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## RESEARCH ARTICLE

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# Development of Educational Instruments for Postpartum Care with Severe Preeclampsia-Eclampsia based on the Health Promotion Model (HPM)

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## ABSTRACT

An educational instrument is needed that is in accordance with the needs of postpartum mothers with severe preeclampsia-eclampsia. The nursing theories that views the importance of health promotion as an effort to prevent complications has been produced by Nola. J Pender as a Health Promotion Model (HPM). This study aims to develop an educational instrument for postpartum mothers with severe preeclampsia-eclampsia based on the HPM. The design of this research was research and development (R & D) which consisted of 2 stages, namely the development stage and the trial stage. The samples in this study were 50 midwives, 10 postpartum mothers, and an educational media that had been used by midwives. Data were collected through interviews, filling out questionnaires and FGD. A specific educational instrument has been developed by adding components to understanding the benefits of action, understanding prevention efforts, understanding the effectiveness of actions, and the effect on activities. Educational instruments based on the HPM get good results after being socialized and tested, and have met the aspects of functionality, efficiency, and usability, so that they can be used as an instrument to educate post partum patients with severe preeclampsia and eclampsia in the work area of the Health Office of Surabaya.

**Keywords:** post partum; severe preeclampsia-eclampsia; educational instruments; health promotion model

## INTRODUCTION

In East Java, there were 567 maternal deaths and 39 of them were found in the city of Surabaya. The most common cause of maternal death in Surabaya (29.9%) is preeclampsia-eclampsia <sup>(1)</sup>. Postpartum mothers with severe preeclampsia and eclampsia can experience multi-organ emergencies, and threaten the life of postpartum mothers, so mothers must get fast and appropriate treatment <sup>(2)</sup> As a result of eclamptic seizures, the mother may experience: 1) pulmonary edema due to aspiration pneumonitis during seizures, heart failure due to severe hypertension and excessive intravenous fluid administration; 2) severe cerebral hemorrhage leading to hemiplegia, coma or loss of consciousness; 3) blindness due to retinal detachment and ischemia or infarction of the occipital lobe; 4) disseminated intravascular coagulation (DIC) due to increased blood viscosity, hemoconcentration, and blood clotting disorders (Help's syndrome); 5) acute renal failure due to decreased glomerular filtration; 6) Placental abruption which can cause postpartum hemorrhage; 7) metabolic acidosis; and 8) cardiac arrest <sup>(3-6)</sup>. In addition, due to eclamptic seizures, the mother can experience psychosis which can last for a few days to two weeks <sup>2</sup>. The results of the study found that women with eclampsia had hypertensive retinopathy (5.9%), placental abruption (1.8%), heartburn (1.4%), pulmonary edema (0.9%), HELLP syndrome (0.5%), postpartum eclampsia (0.5%), left hemiparesis and peripheral type NVII lesions (0.5%), dyspnea (0.5%), cardiac decompensation (0.5%), placental hematoma (0.5%) and ascites (0.5%) <sup>(7-9)</sup>.

Post partum mothers with eclampsia will experience different physiological changes from physiological post partum mothers. Post partum mothers with eclampsia are mostly at risk of infection due to delivery by cesarean section, are at risk of bleeding due to decreased uterine contraction ability due to MgSO<sub>4</sub> administration, and are at risk for postpartum depression due to loss of baby and inability to adapt to hormonal changes <sup>(10,11)</sup>. For this reason, in order to minimize the impact of severe preeclampsia or eclampsia experienced by the mother, especially the psychological impact, the needs of postpartum mothers with severe preeclampsia-eclampsia should be identified as early as possible <sup>(12)</sup>.

That mean the postpartum mothers with severe preeclampsia-eclampsia really need education that is able to: 1) help mothers overcome crises and physical emergencies, as well as psychological changes; and 2) increasing the independence of mothers and families according to their ability to build adaptive coping to changes that occur in performing post partum care for mothers and babies <sup>(13-15)</sup>. So far, there has been no educational instrument that fits the needs of postpartum mothers with preeclampsia-eclampsia.

Based on a preliminary study of midwives and postpartum mothers, it was found that the educational instruments used by midwives in providing education to postpartum mothers with preeclampsia-eclampsia were general and inadequate, and the behavior of patients in performing health care during the postpartum period was not optimal. This is presumably because the educational instruments used are not specific and the approach used is not appropriate. One model that can be used as an effective approach in providing education to postpartum mothers with preeclampsia/eclampsia is the Health Promotion Model (HPM) by Nola J.Pender. HPM is a way to describe human interaction with the physical and interpersonal environment in various dimensions. This health promotion model is a combination of expectancy-value theory and social cognitive theory. The virtue of HPM is an effort to improve health behavior by paying attention to the internal and external aspects of the individual, so that the desire and effort to behave in health arises from the individual himself. In addition, HPM focuses on disease prevention. <sup>(16,17)</sup>

Based on this explanation, it is important to develop educational instruments based on the Health Promotion Model. This study aims to develop an educational instrument for postpartum mothers based on the Health Promotion Model.

## METHODS

The design of this research was research and development (R&D), this research method used to produce certain products, and test the effectiveness of these products <sup>(18)</sup>. The purpose of using this method was to develop an educational instrument for postpartum mothers with severe preeclampsia-eclampsia based on the Health Promotion Model (HPM). This research carried out in 2 stages, stage 1 is the development stage, and stage 2 is the trial stage. The research design in development stage was a qualitative research with a case study approach. The purpose of using this method was to identify the needs and dependencies of postpartum mothers with severe preeclampsia-eclampsia and to evaluate the educational instruments that have been used so far. Furthermore, the preparation of educational instruments based on the Health Promotion Model (HPM) specifically for the care of postpartum mothers with severe preeclampsia-eclampsia. Stage 1 begins with an evaluation of the educational instruments that have been used so far, and continues with FGDs and expert discussions. The results of these activities are used as a reference for develop educational instruments for post partum mothers based on the Health Promotion Model.

The research design used in trial stage was quasi-experimental and used a nonequivalent control group design model. In this stage, there are two activities were carried out, namely socializing the use of educational instruments and trial of educational instruments which ended with FGDs and expert discussions to recommend the use of educational instruments.

Respondents were determined by using purposive sampling technique based on the inclusion and exclusion criteria that have been set. Respondents at the development stage were 15 midwives and 15 postpartum mother with severe preeclampsia-eclampsia from five community health center in Surabaya. Respondents in trial stage were 50 midwives and 50 postpartum mothers with severe preeclampsia-eclampsia at the Public Health Center in the work area of the Health Office of Surabaya.

This research had obtained ethical clearance in the form of a written statement given by the research Ethics Commission of the Poltekkes Kemenkes Surabaya for research involving humans stating that this research is feasible after fulfilling certain requirements. This research was very concerned about: respect for human, beneficence and maleficence, autonomy and freedom, veracity and fidelity, anonymity and confidentiality, and justice.

## RESULTS

This research was conducted in five of Public Health Centers of the Surabaya City Health Office, namely Kenjeran Health Center, Sidotopo Wetan Health Center, Morokrembangan Health Center, Pucang Sewu Health Center, and Menur Health Center. Three of Health Center are ordinary non-maintenance health centers and two health centers with maternal emergency facilities and delivery services.

### Stage 1: Development Stage

The following is a description of the characteristics of respondents in stage 1.

Table 1. Characteristics of midwives

No	Characteristics	Frequency	Percentage
1	Education		
	a. Diploma IV Midwifery	5	33.33
	b. Diploma III Midwifery	10	66.67
2	Years of service		
	a. <5 years	5	33.33
	b. 5 – 10 years	10	66.67
3	Age		
	a. <25 years old	2	13.33
	b. 25-35 years old	10	66.67
	c. >35 years old	3	20.00

Table 1 showed that the majority (66.67%) of midwives who were respondents in the research stage 1 had Diploma III Midwifery education, had 5-10 years of service and were 25-40 years old.

Table 2. Characteristics of postpartum mothers with severe preeclampsia-eclampsia

No	Characteristics	Frequency	Percentage
1	Age		
	a. <25 years old	1	06.67
	b. 25-35 years old	13	86.67
	c. >35 years old	1	06.67
2	Education		
	a. Bachelor	2	13.33
	b. Diploma	3	20.00
	c. Senior high school	5	33.33
	d. Junior high school	5	33.33
	e. Elementary school	0	00.00
3	Parity		
	a. Primipara	10	66.66
	b. Multipara	4	26.67
	c. Grandemultipara	1	06.67
4	Grade of preeclampsia		
	a. Severe preeclampsia	14	93.33
	b. Eclampsia	1	06.67
5	Type of delivery		
	a. Sectio caesarea	13	86.67
	b. Pervaginam	2	13.33

In table 2 it is illustrated that post partum patients who were respondents in the first stage study almost entirely (86.67%) were aged 25-35 years, almost half (33.33%) had Junior and Senior High School education respectively, most of them (66.66 %) were primiparous, almost all (93.33%) with severe preeclampsia and almost all (86.67%) delivered by cesarean section.

Table 3. Evaluation of educational instruments

No	Instrument standard	Results obtained	Analysis
1.	There is an identification of the characteristics and experiences of postpartum mothers with severe preeclampsia/eclampsia who will be given education including: a. Postpartum care behavior that has been done by postpartum mothers before b. Postpartum mother personal factors a) Biological: age, parity, Body Mass Index, blood pressure, uterine involution, breast milk, Hb, fluid balance, etc. b) Psychological: self-esteem, motivation c) Sociocultural: beliefs, culture, ethnicity, social status economy	Education is carried out directly on educational materials without being preceded by identifying the characteristics and experiences of postpartum mothers with preeclampsia/eclampsia.	Not appropriate
2	There is an identification of specific behavioral cognitions and their effects in post partum mothers with severe preeclampsia-eclampsia which includes: a. Benefits of postpartum care according to postpartum mothers b. Barriers to postpartum care according to postpartum mothers experienced by postpartum mothers c. Self efficacy. that is postpartum mother's confidence in her ability to take care of herself and her baby d. Postpartum mother's attitude towards the care of herself and her baby e. Interpersonal influences that affect postpartum mothers in carrying out care. namely family (husband, parents, in-laws, children, etc.) and the community in the postpartum mother's environment including health professionals f. Situational influences that affect postpartum mothers in self-care and their babies g. Postpartum mother's commitment to the action plan that will be determined h. Urgent Needs felt by postpartum mothers in carrying out care self and baby	Education is carried out directly on educational materials without being preceded by identification of specific behavioral cognitions and their effects on postpartum mothers with severe preeclampsia-eclampsia	Not appropriate
3	The existence of postpartum maternal health promotion behavior specified in the education of postpartum mothers with severe preeclampsia-eclampsia a. Postpartum mothers are able to recognize signs and symptoms danger in postpartum with severe preeclampsia-eclampsia b. Postpartum mothers are able to make the right decisions to access services when experiencing signs and dangers c. Postpartum mothers are able to take care of themselves and their babies properly independently	There is no target of postpartum mothers health promotion behavior with severe preeclampsia-eclampsia	Not appropriate

Table 4. Table of characteristics of FGD participants in development stage

No.	Characteristics	Parameter	Frequency	Percentage
1.	Age	20 – 30 years old	4	40.00
		31 – 40 years old	4	40.00
		41 – 50 years old	2	20.00
2.	Sex	Male	1	10.00
		Female	9	90.00
3.	Education	Diploma III Midwifery	3	30.00
		Diploma IV Midwifery	4	40.00
		Magister of Health	3	30.00
4.	Years of service	1 – 5 years	4	40.00
		6 – 10 years	6	60.00
		>10 years	0	00.00
5.	Employment status	Contract employees	7	70.00
		Civil servant	3	30

The results of the instrument assessment in table 3 indicate that the educational instruments used by midwives have not been suitable for postpartum mothers with severe preeclampsia-eclampsia. The educational media used were not specific for postpartum mothers with severe preeclampsia-eclampsia, and were not in accordance with the

Health Promotion Model. Educational instruments should contain elements of understanding the benefits of action, understanding prevention efforts, understanding the effectiveness of actions, and the effect on activities.

The results of the evaluation of the old educational instruments were presented through FGDs and expert discussions. The purpose of this activity is to get an opinion on whether it is necessary to prepare a new educational instrument.

Table 4 illustrates that almost half (40%) of FGD participants were aged 20-30 years and 31-40 years, almost all (90%) were female, almost half (40%) had Diploma IV Midwifery education, most (60 %) 6-10 years of service, and most (70%) are contract employees.

Table 5. Results of FGDs on evaluation of educational instruments

No	Strategic issues	Reason	FGD results	Researcher review
1.	Understanding the benefits of action	There are no special educational instruments for post partum patients with severe preeclampsia-eclampsia regarding understanding of the procedure	Agree on the preparation of specific educational instruments for post partum patients with severe preeclampsia-eclampsia regarding the understanding of action	Educational instruments should include what understanding postpartum mothers have about the actions that will be taken or what the mother has done so far, this is to provide intrinsic motivation for postpartum mothers to carry out the education provided
2.	Understanding of prevention efforts	There is no instrument that shows data on identifying the characteristics and experiences of postpartum mothers with severe preeclampsia-eclampsia who will be given education	Agree to make an instrument to identify the characteristics and experiences of postpartum mothers with severe preeclampsia-eclampsia who will be given education	The educational instrument should contain a format that will be used by nurses/midwives to identify the characteristics and experiences of postpartum mothers with severe preeclampsia-eclampsia before being given education. It is important to know the strengths and resources that can be utilized for postpartum maternal care.
3.	Understanding of the effectiveness of the action	There is no instrument that shows the identification of specific behavioral cognitions and their effects on postpartum mothers with severe preeclampsia-eclampsia	Agree that the preparation of educational instruments that includes the identification of specific behavioral cognitions and their effects in post partum mothers with severe preeclampsia-eclampsia	Educational instruments according to HPM must be able to identify specific behavioral cognitions and their effects in postpartum mothers with severe preeclampsia-eclampsia. It is important that the education provided is in accordance with the level of cognitive ability and the condition of the postpartum mother. Postpartum mothers with severe preeclampsia-eclampsia will experience a very high level of dependence and experience decreased cognitive abilities
4.	Influence on activity	There is no instrument that shows what postpartum maternal health promotion behavior is expected in educating postpartum mothers with severe preeclampsia/eclampsia	Agree that the preparation of an instrument that includes the expected postpartum mothers health promotion behavior in education for postpartum mothers with severe preeclampsia-eclampsia	In the educational instrument it is necessary to determine what health promotion behavior is expected to be carried out by postpartum mothers with severe preeclampsia-eclampsia, this is very important to evaluate the progress that has been achieved by postpartum mothers after receiving education

Based on table 5 appears that the FGD participants approve if a new educational instrument was developed, which is specifically for education for postpartum mothers with severe preeclampsia-eclampsia, which contains elements of identification, understanding of the benefits of action, understanding of prevention efforts, understanding of the effectiveness of the action, and influence on activity.

The result of expert discussion about development of educational instruments for postpartum mothers with severe preeclampsia-eclampsia at the Surabaya City Health Office, suggested that development of specific educational instruments for post partum patients with severe preeclampsia/eclampsia was urgent for done with consent of understanding the benefits of action, understanding of prevention efforts, understanding of the effectiveness of the action, and influence on activity.

Table 6. Results of expert discussion on development of educational instruments

Instrument	Component	Feedback
Specific educational instruments for postpartum mothers with severe preeclampsia-eclampsia based on the Health Promotion Model	1. Understanding the benefits of action	Education for postpartum mothers with severe preeclampsia-eclampsia, based on the Health Promotion Model, requires an instrument that accommodates the identification element of postpartum mothers' understanding of the actions that should be taken by postpartum mothers in order to take care of themselves due to the emergency they experienced after receiving education from nurses/midwives.
	2. Understanding of prevention efforts	Postpartum mothers' understanding of preventing complications, both for themselves and their babies due to the severity of preeclampsia-eclampsia, is an important thing that nurses/midwives must know before providing education. There are several cultural and spiritual beliefs that influence their understanding of prevention. So it is very necessary educational instruments that pay attention to this.
	3. Understanding of the effectiveness of the action	Preparation of instruments is needed for optimizing education in preventing complications and improving postpartum maternal health promotion behavior with preeclampsia/eclampsia by adding an understanding of the effectiveness of the action.
	4. Influence on activity	There are educational instruments that consist of: 1. The Concept of Health Promotion Model 2. Specific educational materials for postpartum mothers with preeclampsia/eclampsia by including their effects to activity

**Stage 2 (Trial Stage)**

The following is a description of the characteristics of respondents in stage 2

Table 7. Characteristics of respondents in the trial stage

Characteristics	Frequency	Percentage
<b>Education</b>		
a. Diploma IV Midwifery	20	40.00
b. Diploma III Midwifery	30	60.00
<b>Years of service</b>		
a. 5 – 10 years	15	30.00
b. <10 years	35	70.00
<b>Age</b>		
a. <25 old age	2	04.00
b. 25-35 old age	10	20.00
c. >35 old age	38	76.00

Table 7 informs about the characteristics of the respondents in terms of age, length of work, and recent education where the results show that most of the participants (60%) had Diploma III Midwifery education, most (70%) with more than 10 years of service, and most of them (76%) were over 35 years old. This shows that the respondents are in the productive age category, and had long work experience at the Community Health Center so that they can be used as respondents to test the educational instruments developed based on the Health Promotion Model.

Socialization and training on the use of educational instruments for postpartum mothers with severe preeclampsia-eclampsia based on the Health Promotion Model was held on October 28, 2020 online with the zoom application at 13.00-14.30. This socialization activity was attended by 50 midwives from 5 selected health centers. there are Kenjeran Health Center, Sidotopo Wetan Health Center, Morokrengangan Health Center, Menur Health Center, and Pucang Sewu Health Center. In this activity, the material is presented in accordance with the unit of activity that has been made. Participants were very cooperative and enthusiastic in training activities and participated in the training from beginning to end. This socialization and training activity was continued with the practice of using educational instruments for postpartum mothers with severe preeclampsia-eclampsia in accordance with the time allocated by the midwife. Researchers accompanied several midwives during the process of using the instrument as a comparison whether what was done by the midwife was appropriate or not. This process lasts for 1 week until all the midwives have tested it.

Table 8. Evaluation of the ability of midwives in testing the application of educational instruments based on the Health Promotion Model in postpartum mothers with severe preeclampsia-eclampsia

Elements of educational instruments	Category			Total – f (%)
	Good – f (%)	Enough – f (%)	Less – f (%)	
Understanding the benefits of action	40 (80)	10 (20)	0 (0)	50 (100)
Understanding of prevention efforts	50 (100)	0 (0)	0 (0)	50 (100)
Understanding of the effectiveness of the action	40 (80)	10 (20)	0 (0)	50 (100)
Influence on activity	40 (80)	10 (20)	0 (0)	50 (100)
Average	42.5 (85)	30 (15)	0 (0)	50 (100)

Table 8 informs that in the majority (85%) of the trial activities using the instrument, the respondents have good ability in using the instrument. The ability of respondents to use educational instruments on understanding the benefits of action in postpartum patients with severe preeclampsia-eclampsia mostly (80%) was good. the ability of respondents to understand all prevention efforts was good (100%), the ability of respondents to understand the effectiveness of some measures mostly (80%) are good, the ability of respondents to influence activities is mostly (80%) good.

Table 9. Instrument quality based on midwife views (user views)

Quality components by user	Category			Total – f (%)
	Good – f (%)	Enough – f (%)	Less – f (%)	
Functionality	45 (90)	5 (10)	0 (0%)	50 (100)
Efficiency	46 (92)	4 (8)	0 (0%)	50 (100)
Usability	47 (94)	3 (6)	0 (0%)	50 (100)

The explanation from table 9 is that almost all respondents (90-94%) stated that the quality of the educational instruments that had been developed based on the Health Promotion Model according to the Midwife was good. viewed from the aspects of functionality, efficiency and usability.

In this section, recommendations for the development of educational instruments based on the Health Promotion Model will be presented for postpartum mothers with severe preeclampsia/eclampsia based on stage 1 and stage 2 FGDs, expert discussions and instrument trials. The educational instruments displayed include part one (concepts) and part two (educational materials) for postpartum mothers with severe preeclampsia-eclampsia.

In the final stage of this research. FGD was conducted to finalize the development of Educational Instruments. The FGD was attended by researchers, nursing experts, representatives from the Public Health Promotion and Empowerment Section of the Surabaya City Health Office, and representatives midwives from five of community health centers in Surabaya.

In this activity, the educational instrument for postpartum mothers with severe preeclampsia-eclampsia based on the Health Promotion Model has been improved in several parts, based on the results of the trial. This

instrument has received a recommendation for its feasibility to be used in postpartum mothers with severe eclampsia-eclampsia. The results of the second FGD can be seen in table 10.

Table 10. Results of FGD Stage 2

Strategic issues	Reason	FGD results	Researcher review
Use of educational instruments for postpartum mothers with severe preeclampsia-eclampsia based on the Health Promotion Model	The new educational instrument has not been applied directly to all postpartum mothers with severe preeclampsia-eclampsia, because some postpartum mothers with severe preeclampsia-eclampsia are still under control at the Referral Hospital and there is a Covid 19 pandemic	The use of new educational instruments will be optimized for use through home visits or when mothers are immunizing their babies	Educational instruments for postpartum patients with severe preeclampsia-eclampsia based on the Health Promotion Model can already be used at the Public Health Center in the Work Area of the Health Office of Surabaya

## DISCUSSION

Educational instruments for postpartum mothers with severe preeclampsia-eclampsia must be specific, so that the education carried out can produce understanding and postpartum mothers with severe preeclampsia-eclampsia are able to take care of their health as optimally as possible. Educational instruments are very necessary for nurses/midwives to teach mothers to detect and deal with postpartum emergencies with severe preeclampsia-eclampsia which are often neglected due to lack of careful education <sup>(19)</sup>.

In this case, the modification of the Health Promotion Model in the preparation of educational instruments can increase mothers' understanding of how to overcome crises and physical and psychological emergencies for postpartum mothers due to severe preeclampsia-eclampsia and help postpartum mothers and their families achieve independence in self-care and their babies according to their abilities. In previous studies, the Health Promotion Model has been applied to nursing care for mothers with severe preeclampsia with termination of pregnancy. This model also helps mothers improve coping in overcoming psychological problems due to a difficult delivery process (surgery) as well as the risk of losing a baby and or giving birth to a premature baby <sup>(17)</sup>.

Educational instruments based on the Health Promotion Model (HPM) consist of an understanding of the benefits of action, an understanding of prevention efforts, an understanding of the effectiveness of the action, and the effect on activities. Understanding of the benefits of action, abilities, and assistance needed when the condition is not stable and the independence that is expected to be carried out by the patient when the patient's condition is stable <sup>(20)</sup>. Understanding of prevention efforts is measured from the data that examines signs of impending eclampsia, magnesium sulfate poisoning, postpartum hemorrhage, pulmonary edema, and comfort level, understanding of the effectiveness of the action is measured by the presence of data on the patient's ability to meet basic needs, self-care needs, baby care needs, and readiness to become parents. The influence on activity is obtained through education about physical and psychological responses, as well as patient behavior that deviates from physiological conditions, as well as habits before illness. Independence in education through assistance or learning needs that are expected by the patient <sup>(21)</sup>.

According to the Expectancy value theory, individuals will rationally act as they should in achieving what they want. and also they tend to maintain it when the desire has been achieved, namely by: 1) increasing the results to be achieved called as a positive personal value and 2) improvement based on available information to achieve the desired result, the individual will not do something that is useless and of no value to him. The individual will not carry out the activity even though the activity is interesting to him if it is felt that the activity is impossible to achieve <sup>(16)</sup>.

In social cognitive theory which is the second basis of HPM. that each individual must have more knowledge and abilities in fostering relationships with the surrounding environment to support adaptive processes. so that this can be a prevention and health improvement that can be done to avoid the possibility of illness. in this case to prevent further complications due to severe preeclampsia-eclampsia in postpartum mothers <sup>(19)</sup>.

In the evaluation of the newly developed educational instrument. there were several items rated good by most of the respondents. The items are: the terms used in this educational instrument are easy to understand, the terms used in this educational instrument do not cause ambiguity, the appearance of this educational instrument is simple and attractive, this educational instrument is easy to use, this educational instrument addresses the needs of postpartum mothers with severe preeclampsia -eclampsia to get help, this educational instrument is useful for overcoming the problems of postpartum mothers with severe preeclampsia-eclampsia. The thing that still needs to be improved on the instrument is that the time used to use this educational instrument is too long and this educational instrument is considered not yet fully used to treat the condition of post-partum patients with severe preeclampsia-eclampsia who have just returned from a referral hospital.

Many obstacles were faced by midwives when conducting trials. namely the unavailability of postpartum patients with severe preeclampsia-eclampsia who visited the Health Service Center where the midwife worked, the COVID-19 pandemic and the midwife's busy schedule with other service tasks. To overcome this, a trial of using educational instruments has just been carried out on postpartum mothers in their respective homes virtually. using whatshap video calls.

## CONCLUSION

The educational instrument that has been used by nurses/midwives to provide education on postpartum maternal care with preeclampsia-eclampsia at the Public Health Center of the Surabaya City Health Office is not yet specific and not in accordance with the Health Promotion Model. In this study, specific educational

instruments have been prepared to be used for postpartum mothers with severe preeclampsia-eclampsia based on the Health Promotion Model through FGDs and expert discussions by adding components of understanding the benefits of action, understanding prevention efforts, understanding the effectiveness of actions, and the effect on activities. The educational instruments based on the Health Promotion Model got good results after being disseminated and tested, and have met the aspects of functionality, efficiency, and usability, so they can be used as instruments to educate post partum patients with severe preeclampsia and eclampsia in the work area of the City Health Office Surabaya.

For stakeholders, nurse/midwives to recommend the use of educational instruments that have been prepared for postpartum mothers with severe preeclampsia-eclampsia based on the Health Promotion Model in the health care setting. For the next researcher to conduct research with more respondents in a more varied and wider range of health services in order to assess the effectiveness of the Health Promotion Model-based educational instrument in preventing complications and increasing appropriate treatment for postpartum mothers with severe preeclampsia-eclampsia.

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