media. E-book merupakan media sekaligus solusi untuk mempermudah mendapat pengetahuan. Tujuan dari penelitian ini yaitu untuk mengetahui pengaruh pendidikan kesehatan menggunakan e-book terhadap pengetahuan pemenuhan gizi pada ibu menyusui. Penelitian ini menggunakan desain pre-eksperimental dengan pendekatan one group pretest posttest design. Populasi penelitian yaitu seluruh ibu yang memiliki bayi usia < 6 bulan di PMB Indah Maharany Malang. Teknik sampling yang digunakan purposive sampling dengan jumlah sampel 35 responden. Instrumen penelitian menggunakan kuesioner dan e-book. Analisis data menggunakan uji paired sampel t-test. Hasil uji statistik didapatkan nilai p value $0,001 > 0,05$ maka dapat disimpulkan bahwa ada pengaruh pendidikan kesehatan menggunakan e-book terhadap pengetahuan pemenuhan gizi pada ibu menyusui di PMB Indah Maharany Malang. Media e-book merupakan media yang mudah dipahami, kapanpun bisa dibaca, adanya e-book membuat kegiatan membaca menjadi efisien dan efektif dalam menumbuhkan keterampilan berpikir kritis. Berdasarkan hasil penelitian tersebut, pemberian pendidikan kesehatan menggunakan media e-book perlu dilakukan sehingga dapat meningkatkan pengetahuan ibu dalam upaya pemenuhan gizi selama menyusui.

ABSTRACT

One of the reasons for inadequate milk production is the lack of knowledge of mothers in understanding the importance of nutritional consumption during breastfeeding, this is due to a lack of information about nutritional consumption that affects the mother's diet. One of the efforts to increase mother's knowledge is by carrying out preventive efforts by providing health education, the component of the success of this effort is the use of media. E-book is a medium as well as a solution to make it easier to get knowledge. The purpose of this study was to determine the effect of health education using e-books on knowledge of nutritional fulfillment in breastfeeding mothers. This study used a pre-experimental design with a one group pretest posttest design approach. The research population is all mothers who have babies aged <6 months at PMB Indah Maharany Malang. The sampling technique used was purposive sampling with a total sample of 35 respondents. The research instrument used a questionnaire and an e-book. Data analysis used paired sample t-test. The statistical test results obtained a p value of $0.001 > 0.05$, so it can be concluded that there is an effect of health education using e-books on knowledge of nutritional fulfillment in breastfeeding mothers at PMB Indah Maharany Malang. E-book media is a medium that is easy to understand, can be read whenever, the existence of e-books makes reading activities efficient and effective in fostering critical thinking skills. Based on the results of this study, it is necessary to provide health education using e-book media so that it can increase mother's knowledge in an effort to fulfill nutrition during breastfeeding.

INTRODUCTION

I Good nutritional intake can help optimize the quality, quantity and health of mothers and babies. Breastfeeding mothers need a variety of nutrients that help the quality of milk and maintain mother's health. The impact of lack of nutritional intake in breastfeeding mothers can cause health problems for mothers and their babies. Disorders in infants include the process of child development, babies get sick easily, are susceptible to infection (Triwidiyantari et al., 2020). The nutrition consumed by the mother during breastfeeding must be of good quality, nutritious and sufficient in calories. Preferably food that contains a source of energy (energy), a source of builders (protein), a source of regulators and protectors (minerals, vitamins, and water). Nutritional needs during breastfeeding will increase by 25%, this is because it is used for the process of producing sufficient milk, it will increase from the usual needs needed by the mother (Solehati, Destiani Ekautami Putri, et al., 2020).

According to research by Maimunah & Sitorus (2020) breast milk production is not smooth, one of which is suspected to be due to the lack of knowledge of mothers in understanding the importance of consuming nutrition during lactation. The lack of knowledge of the mother is caused by a lack of information about nutritional consumption which will affect the mother's diet and inhibit milk production. Mothers must know and understand breast milk well because apart from containing the substances needed for the baby's growth, it is also the safest baby food, and does not require additional costs. Breast milk also contains immune / anti-infective substances that formula milk does not have.

According to Riskesdas data taken from 2014 - 2018 the coverage of exclusive breastfeeding in Indonesia in 2014 was 37.3%, 2015 was 55.7%, 2016 was 54%, 2017 was 61.33%, and in 2018 it experienced a significant decrease of 37.3%. When compared with the target set by the Indonesian Ministry of Health, which is 80%, exclusive breastfeeding at the Indonesian level still has not met the target. Based on data from the health profile of East Java, exclusive breastfeeding in 2017 was 62.5%, 65.1% in 2018, 68.2% in 2019 and 61.0% in 2020. This coverage has decreased compared to 2019 (68.2%).

Based on the results of a preliminary study conducted in March 2022 at the Malang District Health Office, data regarding the coverage of exclusive breastfeeding in 2018 was (60.8%), in 2019 it was (63.8%) and in 2020 it was (63.7%). %) the total coverage of exclusive breastfeeding will decrease in 2020. From the results of interviews conducted by researchers in March 2022 to 11 breastfeeding mothers at PMB Indah Maharany, Malang Regency, they said that they had never received counseling or health education from health institutions or institutions that conducted previous research about nutrition in breastfeeding mothers. In addition, when conducting interviews related to breastfeeding nutrition, it was shown that the results of mother's knowledge about nutrition for breastfeeding mothers were still lacking.

Eight mothers said that they did not know what nutritional components and how much nutrition were needed to facilitate breastfeeding, and 2 of them said that their milk came out little, so the mothers also gave formula milk to their children. As many as 3 out of 11 respondents had good knowledge

*Correspondence: nurulajf@gmail.com

regarding nutrition that must be fulfilled during breastfeeding.

According to research by Febriyeni & Resta (2020) Knowledge is an important part that must be improved to improve this condition. To accelerate the achievement of these improvement goals, health education efforts and dissemination of knowledge are needed. The success of health education depends on the learning components, one of which is learning media. One of the media that can be used to conduct health education is e-books or called electronic books. E-Books can be used as multi-media for providing effective information in the current era.

Based on these problems, efforts are needed to be able to increase mother's knowledge about the nutritional fulfillment of breastfeeding mothers. One of the preventive efforts that can be done is by providing health education related to the nutritional needs of breastfeeding mothers.

METHODS

The research design used in this study was pre-experimental and one group prepost test design. This research was conducted at PMB Indah Maharany Malang with the population in this study being all mothers who had babies aged <6 months in July 2022 totaling 65 people. The sampling technique used was purposive sampling with a total sample of 35 people. Data collection in this study used the E-Book media instrument and a questionnaire. Analysis of statistical test results using the Paired Sample T test.

RESULT AND DISCUSSION

Table 1. CharacteristicsAge of Respondents

Age Year	F	%
< 20	0	0
20-35	28	80
> 35	7	20
Total	35	100%

In table 1 it can be seen that the age characteristics of the 35 respondents are mostly 20-35 years with a percentage of 80% as many as 28 people and the lowest is aged <20 years by 0%.

Table2. Characteristics of Respondents' Education

Level education	F	%
Elementary	1	2,9
Junior High School	2	5,7
Senior High School	19	54,3
College	13	37,1
total	35	100%

Based on table 2, it can be seen that the educational characteristics of the 35 respondents were mostly high school with a percentage of 54.3%, with 19 people and the lowest, with the last education being elementary school, with a percentage of 2.9%, with 1 person.

Table 3. Respondent's Occupational Characteristics

Occupation	F	%
not working	24	68,6
Laborer	3	8,5
Private Sector	7	20
Civil Servants	1	2,9
Total	35	100%

Based on table 3, it can be seen that the job characteristics of the 35 respondents were mostly housewives with a percentage of 68.6%, with 24 people and the lowest, namely civil servants with 1 person with a percentage of 2.9%.

Table 4. Characteristics of Respondent Parity

Parity	f	%
1	12	34,3
2 or 3	17	48,6
> 3	6	17,1
Total	35	100%

Based on table 4 it can be seen that the parity characteristics of the 35 respondents are mostly those with parity 2 and 3 with a percentage of 48.6% for 17 people and the lowest is parity > 3 for 17.1% for 6 people.

Table 5 Knowledge of Breastfeeding Mothers Before Giving Health Education Using E-Books

Knowledge	f	%
Good	5	14,3
Enough	26	74,3
Less	4	11,4
Total	35	100%

Based on table 5, the results show that before being given health education using the E-book media, most of the respondents had sufficient knowledge with a percentage of 74.3%, as many as 26 people.

Table 6. Knowledge of Breastfeeding Mothers After Being Given Health Education Using E-Books

Knowledge	f	%
Good	8	22,9
Enough	25	71,4
Less	2	5,7
Total	35	100%

Based on table 6, the results show that after being given health education using the E-book media, most of them have sufficient knowledge category with a percentage of 71.4% as many as 25 people.

Table.7 Health Education Using E-Books Against Mother Knowledge

Health education	Category						Total	
	Good		Enough		Less		N	%
	N	%	N	%	N	%		
Before	5	14,3	26	74,3	4	11,4	35	100
after	8	22,9	25	71,4	2	5,7	35	100

Based on table 7 there are differences in the results before and after being given health education in the form of E-book media. Most of the respondents' knowledge was in the sufficient category, namely from 74.3% to 71.4%, but the knowledge of respondents who received a good category increased from 14.3% to 22.9%, and with a category less than 11.4% to 5.7%. It can be concluded from the table above that there is an increase in mother's knowledge before being given health education and after being given health education using E-book media.

Knowledge of Mothers About Breastfeeding Nutrition Before Being Given Health Education Using E-Book Media

Based on the research conducted, it was found that before being given health education using e-books, most of the respondents indicated that they had sufficient knowledge, namely with a percentage of 74.3%. This is made possible by several factors that can affect a person's knowledge, namely education and employment factors.

According to Yuliana (2017) factors that can influence knowledge are education. From the research results it can be seen that the educational characteristics of the 35 respondents are mostly high school with a percentage of 54.3% as many as 19 people. The level of education also determines whether or not a person easily absorbs and understands the knowledge they acquire, because in general the higher a person's education, the easier it is to receive the information obtained. This is in line with research according to Wardana & Triguno (2022) education affects the process of learning, the higher a person's education, the easier it is for a person to receive information. Increased knowledge is not absolutely obtained in formal education, but can also be obtained in non-formal education.

In this study, most of the mothers who were respondents to this study were housewives (IRT) with a percentage of 68.6%, 24 people. According to Wardana & Triguno's research (2022), one of the factors that influence knowledge is work. Mothers who don't work usually spend a lot of time at home just taking care of their children, husband and housework, although sometimes they get together but with mothers who don't work so they don't get good information. This is in line with research by Pither et al., (2021) which says that working mothers receive more health information and

they can properly utilize and use existing technology to access various information. In addition, the work environment can also provide experience and knowledge through social interaction and behavior.

Based on the research, it was found that education and work factors were one of the factors that influenced mother's knowledge regarding breastfeeding nutrition before being given health education using e-book media. The pre-test results that have been given to respondents show results in the sufficient category. According to Mubarak (2011) explains that information can also affect one's knowledge. Information about breastfeeding nutrition has not been obtained by respondents as a whole, this is based on a preliminary study when researchers interviewed several respondents regarding the fulfillment of breastfeeding nutrition, so that respondents did not get enough information related to fulfilling nutrition during breastfeeding.

Knowledge of Mothers About Breastfeeding Nutrition After Being Given Health Education Using E-Book Media

Based on the research that has been done, the results obtained after being given health education about fulfilling breastfeeding nutrition using an e-book show that most mothers still have knowledge in the sufficient category, namely with a percentage of 71.4%. In the research results, there is an influence of knowledge that occurs after being given health education because the media is used as a health promotion tool that can be seen, heard, touched, felt or smelled to facilitate communication and information dissemination (Mubarak, 2011).

Knowledge is the result of knowing and occurs after people sense a certain object. Sensing occurs through the five human senses, namely the senses of sight, hearing, smell, taste and

touch (Notoatmodjo S, 2012). According to Yuliana (2017) factors that can influence knowledge are divided into two, namely internal factors and external factors. One of the internal factors consists of age and experience factors.

Based on the results of the research conducted, it can be seen that the age characteristics of the 35 respondents are mostly 20-35 years with an 80% percentage of 28 people. This shows that most of the respondents are of productive age. Age affects one's comprehension and mindset. This is in line with Baskoro's research in Haryati et al., (2019) which says that increasing age will develop a person's mindset and comprehension so that more knowledge will be obtained. The older you get, the more your comprehension and mindset will develop, so that the knowledge and experience you get will get better. According to research by Asia et al., in Suwanti & Wahyuni (2012) states that there is a significant relationship between age and knowledge.

Another factor that influences knowledge is experience. Experience is a way to obtain the truth of knowledge. Therefore personal experience can also be used as an effort to gain knowledge, either obtained directly or indirectly, but not all personal experiences can lead someone to draw conclusions correctly (Rusiana, 2016). Based on the research data, it was found that the majority of respondents with characteristics of parity 2 and 3 with a percentage of 48.6% were 17 people. This is in line with Yuliani's research (2012) which states that women gain knowledge from personal experience. Parity shows that a mother's experience in taking care of children can affect breastfeeding.

Based on the post-test results that have been given, it shows an adequate category, but there

is an increase in the results of the post-test scores that have been carried out. The increase in the score can be influenced by several factors, namely age, experience, and the media that has been given. The media used by researchers is quite in accordance with its function in the form of cognitive functions as explained by Nurdyansyah (2019) that cognitive functions, namely visual symbols or images facilitate the achievement of goals to understand and remember information or messages contained in images.

Analysis of the Effect of Providing Health Education Using E-Books on Mother's Knowledge of Nutrition Fulfillment for Breastfeeding Mothers

Based on the results of statistical tests using the Paired Sample Test analysis with the help of the SPSS 22 program at an error level of 5%, a significant number or probability value (0.001) is obtained which is less than significant 0.05 ($p < \alpha$), then H_0 data is rejected and H_1 is accepted, which means that there is an influence of health education using E-book media on knowledge of nutritional fulfillment in breastfeeding mothers at the Indah Maharany Malang Independent Midwife Practice (PMB).

E-book media is considered more practical and easy to carry everywhere. This is in line with Utari's research (2014) in (Putri & Sudiyat, 2021) that e-books are media that are easy to understand, can be read whenever they are, different from presentation media, audio-visual video as an understanding that is only momentarily different from all e-book media. information or knowledge is already in it, when we forget we can open it. According to Ruddamayanti's research in Makdis (2020) states that having an e-book makes reading activities efficient and effective.

According to the researchers' assumptions, providing health education using an e-book on fulfilling breastfeeding nutrition has a positive effect on mother's knowledge. This is evidenced by an increase in the results of breastfeeding mothers' knowledge before (pre-test) and after being given the intervention (post-test). In addition, in this study the respondents were very enthusiastic about participating in the research series and the respondents were also active in asking questions, so that indirectly providing health education using e-books could add insight or information that was not previously known or understood by respondents. E-book media in providing appropriate and interesting health education can influence the results of mother's knowledge. This is in line with Hidayah & Norazizah's research (2019) which says that the use of e-books is quite effective in cultivating critical thinking skills, so that e-book media has an effect on increasing one's knowledge and attitudes.

Based on the discussion above, it can be concluded that by providing health education using e-books to breastfeeding mothers, it can increase mothers' knowledge about fulfilling nutrition during breastfeeding at PMB Indah Maharany Malang.

CONCLUSION

Based on the results of research at PMB Indah Maharany Malang, the following conclusions can be drawn 1) Mother's knowledge about fulfilling breastfeeding nutrition before being given health education using e-book media, namely most of them are in the sufficient category, 2) Mother's knowledge about fulfilling breastfeeding nutrition after being given health education using e-book media are mostly in the sufficient category, 3) Based on the results of the analysis of the Paired Sample Test, it was found that health education using e-books had an influence on increasing

respondents' knowledge about fulfilling nutrition during breastfeeding at PMB Indah Maharany Malang.

REFERENCE

- Febriyeni, & Resta, A. (2020). Pengaruh Pendidikan Kesehatan Menggunakan Media Audio Visual Terhadap Sikap dan Keterampilan Ibu Hamil tentang ASI Eksklusif. *Jurnal Menara Ilmu*, XIV(02).
- Haryati, E., Maulana, A., & Fauzan, S. (2019). Pengaruh Pendidikan Kesehatan ASI Eksklusif dan Penyediaan Pojok Laktasi terhadap Pengetahuan dan Perilaku Ibu Bekerja dalam Upaya Pemberian ASI Eksklusif. *ProNers*, 4(1).
- Hidayah, L., & Norazizah, Y. (2019). Pelaksanaan Kelas Pasutri Berbasis E-Book Terhadap Pengetahuan Dan Sikap Pasutri Berkaitan Perawatan Kehamilan. *Jurnal Kesehatan Masyarakat Cendekia Utama Kudus*, 7(1).
- Maimunah, R., & Sitorus, N. Y. (2020). Hubungan Pengetahuan Ibu Nifas Tentang Konsumsi Asi Pada Ibu Menyusui Di Wilayah Kera Puskesmas Medan Area Selatan Kota Medan Tahun 2020. *STIKes Flora, Indonesia*, 6(September), 4.
- Makdis, N. (2020). Penggunaan e-book pad era digital. *Al-Maktabah*, 19.
- Mubarak, W. (2011). *Promosi Kesehatan Masyarakat untuk Kebidanan*. Jakarta : Salemba Medika.
- Notoatmodjo S. (2012). *Promosi Kesehatan dan Perilaku Kesehatan*. Jakarta: PT Rineka Cipta.
- Nurdyansyah. (2019). *Media Pembelajaran Inovatif*. UMSIDA Press.
- Pither, M., Yusuf, A., & Aziz, R. (2021). Faktor Risiko Kejadian Hepatitis B pada Ibu Hamil di Kabupaten Luwu Timur.

*Media Publikasi Promosi Kesehatan
Indonesia, 2(1), 56–61*

- Putri, S. N., & Sudiyat, R. (2021). Pengembangan E-Book Anti Stunting (Ebas) Bagi Kader Kesehatan Mengenai Pencegahan Stunting. *Jurnal Kesehatan Siliwangi, 2(1)*.
- Solehati, T., Destiani Ekautami Putri, C., Sri Pujhiyani, P., Sulistiani, E., Nur Fajari, S., Sari Wahyuni, N. S., Afifah, M., Anggia, Y., Intan, F. N., Fatmah, N., & Heryadi, H. (2020). Pengaruh Pendidikan Kesehatan Nutrisi Pada Tingkat Pengetahuan Ibu Post Partum. *An-Nadaa: Jurnal Kesehatan Masyarakat, 7(1)*.
- Triwidiyantari, D., Agustina, A., Suryaningsih, M., Nurhalimah, N., & Herdianti, S. (2020). Peningkatan Pengetahuan Mengenai Asupan Gizi Masa Menyusui. *Abdi Masada, 1*.
- Wardana, ketut eka larasati, & Triguno, Y. (2022). Pendidikan Kesehatan Tentang Pemeriksaan Triple Eliminasi Pada Ibu Hamil Di Puskesmas Seririt Ii Ketut. *Jurnal Pengabdian Kepada Masyarakat Wahana Usada, 4(1), 21–28*.
- Yuliana, E. (2017). Analisis Pengetahuan Siswa Tentang Makanan Yang Sehat Dan Bergizi Terhadap Pemilihan Jajanan Di Sekolah. *Bachelor Thesis, Universitas Muhammadiyah Purwokerto*.