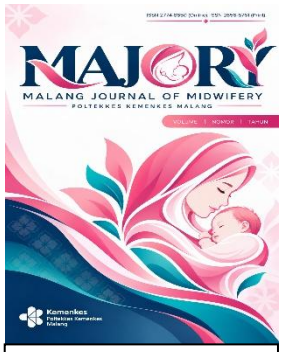
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RESEARCH ARTICLE

Implementation of Early Mobilization Among Postpartum Mothers

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ABSTRACT
Early mobilization is an important component of postpartum care and should be adapted to each mother's clinical condition and readiness. Describing mobilization practices may help identify areas requiring additional postpartum education. To describe reported early mobilization practices among postpartum mothers at Hidayah Clinic, Sukoharjo, Central Java, Indonesia. A descriptive study was conducted from April to June 2024 involving 30 postpartum mothers selected through total sampling. Data were collected using a researcher-developed questionnaire comprising seven yes-or-no items and supplemented by interviews. Data were analyzed descriptively using frequencies and percentages. The questionnaire had not undergone formal validity and reliability testing. Of the 30 respondents, 14 (46.7%) were classified as having adequate mobilization practices, 12 (40.0%) as good, and 4 (13.3%) as inadequate. Sitting upright with back support was the most frequently reported activity (16/30, 53.3%), whereas turning to the left or right was the least frequently reported (7/30, 23.3%). Reported early mobilization practices varied across the seven activities assessed. These findings provide preliminary information for planning individualized postpartum education. Further research using validated measurement instruments and clearly defined assessment criteria is needed.

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1. INTRODUCTION

Maternal health is an important indicator of a country's health status and the quality of its healthcare system(1). Maternal mortality remains a major public health concern, particularly in low- and middle-income countries(2). Maternal deaths may occur during pregnancy, childbirth, and the postpartum period and are associated with various medical, socioeconomic, and healthcare-related factors. According to Indonesia's Maternal Perinatal Death Notification (MPDN) system, the number of maternal deaths increased from 4,005 in 2022 to 4,129 in 2023. These figures highlight the continuing need to strengthen maternal healthcare services, including postpartum care, to prevent complications and improve maternal health outcomes(3).

The postpartum period is a critical phase during which mothers undergo physiological and psychological adaptations following childbirth. Appropriate postpartum care is essential for monitoring recovery, identifying complications, and supporting maternal well-being. One important component of postpartum care is early mobilization, which involves gradually resuming physical activity after childbirth according to the mother's clinical condition(4). Early mobilization may include changing position, sitting, standing, and walking with appropriate assistance (5). When performed safely and appropriately, these activities can support circulation, promote functional recovery, facilitate independent self-care, and help mothers adapt to their postpartum responsibilities(6). However, mobilization should be individualized according to the mode of delivery, physical condition, pain, and the presence of any complications(7).

The implementation of early mobilization is also relevant to maternal independence and psychological well-being (8). Gradual movement may help mothers resume daily activities and participate in newborn care (9). Conversely, prolonged immobility may contribute to reduced physical function and an increased risk of certain complications (10). Nevertheless, early mobilization should not be considered a substitute for comprehensive postpartum monitoring, and its timing must be determined according to clinical assessment and appropriate healthcare guidance(11). Midwives therefore have an important role in providing education, demonstrating safe mobilization techniques, and assisting postpartum mothers in progressing from simple movements to sitting, standing, and walking as tolerated (12).

Local maternal health data further emphasize the importance of strengthening postpartum services. Reports from midwives and healthcare facilities in Sukoharjo Regency recorded 12 maternal deaths in 2022, with a reported maternal mortality ratio of 111.59 per 100,000 live births, compared with 172.60 per 100,000 live births in 2021 (13). Although these figures indicate a decrease in the reported maternal mortality ratio, maternal deaths remain a concern requiring continued attention to the quality and continuity of maternal healthcare (14). At Hidayah Clinic, Mancasan, Baki, Sukoharjo, a preliminary study conducted in February 2024 through interviews with five postpartum mothers found variations in the timing and types of early mobilization activities

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performed. Some mothers performed breathing exercises and leg movements, whereas others progressed to sitting, standing, or walking at different times after childbirth. These preliminary observations suggest that early mobilization practices were not uniform among the interviewed mothers.

Although early mobilization is an established component of postpartum care, the observed variation in practices highlights the need for local assessment of how these activities are implemented in clinical settings(15). Evidence describing the specific mobilization activities performed by postpartum mothers at Hidayah Clinic remains limited based on the preliminary information available to the researchers. The contribution of this study is its descriptive assessment of early mobilization practices among postpartum mothers in this particular clinical setting, including the activities most frequently performed and those that may require additional guidance(16). Therefore, this study aimed to describe the implementation of early mobilization among postpartum mothers at Hidayah Clinic, Mancasan, Baki, Sukoharjo, Central Java, Indonesia. The findings are expected to provide preliminary information to support midwifery education and improve guidance on safe, gradual mobilization during the postpartum period.

2. METHODS

This study employed a descriptive research design to examine early mobilization practices among postpartum mothers at Hidayah Clinic, Mancasan, Baki, Sukoharjo, Central Java, Indonesia, from April to June 2024. A total sampling technique was used to recruit all eligible participants during the study period, resulting in a sample of 30 postpartum mothers (ranging from 8 hours to 6 weeks postpartum) who received care at the facility and consented to participate.

Data were collected using a researcher-developed questionnaire supplemented by semi-structured interviews. The questionnaire comprised seven dichotomous (yes/no) items assessing specific mobilization activities: breathing exercises, turning side-to-side, leg movements, sitting upright with back support on the bed, swinging arms and legs, walking in place, and walking slowly. Each "yes" response was scored 1, and "no" was scored 0, yielding an aggregate score ranging from 0 to 7. Higher scores indicated a greater number of reported activities. This total score represented the quantitative count of activities performed rather than a direct evaluation of mobilization quality, safety, or clinical appropriateness. Additionally, qualitative data from the interviews provided contextual insights into participants' practices and their rationales for performing or omitting specific activities.

Participant practices were classified into four implementation levels: good, adequate, inadequate, and not implemented. Operational definitions and category cut-off points were established based on author-defined scoring thresholds. These categories served as descriptive measures of reported practices rather than validated metrics of clinical compliance.

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Given that the assessed activities varied in physical exertion and clinical intent, and participants spanned a broad postpartum recovery range (8 hours to 6 weeks), individual clinical readiness naturally influenced the feasibility of specific movements. Consequently, total scores and the text provided is already highly polished, but here is a slightly tighter, more concise version to improve the academic flow and reduce wordiness. It is ready to copy and paste.

This study utilized a descriptive research design to examine early mobilization practices among postpartum mothers at Hidayah Clinic in Sukoharjo, Central Java, Indonesia, between April and June 2024. Using a total sampling technique, the study included 30 postpartum mothers (ranging from 8 hours to 6 weeks postpartum) who received care at the facility and consented to participate.

Data were collected via a researcher-developed questionnaire and semi-structured interviews. The questionnaire assessed seven dichotomous (yes/no) mobilization activities: breathing exercises, turning side-to-side, leg movements, sitting upright with back support, swinging arms and legs, walking in place, and walking slowly. Positive responses were scored 1 and negative responses 0, yielding a total score (0–7) that reflected the quantity of reported activities rather than mobilization quality, safety, or clinical appropriateness. Interviews provided qualitative insights into the participants' rationales for performing or omitting specific movements.

Practices were classified into four author-defined implementation levels: good, adequate, inadequate, and not implemented. Because the activities varied in physical exertion and participants spanned a broad recovery timeframe, individual readiness naturally influenced feasibility. Consequently, total scores and categories served strictly as descriptive measures and were not interpreted as direct indicators of safe mobilization.

A primary limitation of this study is that the questionnaire did not undergo formal validity and reliability testing prior to administration. Data were analyzed descriptively using frequencies and percentages, with no inferential statistics performed to test associations between participant characteristics and mobilization practices.

3. RESULT AND DISCUSSION

Respondent Characteristics

A total of 30 postpartum mothers participated in this study. Most respondents were aged 20–35 years (21/30, 70.0%). Regarding educational attainment, 17 respondents (56.7%) had completed senior high school. Most respondents were housewives (17/30, 56.7%), and 19 respondents (63.3%) were multiparous. These findings describe the characteristics of the study population and provide context for interpreting the reported early mobilization practices.

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Table 1. Characteristics of Postpartum Mothers (n=30)

Characteristic	Category	Frequency	Percentage
Age	Under 20 years	2	6.7
	20-35 years	21	70.0
	Over 35 years	7	23.3
Education	Elementary School	1	3.3
	Junior High School	4	13.3
	Senior High School	17	56.7
	Higher Education	8	26.7
Occupation	Laborer/Farmer	3	10.0
	Housewife	17	56.7
	Civil Servant	3	10.0
	Private Sector Employee	7	23.3
Parity	Primiparous	10	33.3
	Multiparous	19	63.4
	Grand Multiparous	1	3.3

Implementation of Early Mobilization

As shown in Table 2, 14 respondents (46.7%) were classified as having an adequate level of early mobilization, 12 (40.0%) a good level, and 4 (13.3%) an inadequate level. No respondents were classified in the category of not implemented. Overall, 26 respondents (86.7%) were classified as having good or adequate implementation. These findings indicate that the reported implementation levels varied among participants. Interpretation of these categories depends on the scoring criteria and operational definitions applied in the study.

Table 2. Distribution of Early Mobilization Implementation Among Postpartum Mothers

Implementation category	Frequency	Percentage
Good	12	40.0
Adequate	14	46.7
Inadequate	4	13.3
Not implemented	0	0.0
Total	30	100

Specific Early Mobilization Activities

The most frequently reported activity was sitting upright with back support on the bed, performed by 16 respondents (53.3%). Moving the legs to the right and left was reported by 15 respond (50.0%), while breathing exercises were reported by 13 respondents (43.3%). Slow walking was reported by 12 respondents (40.0%), swinging the arms and legs by 11 respondents (36.7%), and walking in place by 8 respondents (26.7%). Turning to the left or right was the least frequently reported activity, performed by 7 respondents (23.3%). The remaining 23 respondents (76.7%) reported not performing this movement.

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Table 3. Distribution of Specific Early Mobilization Activities Among Postpartum Mothers

Early mobilization activity	Yess		No	
	F	%	F	%
Breathing exercises	13	43.3	17	56.7
Turning to the left or right	7	23.3	23	76.7
Moving the legs to the right and left	15	50.0	15	50.0
Sitting upright with back support on the bed	16	53.3	14	46.7
Swinging the arms and legs	11	36.7	19	63.3
Walking in place	8	26.7	22	73.3
Walking slowly	12	40.0	18	60.0

DISCUSSION

Overall Implementation of Early Mobilization

This study described reported early mobilization practices among 30 postpartum mothers at Hidayah Clinic, Sukoharjo, Central Java, Indonesia. The findings showed that 14 respondents (46.7%) were classified as having adequate practices, 12 (40.0%) as having good practices, and 4 (13.3%) as having inadequate practices. Although 86.7% of respondents fell into the good or adequate categories, the largest proportion was classified as adequate. These findings suggest variation in the number of mobilization activities reported by participants. However, because the classification was based on researcher-defined scoring criteria, the categories should be interpreted as descriptive indicators rather than validated measures of clinical adherence or the safety of mobilization(17).

Early mobilization is an important component of postpartum care and involves a gradual return to physical activity according to the mother's clinical condition and tolerance(18). Early ambulation as including the ability to get up, stand, walk, and return to bed while moving the extremities during the early postpartum period (19). Absari and Riyanti also discussed the relevance of early mobilization to functional independence (20). These perspectives support the importance of assessing postpartum movement as part of maternal care (21). Nevertheless, the present study focused on reported activities and did not directly assess functional recovery, uterine involution, or postpartum complications(22). Consequently, the findings cannot establish whether the reported mobilization practices were associated with better clinical outcomes (23).

Implementation of Specific Early Mobilization Activities

The frequency of reported participation varied across the seven activities assessed. Sitting upright with back support was the most frequently reported activity, performed by 16 respondents (53.3%). In contrast, turning to the left or right was the least frequently reported activity, performed by 7 respondents (23.3%). Moving the legs to the right and left was reported by 15 respondents (50.0%), breathing exercises by 13 (43.3%), walking slowly by 12 (40.0%), swinging the arms and legs by 11 (36.7%), and walking in place by 8 (26.7%).

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The relatively high frequency of sitting upright may indicate that this activity was commonly performed or perceived as feasible by participants(24). However, the study did not assess the reasons for performing particular movements, and therefore, explanations related to maternal motivation, breastfeeding, or perceived comfort remain speculative. Furthermore, the frequency of a reported activity should not be interpreted as evidence of its clinical appropriateness because the participants' clinical readiness and specific postpartum circumstances were not systematically evaluated(25).

Turning to the left or right was reported by 7 respondents (23.3%), whereas 23 (76.7%) reported not performing this activity. This finding identifies a movement that may warrant further exploration during postpartum assessment and education(26). Midwives can assess maternal comfort, pain, mobility limitations, and readiness before providing individualized assistance(27). However, the study did not systematically investigate the reasons for nonperformance (28). It is therefore not possible to determine whether the low frequency reflected discomfort, limited opportunity, clinical considerations, lack of instruction, or other factors (29).

Walking in place and walking slowly were reported by 26.7% and 40.0% of respondents, respectively. These findings indicate differences in reported participation across activities involving different levels of physical movement (1). Nevertheless, the study did not document whether each activity was indicated, attempted, or appropriate for every participant at the time of assessment (2). The findings should therefore be interpreted as descriptions of reported practices rather than evidence of inadequate clinical care(3). Decisions about postpartum mobilization should remain individualized and guided by clinical assessment, maternal tolerance, and appropriate supervision(4).

Respondent Characteristics and Their Relevance to Mobilization

The findings highlight the importance of individualized postpartum education and assessment (6). Midwives can explain the purpose of appropriate mobilization, demonstrate relevant movements, assess maternal comfort and readiness, and address concerns that may affect participation (7). Education should be adapted to the mother's clinical condition, mode of delivery, physical tolerance, and stage of postpartum recovery (21). The relatively low reported frequency of turning to the left or right and walking in place may help identify topics for further discussion during postpartum care(8). However, these findings should not be used as a basis for requiring every mother to perform all seven activities(9). Instead, healthcare professionals should determine which movements are appropriate for each mother and provide assistance when indicated(10). The priority should be safe, individualized mobilization rather than simply increasing the number of activities performed(11). At the service level, these findings may provide preliminary information for reviewing how postpartum education is delivered at the study site (12). Nevertheless, the study did

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not evaluate the content or quality of midwifery education, so the effectiveness of specific educational approaches cannot be determined(13). Future quality-improvement activities could assess whether mothers receive clear instructions, understand the recommended movements, and know when to seek assistance(14).

Implications for Midwifery Practice

The findings highlight the importance of providing individualized postpartum education. Midwives can explain the purpose of appropriate mobilization activities, demonstrate safe techniques, and address concerns reported by mothers. Guidance should be adapted to each mother's clinical condition, comfort, and readiness to move. The relatively low reported frequency of turning to the left or right and walking in place may help identify activities that warrant further assessment during postpartum care. However, the objective should not simply be to increase the number of activities performed. Clinical readiness, maternal tolerance, and appropriate supervision should remain central to mobilization guidance.

Study Contribution and Limitations

This study provides a descriptive account of seven reported early mobilization activities among 30 postpartum mothers at a single healthcare facility. By identifying the most and least frequently reported activities, it offers preliminary local information that may inform further assessment and postpartum education.

Several limitations should be considered when interpreting the findings. First, the small sample size and recruitment from a single clinic limit the transferability of the results to other healthcare settings. Second, the researcher-developed questionnaire had not undergone formal validity and reliability testing, which may have affected measurement accuracy. Third, the use of self-re 64 responses and interviews may have introduced recall or reporting bias. Fourth, participants ranged from 8 hours to 6 weeks postpartum, representing different stages of recovery. The study did not provide sufficiently detailed analyses to determine how the timing of assessment, mode of delivery, or clinical condition related to reported activities. Finally, the descriptive design and univariate analysis did not permit the assessment of associations or causal relationships. The researcher-defined categories also should not be interpreted as validated measures of mobilization quality or clinical safety.

Future research should include participants from multiple healthcare facilities and use instruments with clearly defined operational criteria and appropriate validity and reliability assessments. Studies should also document the timing of assessment, mode of delivery, relevant clinical characteristics, and reasons for performing or not performing specific activities. Analytical studies could investigate factors associated with reported mobilization practices, while intervention studies

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could evaluate whether structured postpartum education improves maternal knowledge, confidence, and appropriate participation in mobilization. Such research would provide a stronger evidence base for developing individualized and clinically appropriate postpartum care.

4. CONCLUSION

Early mobilization practices among postpartum mothers at Hidayah Clinic varied across the seven activities assessed. Most respondents were classified as having an adequate level of implementation (46.7%), followed by a good level (40.0%) and an inadequate level (13.3%). Sitting upright with back support was the most frequently reported activity (53.3%), whereas turning to the left or right was the least frequently reported (23.3%).

These findings provide a descriptive overview of early mobilization practices in one clinical setting. Midwives should provide individualized education and practical guidance based on each mother's clinical condition and readiness to mobilize. Further research involving multiple healthcare facilities and clearly defined measurement instruments is needed to explore factors associated with early mobilization practices and evaluate educational interventions.

ETHICAL STATEMENT

Ethical approval was obtained from the Aisyiyah University Approval Number 104/V/AUEC/2024 April 5, 2024. Written informed consent was obtained from all participants before data collection. Participants were informed about the purpose of the study, the voluntary nature of their participation, and the confidentiality of their information. All procedures were conducted in accordance with the approved study protocol and applicable ethical guidelines.

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CONFLICT OF INTEREST

The authors declare no conflict of interest related to this study or its publication.

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DECLARATION OF DATA AVAILABILITY

The data supporting the findings of this study are available from the corresponding author upon reasonable request, subject to applicable ethical requirements and participant confidentiality protections.

DECLARATION OF GENERATIVE AI AND AI-ASSISTED TECHNOLOGIES IN THE WRITING PROCESS

The authors acknowledge the use of ChatGPT to assist with language improvement, clarity, and manuscript structure during the writing and revision process. The authors take full responsibility for the accuracy, integrity, and final content of the manuscript.

AUTHOR CONTRIBUTION

Enny Yuliaswati as conceptualization, methodology, data collection, formal analysis, writing original draft, and writingreview and editing. Kamidah as conceptualization, methodology, supervision, validation, and writing—review and editing. Both authors reviewed and approved the final version of the manuscript and agreed to be accountable for their respective contributions.

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