

Research Article

Guidance on the 2024 Revised Maternal and Child Health Handbook: Effectiveness among Health Workers

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Abstract

Objective: To assess the knowledge of health workers in Bukittinggi City regarding the proper completion of the 2024 revised *Maternal and Child Health (MCH) Handbook*.

Methods: This pretest-posttest study involved 48 health workers (physicians, midwives, and nurses) responsible for the MCH program, who were recruited through total sampling. Participants' knowledge was assessed before and after the guidance session, and changes in knowledge scores were analyzed using a paired-samples t-test.

Results: At baseline, 77.09% of participants had a moderate level of knowledge, while only 14.58% demonstrated a good level of knowledge. Following the guidance session, participants' knowledge improved substantially, with 83.33% achieving a good level of knowledge and none remaining in the poor knowledge category. The mean post-test score was significantly higher than the mean pre-test score (paired-samples t-test, $p < 0.001$).

Conclusions: Structured guidance significantly improved health workers' knowledge of the 2024 revised *Maternal and Child Health (MCH) Handbook*. These findings highlight the importance of targeted training to facilitate the effective implementation of the revised handbook.

Keywords: health personnel, knowledge of health worker, maternal-child health handbook, maternal and child health services.

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INTRODUCTION

The Maternal and Child Health (MCH) handbook is a fundamental tool for monitoring the health of mothers and children, promoting healthy behaviors, and serving as a communication medium among families, community health workers, and healthcare professionals.¹⁻³ The Indonesian Ministry of Health has recently issued a revised 2024 edition of the handbook, which integrates significant updates in maternal and neonatal healthcare guidelines to align with current evidence-based practices and the Sustainable Development Goal 3.1.^{4,5}

Health workers play a pivotal role in the successful implementation of these updates, as they are primarily responsible for accurately completing the handbook during antenatal care, delivery, and postnatal follow-up. However, the introduction of a revised version

presents an inherent challenge; without a thorough understanding of the new format, additional indicators, and revised protocols, health workers may experience difficulties in proper documentation. This could potentially compromise the continuity and quality of maternal and child health services.⁶

To date, no formal evaluation has been conducted to assess health workers' knowledge regarding the specific procedures for filling out the 2024 revised MCH handbook in Bukittinggi City, West Sumatra. Furthermore, the effectiveness of structured educational interventions aimed at improving this knowledge has not been investigated in this setting.⁷

Therefore, this study aimed to evaluate the effectiveness of a structured guidance session in improving the knowledge of health workers regarding the correct completion of the 2024 revised MCH handbook in Bukittinggi City.

METHODS

This pretest-posttest study without a control group was conducted from July to August 2025 in Bukittinggi City, West Sumatra, Indonesia.

Participants were recruited using a total sampling approach. Eligible participants included all health workers (physicians, midwives, and nurses) who were actively responsible for the Maternal and Child Health (MCH) program at healthcare facilities in Bukittinggi City. Health workers who were on leave or declined to participate during the study period were excluded. The final sample comprised 48 participants, including six physicians responsible for the MCH program at Primary Health Centers (Puskesmas), seven coordinating midwives, seven implementing midwives at the health centers, 21 midwives, and seven nurses working at village health posts (*Polindes/Poskeskel*).

The study was conducted in accordance with the Declaration of Helsinki and was approved by the Research Ethics Committee of Universitas Negeri Padang (Approval No. 072/KEPK-UNP/10/2025). Written informed consent was obtained from all participants before enrollment.

Participants attended a structured guidance session on the proper completion of the 2024 revised Maternal and Child Health (MCH) Handbook. The session lasted 300 minutes and was delivered by a trained facilitator using a standardized training module. The guidance covered the structural changes introduced in the revised handbook, newly added indicators, and step-by-step instructions for completing the handbook correctly. Participants completed a pre-test immediately before the session and a post-test immediately after its completion.

Participants' knowledge of the proper completion of the 2024 revised Maternal and Child Health (MCH) Handbook was assessed using a structured questionnaire. The questionnaire was pilot-tested on 10 health workers who were not included in the study sample. Content validity was established through expert review, and internal consistency was demonstrated by a Cronbach's alpha coefficient of 0.82, indicating good reliability. Knowledge scores were expressed as percentages and categorized as good (>75%), moderate (60–75%), or poor (<60%).

Data were analyzed using SPSS version 20. The normality of the pre-test and post-test score distributions was assessed using the Shapiro–Wilk test. As both distributions were normally

distributed ($p > 0.05$), a paired-samples t-test was performed to compare the mean knowledge scores before and after the guidance session. Statistical significance was set at $p < 0.05$. Correlation analysis between pre-test and post-test scores was not performed because it was not necessary to address the primary objective of evaluating changes in participants' knowledge following the intervention.

RESULTS

A total of 48 health workers participated in this study. The majority were female (97.92%), with a mean age of 40 years. Most participants were midwives (72.92%), held a Diploma III (D3) as their highest educational qualification (81.26%), and had more than three years of experience in Maternal and Child Health (MCH) services (70.83%). Regarding workload, 85.42% reported a normal workload, whereas 14.58% reported an excessive workload. More than half of the participants (54.17%) had not previously received training on the 2024 revised Maternal and Child Health (MCH) Handbook. Nevertheless, all participants (100%) expressed a high level of motivation to learn the proper completion of the handbook (Table 1).

Table 1. Distribution of Participant Characteristics

Characteristic	N
Age	
21-30	4 (8.33)
31-40	23 (47.92)
41-50	15 (31.25)
>50	6 (12.50)
Sex	
Male	1 (2.08)
Female	47 (97.92)
Facility Type	
Primari Health Center (Puskesmas)	19 (39.58)
Village Primary Health Post (Pustu)	29 (60.42)
Affiliate Primary Health Center	
Guguk Panjang	6 (12.50)
Gulai Bancah	5 (10.42)
Mandiagin	5 (10.42)
Nilam Sari	3 (6.25)
Plus Mandiagin	6 (12.50)
Rasimah Ahmad	11 (22.91)
Tigo Baleh	12 (25.00)
Profession	
Doctor	6 (12.50)
Midwives	35 (72.92)
Nurse	7 (14.58)

Highest Educational Qualification	
Professional degree	7 (14.58)
Bachelor degree	1 (2.08)
Diploma IV	1 (2.08)
Diploma III	39 (81.26)
Years of Experience (years)	
> 3	34 (70.83)
≤ 3	14 (29.17)
Workload	
Excessive	7 (14.58)
Normal	41 (85.42)
Prior Training	
No	26 (54.17)
Yes	22 (45.83)
Motivation	
Yes	48 (100.00)
No	0 (0.00)

The pre-test assessment showed that 77.09% of participants had a moderate level of knowledge, 14.58% had a good level of knowledge, and 8.33% had a poor level of knowledge regarding the 2024 revised *Maternal and Child Health (MCH) Handbook*. Following the structured guidance session, participants' knowledge improved markedly. In the post-test

assessment, 83.33% achieved a good level of knowledge, 16.67% demonstrated a moderate level of knowledge, and no participant remained in the poor knowledge category (Table 2).

Table 2. Participants' Knowledge Levels before and after the Guidance Session

Description	N
Knowledge (pretest)	
Poor	4 (8.33)
Sufficient	37 (77.09)
Good	7 (14.58)
Knowledge (posttest)	
Poor	0 (0.00)
Sufficient	8 (16.67)
Good	40 (83.33)

A paired-samples t-test was performed to evaluate the effect of the guidance session on participants' knowledge scores. The mean pre-test score was 69.55 ± 7.43 , which increased significantly to 87.60 ± 10.64 after the intervention. The mean increase was 18.05 points, and the difference was statistically significant ($p < 0.001$) (Table 3).

Table 3. Comparison Pretest and Posttest Knowledge Scores

Variable	Pre-test Mean $\pm$ SD	Post-test Mean $\pm$ SD	Mean Difference	P-value
Knowledge score	69.55 ± 7.43	87.60 ± 10.64	18.05	<0.001

DISCUSSION

This study demonstrated that a structured guidance session significantly improved health workers' knowledge regarding the proper completion of the 2024 revised *Maternal and Child Health (MCH) Handbook*. The mean knowledge score increased from 69.55 before the intervention to 87.60 afterward, with most participants progressing from a moderate to a good level of knowledge. These findings indicate that structured educational interventions are effective in improving health workers' understanding of newly introduced health guidelines and documentation procedures.

The observed improvement may be attributed to the structured nature of the guidance session, which provided comprehensive explanations of the revisions introduced in the 2024 handbook, including the updated format, newly added indicators, and step-by-step documentation

procedures. More than half of the participants (54.17%) reported that they had never received prior training on the revised handbook, indicating a substantial knowledge gap before the intervention. This gap was effectively addressed through the 300-minute interactive training session. In addition, all participants reported a high level of motivation to learn, which may have enhanced their engagement and knowledge acquisition. These findings are consistent with adult learning theory, which emphasizes that structured, practice-oriented learning combined with learner motivation leads to better educational outcomes.⁸

The present findings are consistent with previous studies demonstrating the importance of educational interventions in improving health workers' knowledge and documentation practices. A study conducted in Padang identified health workers' knowledge as the strongest determinant of accurate completion of the MCH

Handbook.¹ The present study extends these findings by specifically evaluating the 2024 revised edition, which has not been investigated previously. Similarly, research conducted in Yogyakarta showed that training on antenatal care documentation significantly improved the completeness of medical records among midwives.³ International evidence also supports the effectiveness of structured training. Studies from Tanzania reported that targeted training on maternal health records improved documentation quality and continuity of care,^{9,10} while studies from India demonstrated that periodic refresher training on updated maternal health guidelines enhanced health workers' knowledge and clinical practice.^{11–14}

Accurate documentation in the MCH Handbook is essential for ensuring the continuity and quality of maternal and child healthcare. Previous studies have reported that the completeness of MCH Handbook records among referred pregnant women in emergency departments frequently failed to meet required standards, indicating persistent deficiencies in documentation quality.¹⁵ Inadequate documentation may delay the identification of maternal and fetal risk factors and compromise appropriate clinical decision-making. Furthermore, maternal characteristics such as lower educational attainment, preterm birth, and pregnancy complications have been associated with neonatal stunting, highlighting the importance of comprehensive maternal health records for early risk identification and intervention.¹⁶ Another study also demonstrated that maternal age is significantly associated with stunting among children aged 24–59 months, further emphasizing the need for accurate and complete documentation in the MCH Handbook to support appropriate maternal and child health interventions.¹⁷

The findings of this study have important practical implications. The successful implementation of the 2024 revised MCH Handbook requires more than simply distributing the updated handbook; it also requires systematic and continuous capacity building for health workers. Given that more than half of the participants had never received prior training on the revised handbook, local health authorities should incorporate structured guidance into routine in-service training programs. Such initiatives would help ensure that health workers are adequately prepared to implement the revised handbook consistently, thereby

supporting accurate maternal and child health monitoring, early detection of complications, and timely referral of high-risk pregnancies.

This study has several limitations. First, the sample size was relatively small and limited to one city, which may restrict the generalizability of the findings. Second, the pretest-posttest design without a control group limits the ability to attribute the observed improvements exclusively to the intervention because external factors, such as test familiarity or independent learning, may have influenced participants' performance. Third, knowledge was assessed immediately after the guidance session; therefore, long-term knowledge retention could not be evaluated. Finally, this study assessed knowledge rather than actual documentation practices. Future studies should include longer follow-up periods and direct observations of MCH Handbook completion to determine whether improvements in knowledge translate into sustained improvements in clinical documentation.

Despite these limitations, this study provides novel evidence regarding the effectiveness of structured guidance in improving health workers' knowledge of the 2024 revised Maternal and Child Health (MCH) Handbook. To our knowledge, this is the first study conducted in West Sumatra to specifically evaluate health workers' knowledge of the revised handbook. These findings highlight the importance of implementing structured educational interventions alongside the introduction of updated health tools and guidelines to ensure their effective adoption in primary healthcare settings.

CONCLUSION

This study demonstrated that a structured guidance session significantly improved health workers' knowledge of the proper completion of the 2024 revised Maternal and Child Health (MCH) Handbook in Bukittinggi City, as evidenced by significantly higher post-test scores than pre-test scores. These findings highlight the importance of targeted educational interventions in addressing knowledge gaps and supporting the effective implementation of the revised MCH Handbook.

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