
Effectiveness of Self-Care Teaching Media for Pregnant Women and Pregnant Women with Hypertension

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ARTICLE INFO

Article history

Received date
12 Sep 2024

Revised date
22 Nov 2024

Accepted date
29 Nov 2024

Keywords:

Literature review;
m-Health;
Self-care.

ABSTRACT

Complications that occur during pregnancy are one of the causes of high maternal mortality, but these complications can be treated and prevented. Proper care before giving birth and adequate antenatal care can be supported by the presence of teaching media for pregnant women, including pregnant women with hypertension. Teaching media is effective in improving knowledge and self-care skills and helping understand pregnant women and pregnant women with hypertension. The small number of study articles on teaching media for self-care for pregnant women and pregnant women with hypertension made researchers interested in conducting a literature review on this topic. This study aims to determine the effectiveness of teaching media for self-care for pregnant women and pregnant women with hypertension. This research method is a literature review with a narrative review design. A comprehensive literature search was conducted using electronic databases, namely Pubmed, CINAHL, and Google Scholar. The author obtained 24 articles that were based on the research objectives. The results of the study, the teaching media used in self-care for pregnant women and pregnant women with hypertension are educational modules, power points, booklets, videos, animated videos, pamphlets, m-Health technology, mobile applications, social networks such as WhatsApp, Telegram, and Instagram. In conclusion, self-care teaching media can improve self-care in pregnant women, including pregnant women with hypertension because the teaching media is adjusted to the needs of pregnant women, the material is for self-care, the language is easy to understand, and the media used is interesting.

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INTRODUCTION

Problems that complicate pregnancy are still one of the main factors in the Maternal Mortality Rate (MMR) worldwide, especially in developing countries. In 2020, an estimated 287,000 women died during pregnancy and after childbirth (WHO, 2024). Complications that occur during pregnancy are one of the leading causes of maternal death, but these complications can be treated and prevented. Pregnancy complications that cause maternal death worldwide include high blood pressure during pregnancy, such as pre-eclampsia or eclampsia, and unsafe abortion (WHO, 2024). Hypertension during pregnancy is a complication of around 5% to 10% of all pregnancies, which then increases the risk of morbidity (Luger & Kight, 2022). Countries in the world with Maternal Mortality Rates (MMR) that have not reached the Sustainable Development Goals (SDGs) target

are trying to reduce Maternal Mortality Rates (MMR), one of which is caused by pregnancy complications. Developing countries have made various efforts but have not yet achieved the target of sustainable development goals (SDGs).

One of the successful efforts made by developing countries is obstetric services to handle labor complications, skilled care before, during, and after delivery, and adequate antenatal and postpartum services (Gliozheni & Gliozheni, 2020). Skilled care before delivery and adequate antenatal services can be supported by learning media for pregnant women. Learning media is a technology that conveys messages and can be utilized in the learning process. The knowledge and skills of pregnant women, including hypertensive pregnant women, in self-care increase along with the success of learning media.

Learning media plays an essential role in improving self-care in pregnant women and

hypertensive pregnant women. The use of various media such as leaflets, posters, educational videos, social media, and mobile applications provides important information about self-care in pregnant women, including hypertensive pregnant women, which is understood effectively and efficiently. By utilizing the right teaching media, accurate and precise information can be conveyed widely to help pregnant women and hypertensive pregnant women implement effective self-care practices and maintain the health of themselves and their fetuses. Pregnant women's self-care is defined as adherence to the principles and programs of care, maintaining the health of the mother and fetus during pregnancy, childbirth, and the postpartum period (Moulaei et al., 2021). Problems related to self-care in pregnant women, including pregnant women with hypertension, are lack of knowledge, lifestyle, and stress management. A study revealed that 54% of women in Tanzania had knowledge about gestational hypertension, but none knew the related self-care practices (Rasouli et al., 2019). Some pregnant women with hypertension understand the relationship between high salt consumption and hypertension but do not apply this knowledge to their diet. Problems related to self-care in pregnant women and pregnant women with hypertension can be overcome by the existence of teaching media for self-care.

Self-care teaching media is an interesting and promising approach to improving the health and well-being of pregnant women, including pregnant women with hypertension. Research on teaching media for self-care for pregnant women and pregnant women with hypertension is very important in overcoming morbidity and reducing mortality. Teaching media is effective in improving self-care knowledge and skills and helping to understand how teaching media can be adjusted to the needs of pregnant women, including hypertensive pregnant women. However, the lack of study articles on interventions of teaching media for self-care for pregnant women makes it difficult to practice self-care for pregnant women. The existence of good review articles can collect empirical evidence on best practices in the use of teaching media for self-care for pregnant women, including hypertensive pregnant women. Based on the problems above, it is essential to know the effectiveness of teaching media for self-care for pregnant women and hypertensive pregnant women. This study aims to determine the effectiveness of teaching media for self-care for

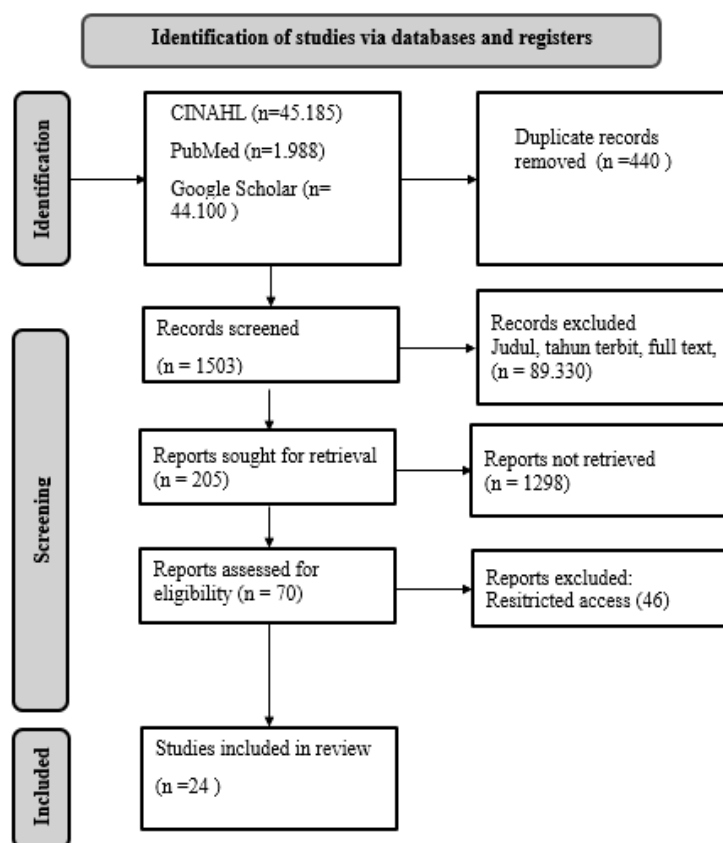
pregnant women and hypertensive pregnant women.

METHOD

This study uses a literature review with a narrative review design. Narrative review aims to present and analyze literature related to the research topic in a structured and comprehensive manner. This narrative review's scoping review includes identifying research topics, literature searches, article selection, data analysis, and interpretation of findings. Research topics are identified to determine the scope of the study. A comprehensive literature search was conducted using the following electronic databases: Pubmed, CINAHL, and Google Scholar. Inclusion and exclusion criteria involve selecting articles that are by the study's objectives. The concept of PCC (Population, Concept, Context) is used as a guideline in determining inclusion criteria. The population is pregnant women and pregnant women with hypertension with the concept of self-care of pregnant women and self-care of pregnant women with hypertension.

The research question used in the literature search is as follows: "What are the interventions or teaching media or learning media for self-care of pregnant women and pregnant women with hypertension?" The search strategy includes a series of appropriate keyword combinations in English: in Pubmed keywords such as ("Self Care" OR "Self Care Intervention" AND "Pregnancy OR Antenatal OR Pregnancy Induced Hypertension OR Pre-eclampsia"). In CINAHL, the keywords are ("Self" AND "Care" AND "Intervention" AND "Pregnancy" AND Pregnant AND Antenatal AND Pregnancy Hypertension AND Pregnancy Induced Hypertension AND Pre-eclampsia"). In Google Scholar, the keywords are "Self Care, Pregnancy, Pregnancy Induced Hypertension, pre-eclampsia". In Indonesian, the keywords are "Self Care", "self-care", "pregnant women", "pregnant women with hypertension". The search is adjusted based on the guidelines in each database. Data is extracted using a manual table containing columns for author, purpose, country, results, and samples. Data analysis was carried out using a descriptive approach. The results of the analysis will be used to present research findings systematically and comprehensively in scientific articles.

Article Screening



In the search results on two databases, Pubmed and CINAHL, the author found 47,173 articles in Pubmed and 84 in CINAHL. The search results on Google Scholar found 44,100 articles. Then, the author eliminated duplicate articles; there were 440 duplicate articles. After that, the author eliminated based on the inclusion criteria, and the author got 70 articles. Then, the author eliminated based on the title and abstract, and the author got 24 articles that met the research objectives.

Based on the country of study, 3 articles came from Egypt, 2 articles from Indonesia, 7 articles from Iran, 1 article from Jordan, 1 article from the Netherlands, 3 articles from India, 1 article from the United States, 1 article from Korea, 1 article from Pakistan, 1 article from Canada, 1 article from Colombia, 1 article from Iraq, and 1 article from the UK.

Based on the research design, 8 articles used quasi-experimental and experimental research, 2 articles used cross-sectional design, 6 articles used Randomized Controlled Trial (RCT) design, 4 articles used descriptive study design, 1

article used comparative design, 1 article used mixed method research design, and 2 articles used qualitative and qualitative phenomenological research design. The samples in this study included pregnant women, pregnant women with pre-eclampsia, pregnant women with hypertension, pregnant women with gestational hypertension, and obstetricians.

RESULTS

From the results of the study conducted, the teaching media used in self-care of pregnant women and pregnant women with hypertension are educational modules, power points, booklets, videos, animated videos, pamphlets, m-Health technology, mobile applications, social networks such as Whatsapp, Telegram and Instagram. Overall, the teaching media used in the self-care of pregnant women and pregnant women with hypertension affects the self-care of pregnant women. The extraction table (table 1) presents the study's results.

Table 1. Data extraction

No	Authors, year	Country	Purpose	Design	Intervention	Results
1.	Afey F. E. A. N. Kamel D. A. 2019	Egypt	Evaluate the effect of an educational module on knowledge and self-care practices (Afey, Nagwa A. El Fadeel, 2019).	Quasi Experiment	Educational modules	There was a statistically significant difference in the mean knowledge score before and after the intervention ($p < 0.000$). There was a statistically significant difference in the mean score of Self-Care Practices ($p < 0.001$).
2	Mulyani et al. 2022	Indonesia	Describe knowledge and self-care practices in preventing pre-eclampsia by pregnant women. (Mulyani et al., 2022).	Cross Sectional	-	The knowledge of self-care for preventing pre-eclampsia was good for 57 respondents, and the practice of self-care for preventing pre-eclampsia was good for 53 respondents.
3	Moulaei K., Bahaadinbeigy K., Ghaffaripour Z., Ghaemi M. 2021	Iran	To design and develop a mobile-based application to facilitate self-care for women suffering from pregnancy poisoning during the COVID-19 pandemic (Moulaei et al., 2021).	Descriptive	-	Pregnant women rated the usefulness of the application at a good level. The application design can reduce anxiety and stress due to pre-eclampsia and improve knowledge and attitudes towards the COVID-19 pandemic and pre-eclampsia.
4	Alnuaimi K., abuidhail J., Abuzaid H. 2020	Yordania	Examine the impact of an intervention program on pre-eclampsia on awareness and pregnancy outcomes (Alnuaimi et al., 2020).	RCT	A 2-hour educational session on pre-eclampsia	There was a significant difference in the average score of pre-eclampsia awareness in the intervention group compared to the control group after conducting the education program.
5	Dinari F., Sarabi E. R., Mashouf E., Moulaei K. 2022	Iran	Determine the role of social networks in improving women's self-care during pregnancy and postpartum (Dinari et al., 2022).	Cross-Sectional	-	There is a significant relationship between education level, occupation, duration of membership in social networks, and duration of social media use. Social networks can help improve women's Self-Care processes during pregnancy and postpartum.

No	Authors, year	Country	Purpose	Design	Intervention	Results
6	Rezaie R., et al 2021	Iran	Determine the effect of self-care counseling on health practices, attitudes towards motherhood and pregnancy symptoms in adolescent pregnant women. (Rezaie et al., 2021).	RCT	Self-care counseling	The average health practice score of the intervention group participants was significantly higher than the control group (p<0.001).
7	Jongsma R.K., et al 2020	Dutch	Explore the experiences of Dutch women at increased risk of hypertension in pregnancy with a blended care approach (mHealth combined with face-to-face care) for remote monitoring of blood pressure and pre-eclampsia and formulate recommendations for using and integrating mHealth in clinical care (Jongsma et al., 2020).	Mixed method study	mHealth technology for automatic blood pressure monitoring with Bluetooth connection to a smartphone application for iOS users and a web-based portal for Android users.	First, the digital platform met patients' expectations, thus contributing to user satisfaction. Second, the platform was perceived as easy to use, and patients preferred different moments and frequencies for measuring their blood pressure. Third, patient autonomy was mentioned in terms of increasing insight into their condition and the ability to influence clinical decision-making. Fourth, the clinical expertise of healthcare professionals was considered necessary for interpreting the data, which implies further responsibility for clinical management.
8	Singh N., Ponna N.S., Rajeshwart R.K., 2017	India	Assessing the knowledge of primigravida women regarding home care management of pregnancy-related hypertension before and after a	Pre-experimental study	Structured teaching program	After providing a structured teaching program, the statistical test results p-value <0.001

No	Authors, year	Country	Purpose	Design	Intervention	Results
			structured teaching program (Singh et al., 2017)			
9	West A.C. 2022	United States of America	Develop a deeper understanding of what pregnant Black women with hypertension experience in pregnancy that may contribute to their disease (West, 2022)	Qualitative Phenomenological	-	The implications for social change include that if black women were more aware of self-care, they could adopt healthy habits that improve pregnancy outcomes.
10	Lee Y., Kim S., Choi S. 2023	Korea	Evaluate the effectiveness of a mobile-based self-care intervention for pregnant women at work in improving the self-care practices of working pregnant women (Lee et al., 2023).	RCT	Self-care application for pregnant women at work	The magnitude of the intervention effect was small to moderate on pregnancy stress (d=-0.425), pregnancy improvement (d=0.333), pregnancy disorders (d=-0.599), and health practices in pregnancy (d=0.490).
11	Shahil-Feroz A., Yasmin H., Saleem S., Bhutta Z., Seto E. 2023	Pakistan	Assessing the usability of the "Raabta" smartphone application from the perspective of pregnant women at high risk of pre-eclampsia (Shahil-Feroz et al., 2023)	Qualitative	-	There are four themes: improving the clarity of instructions, messages, and terminology; accessibility for non-tech-savvy and illiterate Urdu users; improving visuals and icons for user engagement; and simplifying navigation and functionality.
12	Parsa S., Khajouei R., Baneshi R.M., Aali S.B. 2019	Iran	Determine the effect of the pre-eclampsia mobile application on the knowledge of pregnant women (Parsa et al., 2019)	Quasi-experimental	Pre-eclampsia mobile application on pregnant women's knowledge	The participants' knowledge scores after the intervention were significantly related to the differences before and after the intervention with a p-value <0.001.
13	Parfenova M., et al 2020	Kanada	Evaluate patients' knowledge, risk perception, and anxiety about future	RCT	Educational Pamphlet	After 1 month, the knowledge score was higher in the intervention group compared to the control group, with a

No	Authors, year	Country	Purpose	Design	Intervention	Results
			health risks after an episode of hypertensive disorders in pregnancy, as well as their satisfaction with the Educational pamphlet (Parfenova et al., 2021)			p-value <0.0001.
14	Ulloa S. Iliena M. Arias R. Edier M. 2023	Kolombia	Identify salient beliefs regarding self-care behavioral intentions (Ulloa Sabogal et al., 2023)	Quantitative descriptive	-	Positive behavioral beliefs focus on proper maternal nutrition, healthy baby growth and development, prevention and control of diseases during pregnancy, relaxation, peace of mind for the mother, and control and monitoring blood pressure.
15	Hussian et al., 2016	Irak	Examine the self-care management of pregnancy-related hypertension in mothers and determine the relationship between self-care management of pregnancy-related hypertension and several socio-demographics such as age and education level (Hussian, H & AL-Saffar, Amir, A., 2016).	Descriptive study	-	The research findings show that (26%) are in the age group (30-34) years (46%) are elementary school graduates, and (83%) come from low socioeconomic status, and 56% of pregnant women suffer from obesity. The research findings show no significant relationship between self-care management in pregnant women with socio-demographic characteristics and Body Mass Index (BMI).
16	Prathima, 2014	India	Assess and compare knowledge about self-care management due to pregnancy with hypertension in primigravida	Comparative descriptive	-	55% of primigravida mothers and 40% of multigravida mothers have insufficient knowledge. Only 2.5% of primigravida mothers and 5% of multigravida mothers have adequate knowledge. Primigravida

No	Authors, year	Country	Purpose	Design	Intervention	Results
			and multigravida mothers (Prathima., 2014)			respondents know signs and symptoms and preventive measures, 31.8% and 38.6%, respectively.
17	El Sayed, H. A., Said, S. A., Mohy, H. F., & Emam, A. M. 2020	Mesir	Evaluate the effect of an intervention based on the theory of planned behavior on self-care in women with pregnancy-related hypertension (El Sayed et al., 2020)	Quasi-experimental	Arabic language booklet	There was a statistically significant difference ($p < 0.001$) regarding the knowledge of pregnant women and the constructs of the theory of planned behavior. In addition, self-care behaviors related to pregnancy-related hypertension also improved after the intervention based on the theory of planned behavior.
18	Pealing M. L., et all 2019	Inggris	Assess the feasibility of a blood pressure self-monitoring intervention to manage gestational hypertension. (Pealing et al., 2019)	RCT	Daily self-monitoring of blood pressure at home with recording in a diary	Women from four health centers in The median (IQR) number of days with home blood pressure readings per week was 5.5 (3.1–6.5) for those with chronic hypertension and 6.1 (4.5–6.7) for gestational hypertension.
19	Putri J.H., Futriani S. E., 2022	Indonesia	Determine the effectiveness of nutritional education for pregnant women in the first trimester with hypertension through animated videos (Putri & Futriani, 2022)	Quasi Eksperimen	Education through animated video media for pregnant women in the first trimester with hypertension	The results of the paired T-test showed a p-value of 0.000, which means that nutritional education for pregnant women in the first trimester with hypertension is effective through animated video media.
20	Solhi M., Abbasi K., Azar F.E.F., Hosseini A. 2018	Iran	Determine the influence of health literacy education on self-care in pregnant women (Solhi et al., 2019)	RCT	Educational program covering health literacy and self-care during pregnancy and its impact on self-care in pregnant women.	After 1 month of intervention, there was a significant difference ($p < 0.001$). After 2 months of intervention, there was a significant difference ($p < 0.001$).
21	Salim Tanya, Kuriakose A. 2017	India	Assess knowledge of gestational hypertension	Descriptive	-	As many as 70.7% of pregnant women have poor knowledge about gestational

No	Authors, year	Country	Purpose	Design	Intervention	Results
			and knowledge of self-care measures for gestational hypertension in primigravida women with gestational hypertension (Salim & Kuriakose, 2017)			hypertension, and only 4.2% have good knowledge about self-care measures. As many as 36.4% of pregnant women have poor knowledge, and 26.4% have good knowledge about self-care measures.
22	Elbana M.H., Elhady A.M.R., Mohammed R.H. 2022	Mesir	Evaluate the effect of utilizing a self-care management program on antenatal mothers with pregnancy-induced hypertension (PIH) (Elbana et al., 2022)	quasi-experimental	Self-care management program	The total scores of self-care practices related to pregnancy-induced hypertension before and after the intervention (p<0.001).
23	Ahmadinejad S. G., Khadivzadeh T., Eftekharyazdi M., Esmaeili H. 2022	Iran	Determine the effect of self-care counseling on the quality of life of pregnant women with hypertension (Ahmadinejad et al., 2022)	Quasi Experiment	Self-care counseling	There was a significant difference between the two groups (p<0.001)
24	Sarabi N., SheykhloG. S., Moosavi A., Afshar S. 2024	Iran	Evaluating the knowledge of primiparous mothers about blood pressure disorders during pregnancy and self-care by providing education through videos (Sarabi et al., 2024)	Quasi-experimental	Providing education through video	Video education improved the intervention group's knowledge and self-care of hypertensive disorders of pregnancy with p<0.001.

In a study on pre-eclampsia in Egypt in 2019, the Education module was used for self-care practice interventions, with the results showing a statistically significant difference in the average score of Self-Care Practices (p-value<0.001). In addition, there are two studies in Indonesia in the same year, namely 2022, conducted by Mulyani to determine the

description of knowledge and self-care practices in preventing pre-eclampsia carried out by pregnant women in the Baiturrahman Health Center work area with the results of the study, the level of self-care practices for preventing pre-eclampsia was more than 50 percent good and a study conducted by Putri regarding interventions for providing nutrition education through

animated video media for pregnant women in the first trimester with hypertension with the results of the study showing the effectiveness of nutrition education in pregnant women in the first trimester with hypertension.

In a study conducted in Iran by several researchers in 2018, 2019, 2021, 2022, and 2024 using health literacy education media, self-care counseling, mobile-based applications, social networks, mobile applications, and education with videos were able to improve self-care in pregnant women including pregnant women with hypertension. In addition, a study in Jordan in 2020 tested the impact of an intervention program on pre-eclampsia on awareness and pregnancy outcomes, with the study showing an increase in awareness in the group given education. A study in the Netherlands in 2020 with a mixed method design with the results of the study showing that the digital platform met patient expectations, was easy to use and liked, and increased insight into their condition.

In a study in India in 2014 and 2017, several researchers used a descriptive and pre-experimental design where, for the pre-experiment, there was the use of a structured teaching program intervention, with the results of the study showing an increase after the intervention was given. Research conducted in the United States with a qualitative phenomenological research design in 2022 with the results of the study of black women who are more knowledgeable about self-care hypertension in pregnancy. Research in Korea in 2023, with the intervention of self-care applications for pregnant women in the workplace, shows that the results of the study of self-care application interventions are effective in improving self-care practices for pregnant women who work. In addition, there is a study in Pakistan with a qualitative design in 2023 with the aim of the study to assess the usefulness of smartphone applications from the perspective of pregnant women at high risk of pre-eclampsia.

Research in Canada in 2020 with an educational pamphlet intervention, with the results of the study increasing knowledge after the intervention. In addition, there was a study in Colombia in 2023 to identify beliefs about self-care behavioral intentions in dealing with hypertension in pregnancy with the results of the study of positive behavioral beliefs in proper maternal nutrition, healthy growth and development of babies, prevention, and control of diseases during pregnancy, relaxation, peace of mind, monitoring, and control of blood pressure. In addition, research in Iraq in 2015 examined

hypertension self-care management to determine the relationship between socio-demographics, such as age and education level. With the results of the study, there was no relationship. There is a study conducted in Egypt in 2022 with a self-care management program intervention in pregnant women with hypertension. The results show that self-care practices increased after the intervention with a p-value <0.001. In addition, there was a study in England in 2019 with an intervention of monitoring the blood pressure of pregnant women at home, which was carried out independently every day by recording it in a diary.

Self-care teaching media for pregnant women and pregnant women with hypertension

Pamphlet

This educational pamphlet increases women's understanding of the potential future health risks associated with hypertension in pregnancy without causing additional concerns. It may help encourage lifestyle changes needed to reduce the risks caused by hypertension in pregnancy (Parfenova et al., 2021).

Module

Implementing the educational module significantly increased knowledge and practice of self-care (Afefy et al., 2019). The educational module refers to information that has been regularly studied regarding pre-eclampsia and self-management. This module contains the meaning of pre-eclampsia, risk factors, features, complications, dietary management, the importance of rest, and self-care practices that women must do to control and manage. Consists of pictures with simple instructions in Arabic. Researchers use educational books to improve knowledge and practice of self-care (Afefy et al., 2019).

Mobile-based applications

Mobile phones are one of the most prominent technological devices that provide self-care services for pregnant women during the pandemic (Moulaei et al., 2021). This application is designed to reduce anxiety and stress due to pre-eclampsia and improve knowledge and attitudes towards the COVID-19 pandemic and pre-eclampsia. This application contains user profiles, lifestyle, prevention and control, application capabilities, and user satisfaction.

User profiles include name and surname, national ID number, age, weight, height, education, occupation, address, contact number, history of underlying diseases, and pre-eclampsia.

Lifestyle consists of physical exercise, sleep, proper nutrition, and family and family diet, smoking, hookah, and alcohol consumption, stress management of pregnant women, and emotional relationships. Prevention and control consist of introducing and explaining COVID-19, symptoms of pre-eclampsia, complications of pre-eclampsia, the transmission of COVID-19 from mother to fetus, COVID-19 and pre-eclampsia during pregnancy and breastfeeding, prevention of COVID-19, prevention of pre-eclampsia, personal hygiene, smoking, smoking devices, and alcohol consumption during pregnancy and COVID-19, proper methods of interacting with others, harmful aspects of using preventive methods such as wearing masks, using sanitizers, methods to avoid stressful environments and relationships due to COVID-19, maintaining proper nutrition and a healthy diet during the prevalence of COVID-19, maintaining proper nutrition and a healthy diet during pre-eclampsia, introducing methods to reduce or maintain weight during pregnancy, conducting regular pregnancy check-ups, emphasizing the importance of pregnancy care, home quarantine, obtaining reliable news and information, and regular use of medication. During the COVID-19 pandemic, mental and spiritual health during pregnancy.

Power Point

Pre-eclampsia education programs effectively increase awareness of pre-eclampsia and several pregnancy outcomes (Alnuaimi et al., 2020). Educational materials in the program use Power Point, which is helpful for self-monitoring and providing women with the resources they need to improve pregnancy outcomes. PowerPoint presentations were used in a study of the effect of educational modules on the knowledge and self-care practices of 100 women with pre-eclampsia in Egypt in 2019.

Social Media (WhatsApp, Telegram, and Instagram)

As an essential information source, social media can help improve women's self-care processes during pregnancy and postpartum (Dinari et al., 2022). Women more widely use WhatsApp during pregnancy and postpartum as a source of information. Social media is a source of

information for women during pregnancy and postpartum to obtain information on lifestyle, how to deal with pregnancy side effects, deal with psychological problems, and communicate with other pregnant women or the treatment team through social media (Dinari et al., 2022).

mHealth technology

mHealth technology consists of an automatic blood pressure monitor with Bluetooth connection to a smartphone application for iOS users (an operating system developed by Apple Inc. for mobile devices) and a web-based portal for Android users (Jongsma et al., 2020).

Booklet

A book containing relevant educational content and explanations of the physiology and symptoms of pregnancy (Rezaie et al., 2021).

Video

Educational videos include power points and lectures on blood pressure disorders in pregnancy and preventive self-care for the intervention group (Sarabi et al., 2024).

Animation video

Animation video media for nutritional education for pregnant women in the first trimester (Putri & Futriani, 2022). Educational videos in the form of PowerPoint presentations and lectures on blood pressure disorders in pregnancy and preventive self-care for the intervention group, as well as educational videos on general basics of prenatal care and self-care for the control group (Sarabi et al., 2024). Video presentations were also used in a study of the effect of educational modules on the knowledge and self-care practices of 100 women with pre-eclampsia in Egypt in 2019.

DISCUSSION

Based on the article obtained by the author regarding self-care for pregnant women and pregnant women with hypertension in several countries worldwide, both developed and developing countries, research has begun to be applied to the concept of self-care theory developed by Orem. However, research on the topic of self-care interventions for both pregnant women and pregnant women with hypertension is

still limited and has not been widely studied, especially in developing countries where the Maternal Mortality Rate (MMR) has not reached the Sustainable Development Goals (SDGs) target.

By 2030, the Maternal Mortality Rate (MMR) must reach the Sustainable Development Goals (SDGs) target of less than 70 per 100,000 live births, with no country having a Maternal Mortality Rate (MMR) more than twice the global average (WHO, 2024). Therefore, research on self-care interventions must be given more attention as part of efforts to overcome and prevent pregnancy complications so that it can reduce the Maternal Mortality Rate (MMR). Research on self-care in pregnant women and pregnant women with hypertension in developing countries such as India, Egypt, Iran, Iraq, Jordan, Colombia, and Pakistan is still limited to the use of teaching media as a health education intervention that can improve the health of pregnant women and pregnant women with hypertension.

Self-care interventions are a promising and exciting new approach to improving health and well-being, both from the health system's perspective and for the individuals who use these interventions. Self-care can benefit everyone and bring us closer to achieving universal health (WHO, 2022). Implementing self-care interventions is one strategy to address problems in pregnant women that can threaten the safety of the mother and fetus. The use of teaching media to improve self-care skills in pregnant women can have a significant positive impact on their physical and mental health and the health of the fetus they are carrying. The use of teaching media by pregnant women, including pregnant women with hypertension, can provide benefits in increasing knowledge, awareness, skills, and independence and reducing the risk of complications in pregnancy, including reducing the severity of hypertension in pregnancy.

Self-care interventions to advance primary health care are fundamental to achieving universal health coverage (WHO, 2022). One of the primary health services is promotion, which can be done for self-care in pregnant women. One of the efforts to promote self-care is health information education, which requires teaching media or learning media that are useful for interestingly conveying health information, especially for pregnant and hypertensive pregnant women. Teaching media are various tools, materials, or technologies that support learning and teaching. Teaching media can be in textbooks, audio, video, or animation. In the article obtained, pregnant women with hypertension still use old methods in self-care

teaching media, such as lectures and discussions, which are learning methods. In addition, based on the study's results, the author found that self-care teaching media for pregnant and hypertensive pregnant women affects the knowledge of pregnant women and hypertensive pregnant women and can carry out self-care practices that can overcome and prevent complications during pregnancy. Based on the article obtained, teaching media that still use the old ones, such as booklets, modules, and pamphlets for self-care for pregnant women. In addition, self-care teaching media was also influenced by technological developments such as mHealth, social media (WhatsApp, Telegram, and Instagram), animated videos, mobile-based applications, and PowerPoint presentations. The benefits or functions of self-care teaching media for pregnant women and hypertensive pregnant women are as a means of promoting self-care interventions that can improve the welfare of pregnant women and hypertensive pregnant women by controlling or monitoring their health.

CONCLUSION

Based on a narrative review of well-designed teaching media, such as pamphlets, modules, mobile-based applications, power points, social networks (WhatsApp, Telegram, and Instagram), mHealth technology, videos, booklets, and animated videos can convey information in a more interesting, precise, and easy-to-understand way so that it can improve self-care for pregnant women and hypertensive pregnant women. Based on the articles obtained, the teaching media still uses old teaching media such as booklets, modules, and pamphlets for self-care for pregnant women. In addition, self-care teaching media was also influenced by technological developments such as mHealth, social media (WhatsApp, Telegram, and Instagram), animated videos, mobile-based applications, and PowerPoint presentations. These teaching media are effective in improving self-care for pregnant women, including hypertensive pregnant women.

Teaching media is a means to convey health material that can improve self-care by first increasing the knowledge of pregnant and hypertensive pregnant women. Teaching media is effective in supporting the management of self-care for pregnant women, including hypertensive pregnant women. Therefore, self-care teaching media is important in positively impacting the health of pregnant women and the fetus in their

womb. All teaching media based on the results of this study are expected to be applied as a means of promoting self-care health for pregnant women and hypertensive pregnant women in order to prevent more serious complications.

CREDIT AUTHOR STATEMENT

IR: Writing original draft, visualization, funding acquisition, conceptualization, editing; **YH:** writing original draft (supporting), conceptualization, review; **EE:** writing, review.

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