

# Improving midwives competence in postpartum depression screening through EPDS training

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## ABSTRACT

Postpartum depression represents preventable challenges and has a significant impact on both mother and baby. Depression affects over ten percent of individuals during the perinatal period. The prevalence of reported cases of postpartum depression statistically appears low, but in reality there are still cases in the community. The cause of the high obstacle is that many midwives have not been able to apply due to lack of knowledge and skills in using EPDS. This study aims to determine the effect of postpartum depression screening training using EPDS on the knowledge and skills of midwives in detecting postpartum depression. Pre-experimental research type and one group pretest posttest design. The population was all midwives at Genteng Hospital as many as 31 midwives with sampling using total sampling. Analysis of the data was performed using SPSS for Windows (Version 25), employing the Wilcoxon signed-rank test and multiple logistic regression. The analysis yielded a significant increase in knowledge scores, with a mean difference of 38.71 and skills by 88.533 after training. Multivariate results showed that age, education, nursing field, did not affect knowledge and skills, while length of work did not affect knowledge but affected skills by 14, 107 times. Midwives can be more proactive in screening for postpartum depression using EPDS as an early prevention step, so as to identify the risk of postpartum depression more precisely.

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## 1. Introduction

Postpartum depression is a common issue experienced by mothers after childbirth with symptoms such as anxiety, fatigue and intense feelings of sadness. Some of these conditions trigger the baby blues and in the long run will risk causing postpartum depression ([Hayoun et al., 2023](#); [Letourneau et al., 2012](#)). The statistically reported prevalence of postpartum depression cases appears low, but in reality there are still cases of postpartum depression in the community. The reasons for not being detected are due to stigma in the social environment and lack of knowledge to recognise the symptoms of postpartum depression (Sarli & N Sari, 2018). Also, many health facilities have not implemented special screening to detect postpartum depression (Amer et al., 2024).

Based on data from the World Health Organization (WHO) in 2023, it shows that worldwide, more than 10% of pregnant women and mothers who give birth experience depression, more than 75% are in low- and middle-income countries ([WHO, 2023](#)). Postpartum depression usually appears between a period of 3 to 5 days after delivery, with frequency rates ranging from 40% to 80%. Most cases are often documented in the initial 6 months after delivery (Azad et al., 2019). The prevalence of serious depression is estimated between 3.1% and 4.9%, while mild depression is estimated at 11% in

developed countries (Ben Hayoun et al., 2023). In Indonesia, the prevalence of baby blues syndrome in 2023 ranges from 50-70%, postpartum depression at 34% and postpartum psychosis at 1% (Lopez-Morales et al., 2021). The prevalence of postpartum depression in East Java Province in Wonocolo District, Surabaya City shows that there are cases of 66% of mothers who experience postpartum depression (WHO, 2023), (Ayaz et al., 2020; Matsumura et al., 2019). Based on primary data at Genteng Hospital in 2024 there were 5 cases of postpartum depression and in September there were 2 cases detected postpartum blues.

Postpartum depression exerts a significant influence on the well-being of the mother, infant, and the entire family unit. The impact on the mother is experiencing emotional instability, frequent crying, fatigue, anxiety and difficulty in caring for her baby. If not treated immediately, it will contribute to the development of long-term depression and even suicide. The impact on the baby affects the baby's mental and motor development. Children with mothers who experience postpartum depression may experience emotional and behavioural disturbances such as eating and sleeping disorders, crying easily, and speech delays (Śliwerski et al., 2020).

Midwives are one of the health workers who are at the forefront of providing maternal health services after childbirth and act as non-specialist health workers who provide mental health services in accordance with the mental health intervention pyramid. Some previous research results regarding mental health screening attitudes, midwives acknowledge their role in the perinatal period in detecting and facilitating care that can affect the quality of services and conversely potentially worsen health status if not treated appropriately (Noonan et al., 2018).

A recognized strategy for identifying potential cases of postpartum depression involves the administration of the EPDS (Chan et al., 2021). The advantages of the EPDS questionnaire are that it is highly accurate in screening the risk of postpartum depression so as to prevent depression and is most commonly used to detect postpartum depression due to the shorter number of statements (Goutam & Kaushal, 2018). Although the EPDS is a globally recognised tool, many midwives in primary and secondary health facilities in Indonesia are still unaware or untrained in its use, resulting in under-diagnosis of PPD. This aligns with previous study (Müller et al., 2020) indicated 72.2% of midwives in the Sidomulyo Puskesmas area and 71.4% of inpatient puskesmas midwives had never heard of or did not know about EPDS (Moraes et al., 2017).

Midwives' knowledge and skills about screening using the EPDS questionnaire with training. This aligns with Noonan et al. (2018) that midwives need further education or training to be able to recognise symptoms of postpartum depression. Good knowledge and skills can prevent postpartum depressive disorders since pregnancy (Noonan et al., 2018). Based on preliminary study on 30 September - 3 October 2024 in the delivery room of Genteng Hospital for 10 midwives, it shows that all 10 midwives do not know about the EPDS questionnaire. However, there is a discernible gap in the literature concerning the specific impacts of targeted EPDS screening training on midwives' competence in district-level hospitals in Indonesia (Demissie & Bitew, 2021). This study fills that gap.

The postpartum depression screening training is expected to yield a positive and beneficial influence on the mental wellbeing of postpartum mothers at Genteng Hospital. It is hoped that this programme can become a model that can be implemented in other hospitals to support the mental health of postpartum mothers more broadly.

## 2. Method

This study is a pre-experimental study with a one-group pre-test post-test design. The pre-experimental study is conducted to determine the effect of a treatment on another variable without the presence of a comparison group (control group). The population used consists of all midwives at Genteng Hospital, totaling 31 midwives with total sampling. The research was conducted in January-February 2025 at Genteng Hospital in Banyuwangi. The independent variable in this study is postnatal depression training using EPDS, while the dependent variables are knowledge and skills, and the confounding variables are age, education, length of work, and field of care. The operational definition of knowledge is the result of the midwife's understanding from participating in the training provided (understanding, the function of EPDS, the purpose of using EPDS, how to fill it out, and the interpretation of the results from EPDS), while skills refer to the ability and expertise in carrying out

screening using EPDS with the indicators being the accuracy and precision of the midwife in filling out EPDS correctly.

Implementation stage: 1) After obtaining permission from Genteng Hospital, the researcher coordinates with respondents to determine the time and place of the training. 2) explaining the aims and objectives of the research to be conducted, 3) distributing an information consent form which is then filled out voluntarily by the respondents, 4) distributing the questionnaire (pre-test), 5) providing material about postpartum depression and demonstrating how to fill out the EPDS, 6) assisting midwives in screening for postpartum depression among postpartum patients in the delivery room. 7) conducting a post-test. The measuring tool used for knowledge is a questionnaire based on the module compiled by (Rauf et al., 2024) and has undergone validity testing using product moment with results showing all item question R calculated value > R table (0.361) which means valid, and reliability testing using Cronbach's alpha with a result of 0.763 which means reliable. The data that has been collected is tested for normality using Shapiro-Wilk showing knowledge p-value before 0.038 and after  $0.000 < \alpha = 0.05$ , skills showing p-value before 0.000 and after  $0.000 < \alpha = 0.05$ , so the data is not normally distributed, thus analyzed by using the Wilcoxon test, while to determine the effect of confounding variables (age, education, length of work, and nursing field) on knowledge and skills using multiple logistic regression tests.

This research has passed the ethical review by the Ethics Commission of STIKES Banyuwangi Number 068/01/KEPK-STIKESBWI/XII/2024-2025 dated 30 December 2024.

### 3. Results and Discussion

#### 3.1. Respondent Characteristics

**Table 1.** Frequency Distribution of Respondents' Characteristics

Variable	Frequency (n)	Percentage (%)
<b>Education</b>		
Completed D3	19	61
D4 / S1 graduates	12	39
<b>Field of Care</b>		
Emergency room	4	13
Delivery room	25	81
Pregnancy and gynaecology clinic	2	6
<b>Total</b>	<b>31</b>	<b>100</b>

Table 1 indicated most of the 19 (61%) respondents have a D3 education and almost all 25 (81%) respondents work in the delivery room.

**Table 2.** Characteristics of respondents by age and length of work of Midwives

Variable	n	Mean	Median	Minimal	Maximum
Age	31	37,81	36	29	58
Length of work	31	12,26	12	1	27

Table 2 indicated the average age of respondents is 37 years and 8 months with the youngest of 29 years and the oldest of 58, while the average length of service of respondents is 12 years and 2 months with the latest 1 year and the longest 27 years.

**Table 3.** The results of analysis of postpartum depression screening training using EPDS on the knowledge and skills of midwives in detecting postpartum depression

Variable	Before	After	p-value*
<b>Knowledge</b>			
Mean (SD)	57,74 (16,67)	96,45 (6,082)	0,000
Min-Max	30-90	80-100	
<b>Skills</b>			
Mean (SD)	34,032 (5,939)	92,565 (7,602)	0,000
Min- Max	0-12,5	75-100	

\*Wilcoxon sign rank test, sig.< $\alpha = 0,05$

Based on the table above, it can be concluded that the knowledge and skills of midwives before and after the training have increased significantly, where knowledge has increased by 38.71, while in skills there is an increase of 58.533.

**Table 4.** Multivariate Test Result Knowledge

Variable	<i>p-value</i>	Normally	Description
Age	0,691	$P\text{-value} < \alpha = 0,05$	Not significant
Education	0,667		Not significant
Treatment field	0,869		Not significant
Length of work	0,596		Not significant

Based on the table 4 above, it can be concluded that age, education, field of care and length of work do not affect midwives' knowledge in detecting postpartum depression.

**Table 5.** Multivariate Test Results Skills

Variable	<i>p-value</i>	Normally	Description
Age	0,069	$P\text{-value} < \alpha = 0,05$	Not significant
Education	0,364		Not significant
Treatment field	0,692		Not significant
Length of work	0,020		Significant

Based on the table 5 above, it can be concluded that the length of work significantly affects the skills of midwives in detecting postpartum depression at Genteng Hospital.

**Table 6.** Factors affecting midwives' skills in carrying out postpartum depression detection

Variable	B	Sig.	Exp (B)
Length of work	0,464	0,020	14,107

Table 6 above showed the analysis results using multiple linear regression tests show that the length of work affects the midwives' skills in detecting postnatal depression at Genteng Hospital Banyuwangi with a  $p\text{-value}$  of  $0.020 < \alpha = 0.05$ . The Exp (B) value for length of work is 14.107, which means that an increase in the length of work of midwives will increase the skills of midwives at Genteng Hospital by 14.107 times.

### 3.2. Discussion

Midwives believe that screening, counseling, and referring mothers with depression is part of their responsibilities. This aligns with the philosophy of the International Confederation of Midwives, and continuous midwifery provision, informed by an understanding of the diverse social, emotional, cultural, spiritual, and physiological dimensions of women's lives. The role of midwives has been established to include the identification of individuals at risk for mental health disorders through screening and the provision of relevant education. However, very few have received specialized training in this area (Stewart & Henshaw, 2022). At Genteng District Hospital, midwives have not received training on postpartum depression screening; if patients experience mental health issues, collaboration is conducted with psychiatrists. This is consistent with research in Cambodia and Malaysia where midwives have not received mental health training through either seminars or courses (Olofsson et al., 2018), (Fellmeth et al., 2018).

Midwives require further education or training. If midwives possess knowledge and skills, they can recognize women with postpartum depression (Noonan et al., 2018). In addition to enhancing knowledge and skills, training can also impact the quality of healthcare services such as in hospitals. With the ability to detect postpartum depression early, midwives can refer mothers in need of further assistance to competent healthcare professionals, such as psychologists, psychiatrists, or mental health specialists. Furthermore, training encourages midwives to be more proactive in educating mothers and families about the importance of postpartum mental health. This training also has long-term effects; with increased knowledge among midwives, it is expected that the number of mothers detected with postpartum depression will rise, allowing for earlier interventions (Farrell et al., 2020; Shorey et al., 2023).

Postpartum depression screening training using the Edinburgh Postnatal Depression Scale (EPDS) at the Genteng Regional Public Hospital has proven effective in increasing midwives' knowledge and

skills in early detection of postpartum depression. Before the training, many midwives did not understand how to fill out the EPDS or its benefits as a screening tool, which resulted in the potential for postpartum depression often being overlooked. Through training that involved providing materials and hands-on practice using the EPDS questionnaire, there was a significant increase in midwives' knowledge and skills, with the average knowledge score rising from 57.74 to 96.45 and skills improving from an average score of 34.032 to 92.56. This is consistent with research conducted (Leny Rauf et al., 2024), and (Khalid & Hirst-Winthrop, 2022), where there was an increase in midwives' knowledge about the EPDS after socialization and implementation of the EPDS. This training demonstrates that theory and practice-based training is effective in enhancing midwives' knowledge and skills in detecting postpartum depression.

To enhance the involvement of midwives in postpartum depression screening programs, several strategies can be applied. First, specialized training on the use of screening tools such as the Edinburgh Postnatal Depression Scale (EPDS) is essential to improve midwives' knowledge and skills in early detection of postpartum depression. This training can also boost midwives' confidence in conducting screenings and providing counseling to postpartum mothers (Leny Rauf et al., 2024), (Farrell et al., 2020). Second, integrating postpartum depression screening into routine services in prenatal classes will facilitate midwives in carrying out screenings continuously and systematically (Özkaraman et al., 2018). Third, providing adequate guidelines, protocols, and screening tools at health facilities will reduce external barriers often faced by midwives, such as the unavailability of tools or official guidelines (Shorey et al., 2023). Fourth, management support and recognition of the role of midwives in mental health screening can increase motivation and prioritize the implementation of screening in the field. Fifth, increasing awareness and health literacy regarding perinatal mental health in the community and families will also support the role of midwives as mothers and families become more open in reporting symptoms and accepting interventions (Grimes et al., 2014; Muhwava et al., 2020). With a combination of training, facility support, strengthening protocols, and enhancing community awareness, midwives' involvement in postpartum depression screening programs can significantly increase, allowing for more effective early detection and management of postpartum depression.

The results of multivariate analysis indicate that work experience is one of the factors influencing skills. The analysis results show that the increase in the midwives' work experience at Genteng Hospital is actually associated with a 14.107-fold improvement in skills. The working experience of midwives greatly affects their skills in conducting postpartum depression screenings. Midwives with longer experience tend to be more knowledgeable and confident in recognizing the symptoms of postpartum depression and effectively using screening tools such as the Edinburgh Postnatal Depression Scale (EPDS). Routine practice experience allows midwives to enhance their observation and communication skills with postpartum mothers, enabling them to gather psychological information more sensitively and accurately (Petrozzi & Gagliardi, 2016; Ross et al., 2005). Conversely, midwives with limited experience may still feel less confident or less skilled in conducting screenings, resulting in mental health screenings for postpartum mothers often being suboptimal (Jiang et al., 2014).

In addition, work experience is also related to the midwife's understanding of the importance of early detection of postpartum depression to prevent negative impacts on maternal health and child development. Midwives who regularly deal with postpartum cases will be more sensitive to signs of depression and tend to be more proactive in screening and providing education to mothers and families. This experience also helps midwives to overcome barriers in implementing screening, such as mothers' feelings of shame or stigma related to mental health issues. Therefore, enhancing experience through continuous training and practice supervision is crucial to improve midwives' skills in effectively and consistently screening for postpartum depression (Fitriana et al., 2022).

This research on early detection of postpartum depression has several methodological limitations that need to be considered. 1. The small sample size, which may reduce statistical power and the generalizability of the research results. 2. The study was conducted in a single location or limited area (Genteng Regional General Hospital), so the results may not reflect the conditions of a broader population. 3. The absence of a control group makes it impossible to compare and assess the effects of the intervention more validly.



#### 4. Conclusion

Training on postpartum depression screening using EPDS significantly affect the knowledge and skills of midwives in the detection of postpartum depression in hospitals tile. Midwife skills are influenced by the length of work, where the increase in the length of work on midwives will increase the skills of midwives in general hospital Genteng by 14, 107 times. Midwives should be more proactive in screening postpartum depression using EPDS as an early preventive measure, so as to identify the risk of postpartum depression more precisely. Integrating EPDS training into continuous professional development (CPD). Policy recommendations for hospitals to mandate postpartum screening. Suggestions for future research, e.g., “A randomized controlled study with a control group is recommended to confirm the causal relationship.”

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