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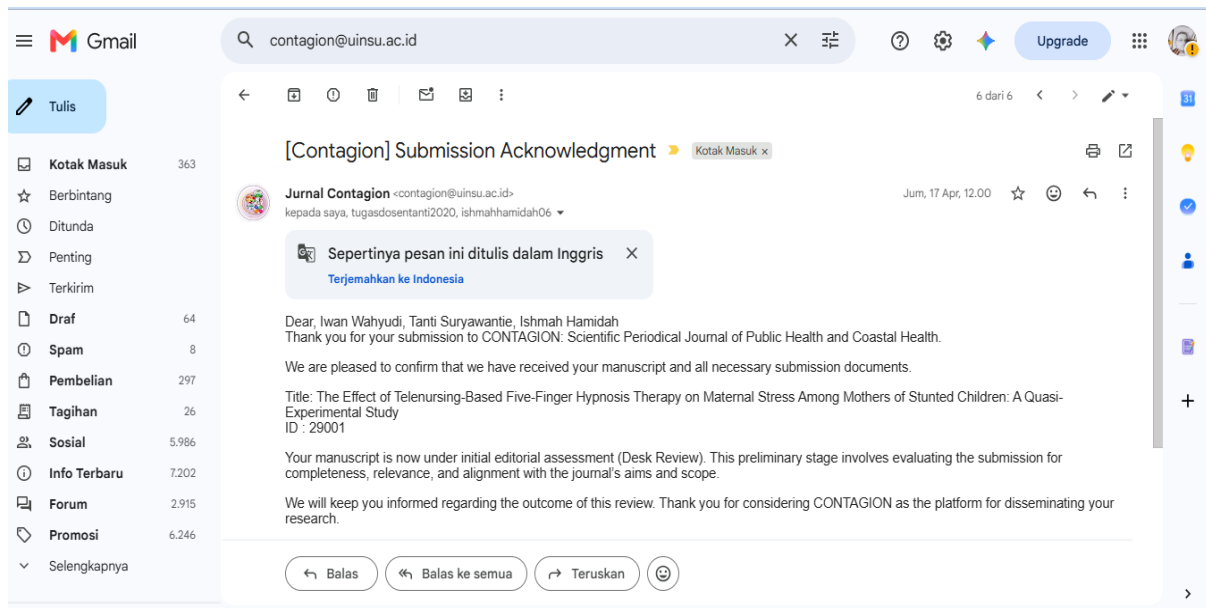
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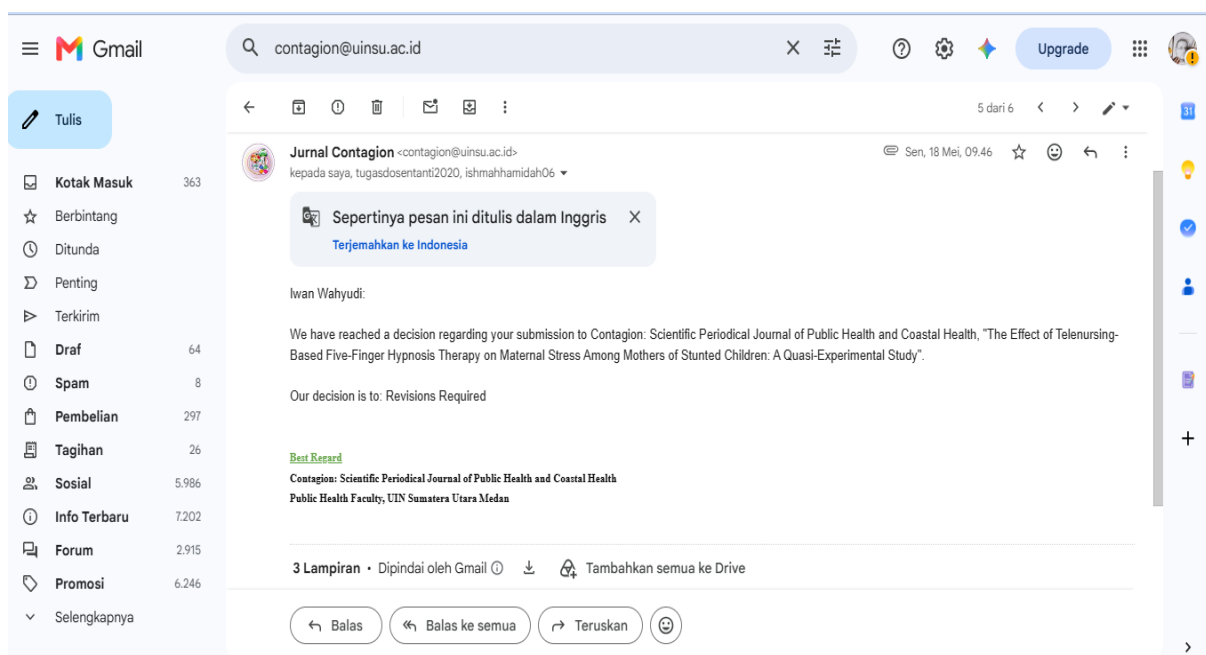
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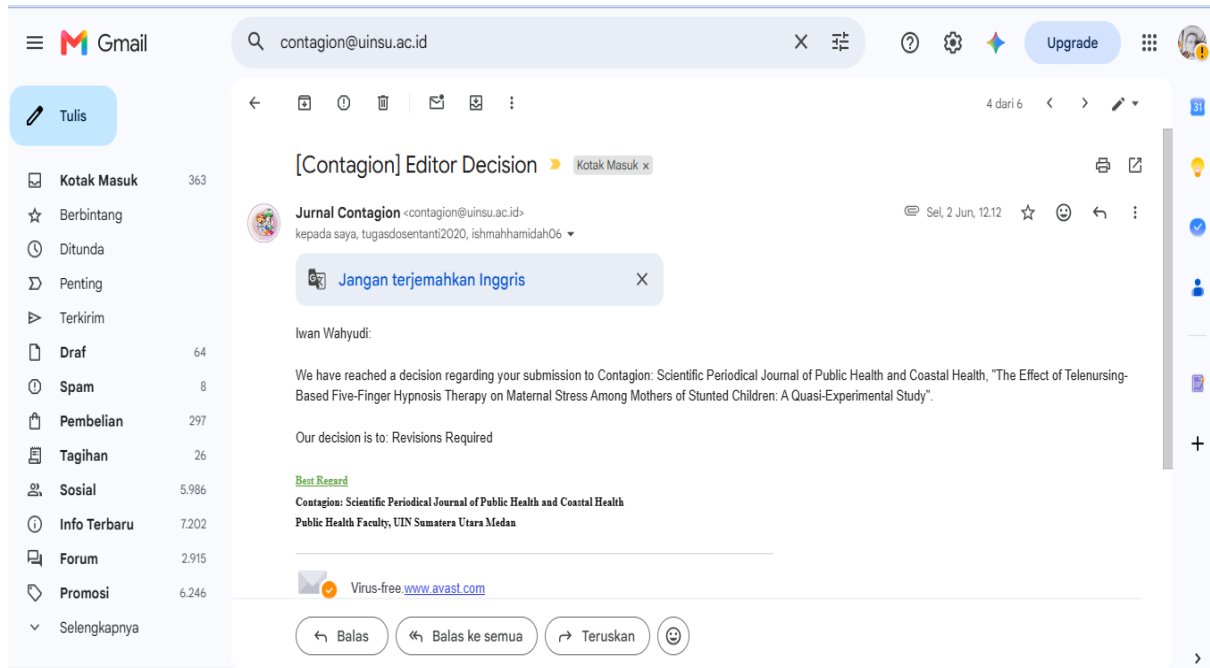
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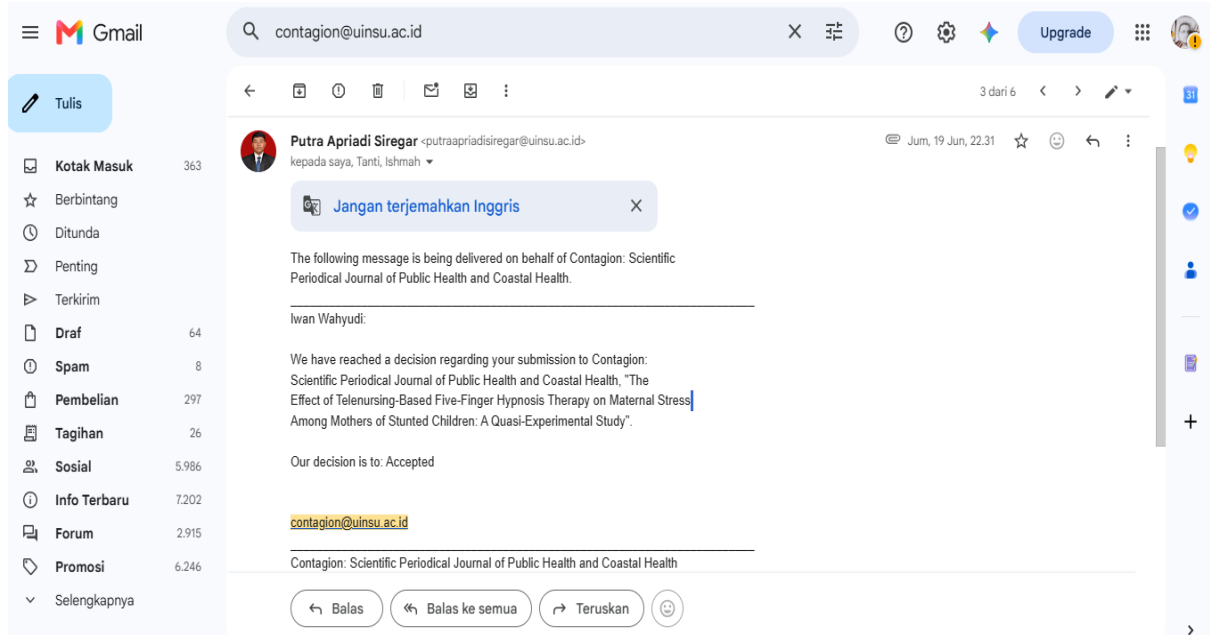
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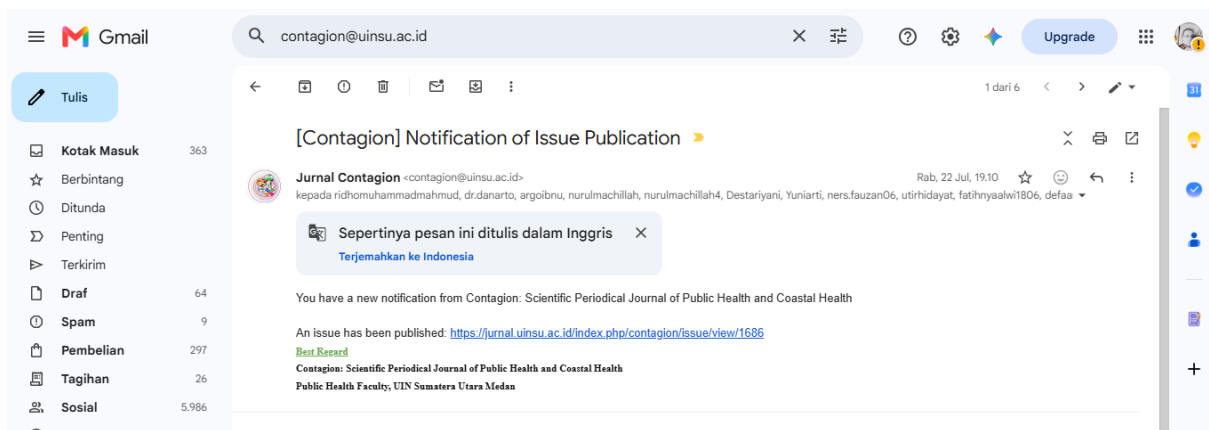


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The Effect of Telenursing-Based Five-Finger Hypnosis Therapy on Maternal Stress Among Mothers of Stunted Children: A Quasi-Experimental Study

Track Record Article	Abstract
Accepted: Published:	<i>Background:</i> Stunting remains a major public health problem in developing countries, including Indonesia. In addition to nutritional factors, maternal psychological stress may indirectly affect caregiving quality and child well-being. <i>Objective:</i> This study aimed to examine the effect of telenursing-based five-finger hypnosis therapy on maternal stress levels among mothers of children with stunting. <i>Methods:</i> A quasi-experimental pretest-posttest control group design was conducted from March to May 2024 in Wanaraja Village, Garut Regency, Indonesia. A total of 34 mothers of children with stunting were recruited using purposive sampling and assigned to an intervention group (n = 17) and a control group (n = 17). The intervention group received telenursing-based five-finger hypnosis therapy for seven sessions over four weeks, while the control group received routine Puskesmas services. Maternal stress was measured using 14 items derived from a modified DASS-42 questionnaire. Data were analyzed using Jamovi statistical software version 2.6.45, with the Friedman test for within-group comparisons and the Mann-Whitney U test for between-group comparisons. <i>Results:</i> Maternal stress in the intervention group decreased progressively from pretest to posttest 1 and posttest 2, with mean scores declining from 18.4 (SD 3.12) to 16.4 (SD 2.50) and 14.5 (SD 2.40), respectively. The control group also showed a slight reduction, from 18.9 (SD 2.29) to 17.9 (SD 2.77) and 17.6 (SD 2.50). However, the reduction in maternal stress was significantly greater in the intervention group than in the control group at week 2 (p = 0.036) and week 4 (p < 0.001), with a larger effect observed at week 4. <i>Conclusion:</i> Telenursing-based five-finger hypnosis therapy was associated with a greater reduction in maternal stress among mothers of children with stunting than routine care alone. This intervention may serve as a supportive psychosocial strategy in community-based stunting management programs. Keywords: Stunting, Maternal Stress, Five-Finger Hypnosis, Telenursing, Community Health Nursing

INTRODUCTION

Stunting remains a persistent public health challenge that affects child growth and development globally (Mulyani et al., 2025; Soliman et al., 2024). The World Health Organization reported that stunting affects millions of children worldwide, particularly in low-and middle-income countries (WHO, 2025). In Indonesia, the prevalence of stunting remains above the WHO threshold, indicating ongoing public health concerns. Stunting prevention has been prioritized through multisectoral strategies involving nutrition-specific and nutrition-sensitive interventions (Kemenkes, 2025; WHO, n.d.).

In addition to nutritional inadequacy and infectious diseases, indirect determinants, such as maternal caregiving practices and psychological well-being, play a crucial role in child growth outcomes (Muzzamil et al., 2025; Rana et al., 2024). Mothers of children with stunting frequently experience psychological stress due to caregiving burden, social stigma, economic constraints, and limited social support (Febristi et al., 2023; Saripah, 2022). Persistent maternal stress is associated with a higher risk of depression and anxiety, which may compromise the quality of nurturing care provided at home (O'Dea et al., 2023; Wang et al., 2024).

Prolonged maternal stress may impair emotional regulation and caregiving quality, potentially exacerbating child growth problems. Studies have shown that unmanaged stress among caregivers is associated with maladaptive coping and reduced caregiving responsiveness (Pan et al., 2025; Ren et al., 2025). In the context of community health services, nurses are strategically positioned to provide psychosocial interventions. Nevertheless, the delivery of psychosocial support is often constrained by a high workload, limited time, geographical barriers, and uneven access to in-person counseling, especially in rural areas (Kenwright et al., 2024; Rafi et al., 2026).

Various non-pharmacological interventions have been developed to manage stress in nursing practice, including relaxation techniques. One such intervention is five-finger hypnosis therapy, which combines tactile stimulation with positive imagery to induce relaxation. Previous studies have demonstrated that five-finger hypnosis effectively reduces stress and anxiety among caregivers (Hansen et al., 2022; Wati et al., 2021). Hypnosis-based and relaxation interventions have demonstrated effectiveness in reducing stress and anxiety across various populations, including caregivers, and may enhance coping and self-efficacy (Cardoso et al., 2025; Padilla et al., 2026).

Digital health and telehealth innovations have expanded rapidly in recent years and have been recommended as feasible strategies for strengthening primary health care systems through improved continuity of care, remote monitoring, and health education (Forslund et al., 2024; Sriati et al., 2024). Telenursing offers a promising approach to expanding access to nursing care by using telecommunications to deliver education, monitoring, and supportive interventions. Telenursing enables the provision of education, counseling, and psychosocial support without geographical barriers (Emalia & Nilasari, 2021; Nishigaki et al., 2025).

However, empirical evidence regarding the use of nurse-led five-finger hypnosis delivered through tele-health specifically for mothers of children with stunting within community health

programs remains limited. This evidence gap is relevant to nursing practice in Puskesmas, as psychosocial interventions may help strengthen caregiver capacity and complement nutrition-focused stunting programs. Therefore, this study aimed to examine the effect of tele-health-based five-finger hypnosis therapy on maternal stress levels among mothers of children with stunting. The findings may provide preliminary evidence to inform caregiver psychosocial support in community-based stunting services.

METHODS

Design

This study employed a quasi-experimental pretest-posttest control group design. It was conducted from March to May 2024 in Wanaraja Village, Garut Regency, West Java, Indonesia. A total of 34 mothers of children with stunted growth were recruited using purposive sampling; 17 participants were allocated to the intervention group and 17 to the control group. Group allocation was determined based on the study setting and participant eligibility within the community health service area, as random assignment was not applied in this study. All eligible participants first underwent a baseline assessment of maternal stress before being assigned to either the intervention or control group.

Inclusion and Exclusion Criteria

The inclusion criteria were as follows: (1) mothers with mild-to-moderate stress levels; (2) mothers of stunted children aged 0–23 months; (3) mothers who were the primary caregivers; (4) mothers who owned a smartphone and were able to use WhatsApp Messenger; and (5) children diagnosed with stunting within the previous six months. The exclusion criteria were as follows: (1) refusal to participate, (2) communication barriers, and (3) ongoing psychological or other stress-related therapy. Participants who missed at least two intervention sessions or withdrew during the study were excluded from the final analysis. A total of 34 participants were enrolled in the study, comprising 17 mothers in the intervention group and 17 mothers in the control group. No participants withdrew or were excluded during the study period. All participants were included in the final analysis. In the intervention group, adherence to the intervention was monitored across seven scheduled sessions, and all participants met the predefined attendance criteria.

Intervention

The intervention group received telenursing-based five-finger hypnosis therapy delivered remotely through a WhatsApp Messenger group and video conference. Baseline assessment of maternal stress was conducted before the first intervention session. The intervention was administered over four weeks in seven sessions, with each session lasting approximately 10–15 minutes. In general, the sessions included stress education, coping-related discussions, participant sharing, and evaluations, while the final sessions emphasized the implementation of the five-finger hypnosis technique. The control group received routine community health center for stunting management without hypnosis intervention.

To minimize potential bias, the same inclusion and exclusion criteria were applied to both the intervention and control groups. Maternal stress was assessed at the same measurement points in both groups, namely before the intervention, at week 2, and at week 4. To reduce contamination bias, the intervention and control groups were managed separately, and the control group did not receive five-finger hypnosis therapy during the study period. Participants who missed at least two intervention sessions, withdrew voluntarily, or were unable to complete follow-up assessments would be excluded from the final analysis. However, no participants dropped out or were excluded during the study period; therefore, all 34 participants were included in the final analysis.

Instrument

Maternal stress was measured using a modified DASS-42 questionnaire focusing on the stress domain. The instrument consisted of 14 items adapted to reflect the stress experienced by mothers of stunted children. Each item was scored on a 4-point scale ranging from 0 (never) to 3 (very often), with higher total scores indicating higher levels of stress. Total scores were categorized as normal (0–14), mild (15–18), moderate (19–25), severe (26–33), and extremely severe (>34). Prior to the main study, the instrument was tested in 30 mothers of stunted children in Wanasari Village. The item-total correlation coefficients ranged from 0.361 to 0.730, and the instrument showed good reliability (Cronbach's $\alpha = 0.841$).

Data Analyses

Data were analyzed using Jamovi version 2.6.45. Descriptive statistics included frequencies, percentages, means, and standard deviations. Normality was assessed using the Shapiro–Wilk test, which showed that the data were not normally distributed. Therefore, non-

parametric tests were used for inferential analysis. Changes in maternal stress scores across the three measurement points within each group were analyzed using the Friedman test, whereas between-group differences in change scores (post-test 1–pre-test and post-test 2–pre-test) were analyzed using the Mann–Whitney U test. The effect size for the between-group comparison was estimated using rank-biserial correlations. All statistical analyses were performed using Jamovi statistical software version 2.6.45, and statistical significance was set at $p < 0.05$.

Ethics approval and consent to participate

Ethical approval was obtained from the Ethics Committee of STIKes Karsa Husada Garut (No. 001188/KEP STIKes Karsa Husada Garut/2024). Written informed consent was obtained from all participants, and all procedures were conducted in accordance with the Helsinki Declaration.

RESULTS

Characteristics of Respondents

Table 1 presents the characteristics of the respondents in the intervention and control groups. The age distributions were similar in both groups, with most respondents aged 31–45 years. Regarding education, most respondents in both groups had senior high school education, with a higher proportion observed in the intervention group than in the control group.

Table 1. Characteristics of respondents

Characteristics	Intervention (n=17)	Control (n=17)
Age, n (%)		
20 – 30 years	8 (47.1%)	8 (47.1%)
31 – 45 years	9 (52.9%)	9 (52.9%)
Education, n (%)		
Junior high school (SMP)	3 (17.6%)	6 (35.3%)
Senior high school (SMA)	14 (82.4%)	11 (64.7%)

Stress levels in the intervention and control groups.

Table 2 presents the distribution of maternal stress categories in the intervention and control groups across measurement points. At baseline, most mothers in both groups were classified as having mild or moderate stress, with no participants in the normal category. In the intervention group, the proportion of mothers categorized as normal increased from 0.0% at pretest to 23.5% at posttest 1 (week 2) and 64.7% at posttest 2 (week 4), while the proportion with moderate stress decreased from 41.2% at baseline to 29.4% at posttest 1 (week 2) and 0.0% at posttest 2 (week 4). In contrast, the distribution of stress categories in the control group remained unchanged across all three measurement points, with 52.9% of mothers categorized as having mild stress and 47.1% as having moderate stress.

Table 2. Distribution of stress in the groups

Measurement	Normal, n (%)	Mild, n (%)	Moderate, n (%)
Intervention group			
Pretest	0 (0.0%)	10 (58.8%)	7 (41.2%)
Posttest (week 2)	4 (23.5%)	8 (47.1%)	5 (29.4%)
Posttest (week 4)	11 (64.7%)	6 (35.3%)	0 (0.0%)
Control group			
Pretest	0 (0.0%)	9 (52.9%)	8 (47.1%)
Posttest 1 (week 2)	0 (0.0%)	9 (52.9%)	8 (47.1%)
Posttest 2 (week 4)	0 (0.0%)	9 (52.9%)	8 (47.1%)

Changes in mean stress scores.

Table 3 presents the changes in mean maternal stress scores across the three measurement points in both groups. In the intervention group, the mean stress score decreased progressively from 18.4 (SD 3.12) at pretest to 16.4 (SD 2.50) at posttest 1 (week 2) and 14.5 (SD 2.40) at posttest 2 (week 4). In the control group, the mean stress score also decreased slightly from 18.9 (SD 2.29) at pretest to 17.9 (SD 2.77) at posttest 1 (week 2) and 17.6 (SD 2.50) at posttest 2 (week 4). The Friedman test showed significant changes over time in both groups ($p < 0.001$).

Table 3. Stress score in the groups

Group	Pretest Mean (SD)	Posttest 1 Mean (SD)	Posttest 2 Mean (SD)	Friedman χ^2	<i>p-value</i>
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Intervention	18.4 (3.12)	16.4 (2.50)	14.5 (2.40)	33.0	<0.001
Control	18.9 (2.29)	17.9 (2.77)	17.6 (2.50)	20.4	<0.001

Note: *P-values* were obtained from the Friedman test.

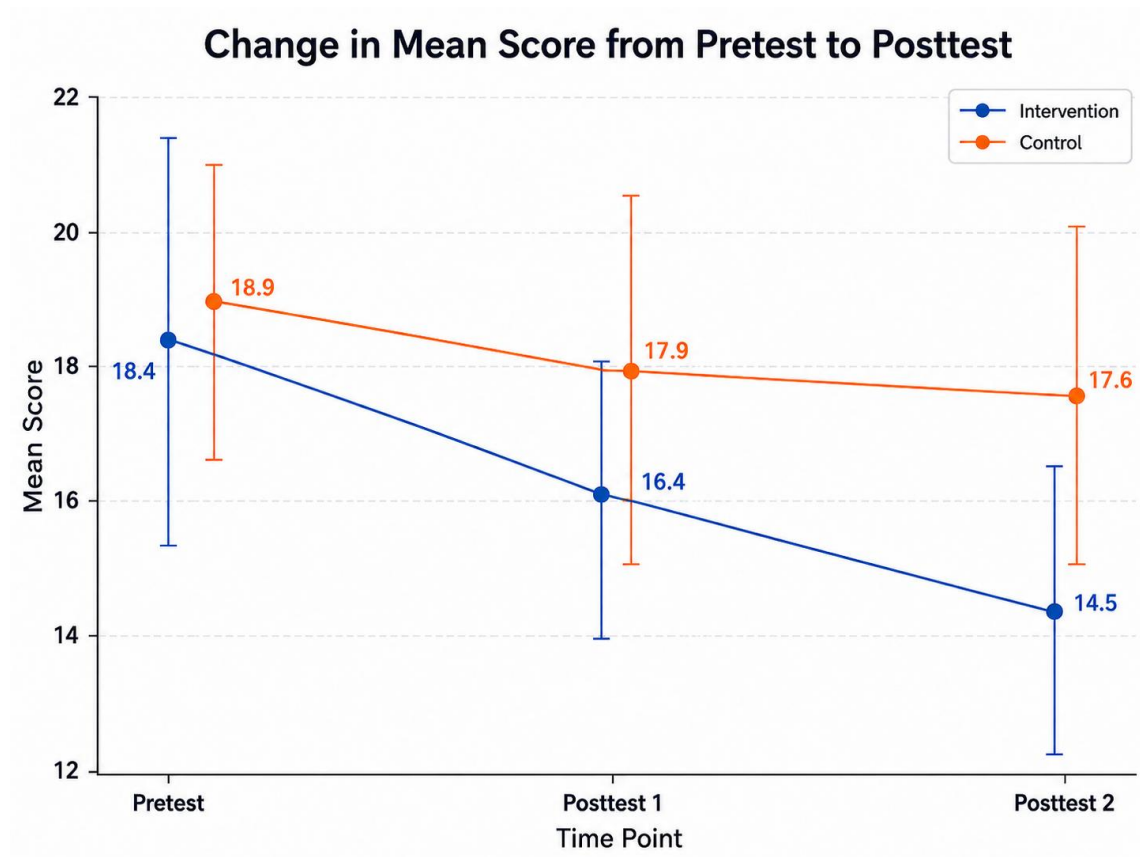


Figure 1. Changes in Mean Maternal Stress Scores Across Measurement Points

Figure 1 illustrates the changes in mean maternal stress scores in the intervention and control groups across the three measurement points. The intervention group showed a progressive decrease in mean stress scores from pretest to week 2 and week 4, whereas the control group showed only a slight reduction over the same period. Specifically, the mean stress score in the intervention group decreased from 18.4 at pretest to 16.4 at week 2 and further to 14.5 at week 4. In comparison, the control group showed a smaller decline, from 18.9 at pretest to 17.9 at week 2 and 17.6 at week 4. This visual trend supports the finding that maternal stress reduction was greater in the intervention group than in the control group.

Table 4 presents the between-group differences in changes in maternal stress scores from baseline to week 2 and week 4. The intervention group showed greater reductions in maternal stress scores than the control group at both time points. For posttest 1–pretest, the between-group difference was significant (Mann–Whitney $U = 86.0$, $p = 0.036$) with a moderate effect size (rank biserial correlation = -0.405). For posttest 2–pretest, the difference was also significant (Mann–Whitney $U = 18.0$, $p < 0.001$) with a large effect size (rank biserial correlation = -0.875). These findings indicate that the intervention produced a stronger reduction in maternal stress than routine care alone, and that the effect became more pronounced after four weeks of intervention.

Table 4. Between-Group Differences in Changes in Maternal Stress Scores

Change Score	Intervention Mean (SD)	Control Mean (SD)	Mean Difference (I–C)	Mann-Whitney U	<i>p</i> -value	Effect Size	Interpretation
Posttest 1 – Pretest (week 2)	-1.94 (1.25)	-0.94 (1.09)	-1.00	86.0	0.036	-0.405	Moderate
Posttest 2 – Pretest (week 4)	-3.88 (1.36)	-1.29 (1.21)	-2.59	18.0	<0.001	-0.875	Large

Note: Negative values indicate greater reductions in maternal stress scores in the intervention group. The effect size was estimated using rank biserial correlation.

DISCUSSION

This study demonstrated that telenursing-based five-finger hypnosis therapy was associated with greater reductions in maternal stress levels among mothers of stunted children. Stress reduction in the intervention group occurred progressively from baseline to week 2 and week 4. Although the control group also showed a slight reduction in mean stress scores over time, the decrease was substantially greater in the intervention group. These findings suggest that the intervention provided additional benefits beyond routine care alone.

These findings indicate that a structured, brief psychosocial intervention delivered remotely by nurses may provide measurable benefits for caregiver well-being in community stunting contexts. These findings are consistent with previous studies reporting the effectiveness of five-finger hypnosis in reducing stress and anxiety (Safitri & Tresya, 2023; Wati et al., 2021). Hypnosis may reduce stress through two interconnected pathways: physiological regulation and

psychological modulation. Physiologically, hypnosis may reduce psychophysiological arousal by modulating autonomic nervous system activity, as reflected in changes in heart rate, heart rate variability, electrodermal activity, and respiratory rate, thereby promoting a more relaxed state. Psychologically, hypnosis may help focus attention, reduce reactivity to stressors, and enhance emotional self-regulation, enabling mothers to better manage anxiety, tension, and feelings of being overwhelmed (De Benedittis, 2024; Leo et al., 2024). Recent evidence shows that hypnosis remains a relevant psychological intervention, with generally positive effects on mental disorders, including outcomes related to stress and anxiety (Rosendahl et al., 2024). Five-finger hypnosis may be particularly suitable for community nursing because of its simplicity, short duration, and minimal resource requirements. The technique also promotes self-efficacy because mothers can practice the cues independently between sessions, potentially reinforcing sustained stress management. The stress reduction observed in this study may be explained by the physiological relaxation response induced by hypnosis-based techniques, which promote parasympathetic activation and emotional regulation (De Benedittis, 2024; Fernandez et al., 2021). By integrating this intervention into a telenursing framework, accessibility may be improved, particularly in community and rural settings.

Maternal stress may negatively influence caregiving behaviors, including feeding consistency, emotional responsiveness, and engagement in stimulating activities, which can indirectly contribute to poor growth trajectories. Therefore, interventions that strengthen maternal coping and emotional regulation are increasingly recognized as complementary components of stunting prevention and rehabilitation programs (Almaatani et al., 2023; Pan et al., 2025). Importantly, the delivery of five-finger hypnosis through telenursing may help address one of the common barriers in primary healthcare, namely, limited opportunities for frequent in-person psychosocial support. Digital health and telehealth have been increasingly recommended as approaches to strengthen primary healthcare systems, improve continuity of care, and expand access to interventions for populations facing geographic or logistical constraints (Sriati et al., 2024; WHO, 2021). In Indonesian Puskesmas settings, where nurses often manage high caseloads across multiple programs, telenursing may have potential as an additional strategy to support caregiver psychosocial well-being. However, the present study did not directly assess implementation outcomes, such as feasibility, acceptability, fidelity, or cost-

effectiveness. Therefore, these findings should be interpreted as preliminary evidence of effectiveness rather than evidence supporting routine large-scale implementation.

From a nursing management perspective, the findings suggest that nurse-led telenursing-based stress management may be a supportive component of community stunting programs. Nevertheless, this implication should be interpreted cautiously, as the present study focused on maternal stress outcomes and did not evaluate implementation processes or service-level outcomes. Before wider adoption is considered, further research is needed to assess the feasibility of delivery within routine Puskesmas services, acceptability of the intervention among mothers and nurses, fidelity of implementation, and resources required to sustain the program. Such evidence is important to determine whether this intervention can be appropriately incorporated into family centered community nursing care.

Limitations

This study has several limitations. First, the relatively small sample size and use of self-report measures may limit the generalizability and objectivity of the findings. Second, the study did not assess longer-term outcomes; therefore, the sustainability of the intervention effect remains unclear. Third, implementation-related outcomes, such as feasibility, acceptability, fidelity, and cost-effectiveness, were not evaluated, which limits conclusions regarding the scalability and routine integration of the intervention into community health service. Therefore, future research should employ randomized controlled designs with larger samples, longer follow-up periods, and broader outcome measures, including caregiving practices and child growth indicators, while also examining implementation aspects before wider adoption can be recommended.

CONCLUSION

The findings showed that mothers of children with stunting who received telenursing-based five-finger hypnosis therapy experienced a greater reduction in maternal stress than mothers of children with stunting who received routine care. The reduction in stress scores was observed progressively from baseline to week 2 and week 4, indicating that the intervention may contribute to improving maternal psychological well-being during community-based stunting care.

Therefore, telenursing-based five-finger hypnosis therapy may be considered a supportive psychosocial nursing intervention to complement routine stunting management services. However, given the quasi-experimental design and small sample size, further studies with larger samples, randomized designs, and longer follow-up periods are needed to confirm these findings.

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COMMENTS:

- The title is concise and informative, clearly identifying the intervention (Telenursing-based Five-Finger Hypnosis), the population (Mothers of stunted children), and the study design (Quasi-experimental).
- The abstract effectively covers the background, objective, methods, results, and conclusions within a structured format.
- Keywords are relevant and aligned with MeSH (Medical Subject Headings) standards, aiding in high discoverability.
- The abstract accurately reflects the key finding that telenursing-based hypnosis significantly reduces maternal stress over a 4-week period compared to routine care.
- The introduction incorporates global context by citing WHO 2025 reports on stunting prevalence in low- and middle-income countries.
- The background effectively narrows from the global stunting crisis to the specific psychological burden of Indonesian mothers, creating a clear "problem pyramid".
- The manuscript identifies a critical gap: while stunting is traditionally managed through nutrition, the psychosocial support for caregivers—especially via digital platforms—is under-researched.
- The study offers novelty by combining a traditional relaxation technique (five-finger hypnosis) with modern telenursing delivery (WhatsApp/Video) specifically for the stunting context.
- The objectives are clear and testable, focusing on the reduction of stress scores as a measurable outcome.
- Citations are highly current (including 2024–2026 sources), which is essential for an International journal to demonstrate the study's relevance to the current state of the art.
- The quasi-experimental pretest-posttest control group design is appropriate for testing a nursing intervention in a community setting where randomization may be logistically challenging.
- A total of 34 participants (17 per group) were recruited via purposive sampling; while sufficient for a pilot/quasi-experiment, the manuscript correctly acknowledges this small size as a limitation.
- The use of a modified DASS-42 (stress domain) is appropriate, and the reported Cronbach's alpha (0.841) confirms the instrument's reliability for this population.
- The independent variable (Telenursing Hypnosis) and dependent variable (Maternal Stress) are clearly defined.
- The use of the Friedman test (within-group) and Mann-Whitney U test (between-group) is statistically sound given the non-normal distribution of data.
- Ethical approval and informed consent procedures are explicitly stated, adhering to the Helsinki Declaration.
- The author needs to explain how to avoid bias.
- How does the author replace participants if they are excluded or drop out during the study?
- Findings directly address the study objectives by quantifying the intervention's impact at two different time points (week 2 and week 4).
- The discussion interprets the findings through both physiological (autonomic nervous system regulation) and psychological (emotional self-regulation) lenses.

- The study compares its findings with both Indonesian and international literature, situating the results within the global digital health trend.
- The authors successfully argue that telenursing can bridge the gap in primary healthcare for rural or overburdened community settings.
- The conclusions are well-supported by the significant p-values and observed categorical shifts in stress levels (e.g., 64.7% of the intervention group reaching "Normal" stress by week 4).
- The manuscript articulates practical implications for Puskesmas (community health centers) and suggests that psychosocial support should complement nutritional interventions.

The Effect of Telenursing-Based Five-Finger Hypnosis Therapy on Maternal Stress Among Mothers of Stunted Children: A Quasi-Experimental Study

Track Record Article	Abstract
Accepted:	
Published:	<i>Background:</i> Stunting remains a major public health problem in developing countries, including Indonesia. In addition to nutritional factors, maternal psychological stress may indirectly affect caregiving quality and child well-being. <i>Objective:</i> This study aimed to examine the effect of telenursing-based five-finger hypnosis therapy on maternal stress levels among mothers of children with stunting. <i>Methods:</i> A quasi-experimental pretest-posttest control group design was conducted from March to May 2024 in Wanaraja Village, Garut Regency, Indonesia. A total of 34 mothers of children with stunting were recruited using purposive sampling and assigned to an intervention group (n = 17) and a control group (n = 17). The intervention group received telenursing-based five-finger hypnosis therapy for seven sessions over four weeks, while the control group received routine Puskesmas services. Maternal stress was measured using 14 items derived from a modified DASS-42 questionnaire. Data were analyzed using the Friedman test and Mann-Whitney test. <i>Results:</i> Maternal stress in the intervention group decreased progressively from pretest to posttest 1 and posttest 2, with mean scores declining from 18.4 (SD 3.12) to 16.4 (SD 2.50) and 14.5 (SD 2.40), respectively. The control group also showed a slight reduction, from 18.9 (SD 2.29) to 17.9 (SD 2.77) and 17.6 (SD 2.50). However, the reduction in maternal stress was significantly greater in the intervention group than in the control group at week 2 (p = 0.036) and week 4 (p < 0.001), with a larger effect observed at week 4. <i>Conclusion:</i> Telenursing-based five-finger hypnosis therapy was associated with a greater reduction in maternal stress among mothers of children with stunting than routine care alone. This intervention may serve as a supportive psychosocial strategy in community-based stunting management programs. Keywords: Stunting, Maternal Stress, Five-Finger Hypnosis, Telenursing, Community Health Nursing

INTRODUCTION

Stunting remains a persistent public health challenge that affects child growth and development globally (Mulyani et al., 2025; Soliman et al., 2024). The World Health Organization reported that stunting affects millions of children worldwide, particularly in low-and middle-income countries (WHO, 2025). In Indonesia, the prevalence of stunting remains above the WHO threshold, indicating ongoing public health concerns. Stunting prevention has been prioritized through multisectoral strategies involving nutrition-specific and nutrition-sensitive interventions (Kemenkes, 2025; WHO, n.d.).

In addition to nutritional inadequacy and infectious diseases, indirect determinants, such as maternal caregiving practices and psychological well-being, play a crucial role in child growth

outcomes (Muzzamil et al., 2025; Rana et al., 2024). Mothers of children with stunting frequently experience psychological stress due to caregiving burden, social stigma, economic constraints, and limited social support (Febristi et al., 2023; Saripah, 2022). Persistent maternal stress is associated with a higher risk of depression and anxiety, which may compromise the quality of nurturing care provided at home (O'Dea et al., 2023; Wang et al., 2024).

Prolonged maternal stress may impair emotional regulation and caregiving quality, potentially exacerbating child growth problems. Studies have shown that unmanaged stress among caregivers is associated with maladaptive coping and reduced caregiving responsiveness (Pan et al., 2025; Ren et al., 2025). In the context of community health services, nurses are strategically positioned to provide psychosocial interventions. Nevertheless, the delivery of psychosocial support is often constrained by a high workload, limited time, geographical barriers, and uneven access to in-person counseling, especially in rural areas (Kenwright et al., 2024; Rafi et al., 2026).

Various non-pharmacological interventions have been developed to manage stress in nursing practice, including relaxation techniques (Toussaint et al., 2021). One such intervention is five-finger hypnosis therapy, which combines tactile stimulation with positive imagery to induce relaxation (Valentine et al., 2019). Previous studies have demonstrated that five-finger hypnosis effectively reduces stress and anxiety among caregivers (Hansen et al., 2022; Wati et al., 2021). Hypnosis-based and relaxation interventions have demonstrated effectiveness in reducing stress and anxiety across various populations, including caregivers, and may enhance coping and self-efficacy (Cardoso et al., 2025; Padilla et al., 2026).

Digital health and telehealth innovations have expanded rapidly in recent years and have been recommended as feasible strategies for strengthening primary health care systems through improved continuity of care, remote monitoring, and health education (Forslund et al., 2024; Sriati et al., 2024). Telenursing offers a promising approach to expanding access to nursing care by using telecommunications to deliver education, monitoring, and supportive interventions. Telenursing enables the provision of education, counseling, and psychosocial support without geographical barriers (Emalia & Nilasari, 2021; Nishigaki et al., 2025).

However, empirical evidence regarding the use of nurse-led five-finger hypnosis delivered through tele-health specifically for mothers of children with stunting within community health programs remains limited. This evidence gap is relevant to nursing practice in Puskesmas community health service, as psychosocial interventions may help strengthen caregiver

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Commented [i2R1]: We appreciate the reviewer's suggestion. We have added a supporting reference to the Introduction section to strengthen the statement that non-pharmacological interventions, including relaxation techniques, have been used to manage stress in nursing practice.

Commented [AR3]: Reference?

Commented [i4R3]: We have revised the Introduction section by adding a reference to support the description of five-finger hypnosis therapy as an intervention involving tactile stimulation and positive imagery to induce relaxation.

Commented [AR5]: Reference?

Commented [i6R5]: We have revised the statement on the evidence gap to make it more cautious and specific. Rather than making an overly broad claim, we clarified that empirical evidence remains limited regarding the use of nurse-led five-finger hypnosis delivered through telehealth specifically for mothers of children with stunting within community health programs. This revision better frames the rationale for the present study.

capacity and complement nutrition-focused stunting programs (Yehuda et al., 2024). Therefore, this study aimed to examine the effect of tele-health-based five-finger hypnosis therapy on maternal stress levels among mothers of children with stunting. The findings may provide preliminary evidence to inform caregiver psychosocial support in community-based stunting services.

METHODS

Design

This study employed a quasi-experimental pretest-posttest control group design. It was conducted from March to May 2024 in Wanaraja Village, Garut Regency, West Java, Indonesia. A total of 34 mothers of children with stunted growth were recruited using purposive sampling; 17 participants were allocated to the intervention group and 17 to the control group. Group allocation was determined based on the study setting and participant eligibility within the community health service area, as random assignment was not applied in this study. All eligible participants first underwent a baseline assessment of maternal stress before being assigned to either the intervention or control group.

Inclusion and Exclusion Criteria

The inclusion criteria were as follows: (1) mothers with mild-to-moderate stress levels; (2) mothers of stunted children aged 0–23 months; (3) mothers who were the primary caregivers; (4) mothers who owned a smartphone and were able to use WhatsApp Messenger; and (5) children diagnosed with stunting within the previous six months. The exclusion criteria were as follows: (1) refusal to participate, (2) communication barriers, and (3) ongoing psychological or other stress-related therapy. Participants who missed at least two intervention sessions or withdrew during the study were excluded from the final analysis. A total of 34 participants were enrolled in the study, comprising 17 mothers in the intervention group and 17 mothers in the control group. No participants withdrew or were excluded during the study period. All participants were included in the final analysis. In the intervention group, adherence to the intervention was monitored across seven scheduled sessions, and all participants met the predefined attendance criteria.

Intervention

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Commented [i8R7]: We have added a supporting reference to strengthen the statement on the relevance of psychosocial interventions for caregiver capacity and nutrition-focused stunting programs.

The intervention group received telenursing-based five-finger hypnosis therapy delivered remotely through a WhatsApp Messenger group and video conference. Baseline assessment of maternal stress was conducted before the first intervention session. The intervention was administered over four weeks in seven sessions, with each session lasting approximately 10–15 minutes. In general, the sessions included stress education, coping-related discussions, participant sharing, and evaluations, while the final sessions emphasized the implementation of the five-finger hypnosis technique. Maternal stress was reassessed at the fourth and seventh meetings. The control group received routine Puskesmas services for stunting management without hypnosis intervention.

Instrument

Maternal stress was measured using a modified DASS-42 questionnaire focusing on the stress domain. The instrument consisted of 14 items adapted to reflect the stress experienced by mothers of stunted children. Each item was scored on a 4-point scale ranging from 0 (never) to 3 (very often), with higher total scores indicating higher levels of stress. Total scores were categorized as normal (0–14), mild (15–18), moderate (19–25), severe (26–33), and extremely severe (>34). Prior to the main study, the instrument was tested in 30 mothers of stunted children in Wanasari Village. The item-total correlation coefficients ranged from 0.361 to 0.730, and the instrument showed good reliability (Cronbach's $\alpha = 0.841$).

Data Analyses

Data were analyzed using Jamovi version 2.6.45. Descriptive statistics included frequencies, percentages, means, and standard deviations. Normality was assessed using the Shapiro–Wilk test, which showed that the data were not normally distributed. Therefore, non-parametric tests were used for inferential analysis. Changes in maternal stress scores across the three measurement points within each group were analyzed using the Friedman test, whereas between-group differences in change scores (post-test 1–pre-test and post-test 2–pre-test) were analyzed using the Mann–Whitney U test. The effect size for the between-group comparison was estimated using rank-biserial correlations. Statistical significance was set at $p < 0.05$.

Ethics approval and consent to participate

Ethical approval was obtained from the Ethics Committee of STIKes Karsa Husada Garut (No. 001188/KEP STIKes Karsa Husada Garut/2024). Written informed consent was obtained

from all participants, and all procedures were conducted in accordance with the Helsinki Declaration.

RESULTS

Characteristics of Respondents

Table 1 presents the characteristics of the respondents in the intervention and control groups. The age distributions were similar in both groups, with most respondents aged 31–45 years. Regarding education, most respondents in both groups had senior high school education, with a higher proportion observed in the intervention group than in the control group.

Table 1. Characteristics of respondents

Characteristics	Intervention (n=17)	Control (n=17)
Age, n (%)		
20 – 30 years	8 (47.1%)	8 (47.1%)
31 – 45 years	9 (52.9%)	9 (52.9%)
Education, n (%)		
Junior high school (SMP)	3 (17.6%)	6 (35.3%)
Senior high school (SMA)	14 (82.4%)	11 (64.7%)

Stress levels in the intervention and control groups.

Table 2 presents the distribution of maternal stress categories in the intervention and control groups across measurement points. At baseline, most mothers in both groups were classified as having mild or moderate stress, with no participants in the normal category. In the intervention group, the proportion of mothers categorized as normal increased from 0.0% at pretest to 23.5% at posttest 1 (week 2) and 64.7% at posttest 2 (week 4), while the proportion with moderate stress decreased from 41.2% at baseline to 29.4% at posttest 1 (week 2) and 0.0% at posttest 2 (week 4). In contrast, the distribution of stress categories in the control group remained unchanged across all three measurement points, with 52.9% of mothers categorized as having mild stress and 47.1% as having moderate stress.

Table 2. Distribution of stress in the groups

Measurement	Normal, n (%)	Mild, n (%)	Moderate, n (%)
Intervention group			
Pretest	0 (0.0%)	10 (58.8%)	7 (41.2%)
Posttest (week 2)	4 (23.5%)	8 (47.1%)	5 (29.4%)
Posttest (week 4)	11 (64.7%)	6 (35.3%)	0 (0.0%)
Control group			
Pretest	0 (0.0%)	9 (52.9%)	8 (47.1%)
Posttest 1 (week 2)	0 (0.0%)	9 (52.9%)	8 (47.1%)
Posttest 2 (week 4)	0 (0.0%)	9 (52.9%)	8 (47.1%)

Changes in mean stress scores.

Table 3 presents the changes in mean maternal stress scores across the three measurement points in both groups. In the intervention group, the mean stress score decreased progressively from 18.4 (SD 3.12) at pretest to 16.4 (SD 2.50) at posttest 1 (week 2) and 14.5 (SD 2.40) at posttest 2 (week 4). In the control group, the mean stress score also decreased slightly from 18.9 (SD 2.29) at pretest to 17.9 (SD 2.77) at posttest 1 (week 2) and 17.6 (SD 2.50) at posttest 2 (week 4). The Friedman test showed significant changes over time in both groups ($p < 0.001$).

Table 3. Stress score in the groups

Group	Pretest Mean (SD)	Posttest 1 Mean (SD)	Posttest 2 Mean (SD)	Friedman χ^2	p -value
Intervention	18.4 (3.12)	16.4 (2.50)	14.5 (2.40)	33.0	<0.001
Control	18.9 (2.29)	17.9 (2.77)	17.6 (2.50)	20.4	<0.001

Note: P -values were obtained from the Friedman test.

Table 4 presents the between-group differences in changes in maternal stress scores from baseline to week 2 and week 4. The intervention group showed greater reductions in maternal stress scores than the control group at both time points. For posttest 1–pretest, the between-group difference was significant (Mann–Whitney $U = 86.0$, $p = 0.036$) with a moderate effect size (rank biserial correlation = -0.405). For posttest 2–pretest, the difference was also significant (Mann–Whitney $U = 18.0$, $p < 0.001$) with a large effect size (rank biserial correlation = -0.875). [Within](#)

the study sample, these findings suggest the potential effectiveness of telenursing-based five-finger hypnosis therapy in reducing maternal stress compared with routine care alone, with a larger between-group difference observed after four weeks of intervention. These findings indicate that the intervention produced a stronger reduction in maternal stress than routine care alone, and that the effect became more pronounced after four weeks of intervention.

Commented [AR9]: Isn't this an overclaim considering the small sample size? Perhaps it could add "within the study sample" or rephrased as "suggests potential effectiveness"?

Table 4. Between-Group Differences in Changes in Maternal Stress Scores

Change Score	Intervention Mean (SD)	Control Mean (SD)	Mean Difference (I–C)	Mann-Whitney U	p-value	Effect Size	Interpretation
Posttest 1 – Pretest (week 2)	-1.94 (1.25)	-0.94 (1.09)	-1.00	86.0	0.036	-0.405	Moderate
Posttest 2 – Pretest (week 4)	-3.88 (1.36)	-1.29 (1.21)	-2.59	18.0	<0.001	-0.875	Large

Note: Negative values indicate greater reductions in maternal stress scores in the intervention group. The effect size was estimated using rank biserial correlation.

DISCUSSION

This study demonstrated that telenursing-based five-finger hypnosis therapy was associated with greater reductions in maternal stress levels among mothers of stunted children. Stress reduction in the intervention group occurred progressively from baseline to week 2 and week 4. Although the control group also showed a slight reduction in mean stress scores over time, the decrease was substantially greater in the intervention group. These findings suggest that the intervention provided additional benefits beyond routine care alone.

These findings indicate that a structured, brief psychosocial intervention delivered remotely by nurses may provide measurable benefits for caregiver well-being in community stunting contexts. These findings are consistent with previous studies reporting the effectiveness of five-finger hypnosis in reducing stress and anxiety (Safitri & Tresya, 2023; Wati et al., 2021). The present study extends this evidence by applying five-finger hypnosis through a telenursing approach among mothers of children with stunting in a community-based community health service setting. This context is important because maternal stress may affect caregiving quality, while access to regular in-person psychosocial support in community settings can be limited.

Commented [AR10]: Is there any novelty in these findings compared to previous studies?

Commented [i11R10]: We have revised the Discussion section by clarifying the novelty of the present study compared with previous studies. We explained that previous studies have examined five-finger hypnosis or relaxation-based interventions in other populations, whereas this study integrates five-finger hypnosis with telenursing delivery and focuses specifically on mothers of children with stunting in a community-based health service context.

Therefore, the novelty of this study lies in integrating a brief five-finger hypnosis intervention with telenursing delivery to support maternal stress management in community-based stunting care.

Hypnosis may reduce stress through two interconnected pathways: physiological regulation and psychological ~~modulation~~ modulation~~s~~ (Valentine et al., 2019). Physiologically, hypnosis may reduce psychophysiological arousal by modulating autonomic nervous system activity, as reflected in changes in heart rate, heart rate variability, electrodermal activity, and respiratory rate, thereby promoting a more relaxed state (Batra et al., 2024). Psychologically, hypnosis may help focus attention, reduce reactivity to stressors, and enhance emotional self-regulation, enabling mothers to better manage anxiety, tension, and feelings of being overwhelmed (De Benedittis, 2024; Leo et al., 2024). Recent evidence shows that hypnosis remains a relevant psychological intervention, with generally positive effects on mental disorders, including outcomes related to stress and anxiety (Rosendahl et al., 2024). Five-finger hypnosis may be particularly suitable for community nursing because of its simplicity, short duration, and minimal resource requirements. The technique also promotes self-efficacy because mothers can practice the cues independently between sessions, potentially reinforcing sustained stress management. The stress reduction observed in this study may be explained by the physiological relaxation response induced by hypnosis-based techniques, which promote parasympathetic activation and emotional regulation (De Benedittis, 2024; Fernandez et al., 2021). By integrating this intervention into a telenursing framework, accessibility may be improved, particularly in community and rural settings.

Maternal stress may negatively influence caregiving behaviors, including feeding consistency, emotional responsiveness, and engagement in stimulating activities, which can indirectly contribute to poor growth trajectories. Therefore, interventions that strengthen maternal coping and emotional regulation are increasingly recognized as complementary components of stunting prevention and rehabilitation programs (Almaatani et al., 2023; Pan et al., 2025). Importantly, the delivery of five-finger hypnosis through telenursing may help address one of the common barriers in primary healthcare, namely, limited opportunities for frequent in-person psychosocial support. Digital health and telehealth have been increasingly recommended as approaches to strengthen primary healthcare systems, improve continuity of care, and expand access to interventions for populations facing geographic or logistical constraints (Sriati et al.,

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Commented [i13R12]: We have strengthened the Discussion section by adding references to support the proposed mechanisms of hypnosis in stress reduction.

Commented [AR14]: Reference?

Commented [i15R14]: We have added recent references to support the physiological mechanism of hypnosis, particularly its potential influence on autonomic nervous system activity and psychophysiological arousal.

2024; WHO, 2021). In Indonesian Puskesmas settings, where nurses often manage high caseloads across multiple programs, telenursing may have potential as an additional strategy to support caregiver psychosocial well-being (Adrian et al., 2021). However, the present study did not directly assess implementation outcomes, such as feasibility, acceptability, fidelity, or cost-effectiveness. Therefore, these findings should be interpreted as preliminary evidence of effectiveness rather than evidence supporting routine large-scale implementation.

From a nursing management perspective, the findings suggest that nurse-led telenursing-based stress management may be a supportive component of community stunting programs. Nevertheless, this implication should be interpreted cautiously, as the present study focused on maternal stress outcomes and did not evaluate implementation processes or service-level outcomes. Before wider adoption is considered, further research is needed to assess the feasibility of delivery within routine Puskesmas services, acceptability of the intervention among mothers and nurses, fidelity of implementation, and resources required to sustain the program. Such evidence is important to determine whether this intervention can be appropriately incorporated into family centered community nursing care.

Limitations

This study has several limitations. First, the relatively small sample size and use of self-report measures may limit the generalizability and objectivity of the findings. Second, the study did not assess longer-term outcomes; therefore, the sustainability of the intervention effect remains unclear. Third, implementation-related outcomes, such as feasibility, acceptability, fidelity, and cost-effectiveness, were not evaluated, which limits conclusions regarding the scalability and routine integration of the intervention into Puskesmas services. Therefore, future research should employ randomized controlled designs with larger samples, longer follow-up periods, and broader outcome measures, including caregiving practices and child growth indicators, while also examining implementation aspects before wider adoption can be recommended.

CONCLUSION

Commented [AR16]: Reference?

Commented [i17R16]: We have revised the Discussion section by adding a supporting reference to the statement regarding the potential role of telenursing in Indonesian Puskesmas settings.

Nurse-delivered telenursing-based five-finger hypnosis therapy administered over four weeks in seven sessions was associated with greater reductions in maternal stress among mothers of stunted children. These findings suggest that the intervention may be considered a supportive psychosocial approach in community-based stunting programs. However, further studies are needed to evaluate its feasibility, acceptability, fidelity, and cost-effectiveness before it can be recommended for wider implementation in Puskesmas settings.

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The authors thank the participating mothers, nurses, and Puskesmas staff in the Wanaraja Village for their support.

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Title Manuscript : The Effect of Telenursing-Based Five-Finger Hypnosis Therapy on Maternal Stress Among Mothers of Stunted Children: A Quasi-Experimental Study

ID Manuscript : 29001

No.	Comment Reviewer 1	Response
1	Abstract Please provide details of your data analysis software	Thank you for your helpful comment. We have revised the Methods part of the Abstract by adding details of the statistical software used for data analysis to improve transparency and reproducibility. As below: “Data were analyzed using Jamovi statistical software version 2.6.45, with the Friedman test for within-group comparisons and the Mann-Whitney U test for between-group comparisons.”
2	Method - How do you avoid bias? - What would you do if a participant were to drop out whilst the research is ongoing?	Thank you for your constructive comment. We have revised the Methods section by adding a clearer explanation of the procedures used to minimize potential bias and manage participant withdrawal or dropout during the study. We clarified that the same inclusion and exclusion criteria were applied to both the intervention and control groups, maternal stress was assessed at the same measurement points in both groups, and the intervention and control groups were managed separately to reduce contamination bias. We also clarified that participants who missed at least two intervention sessions, withdrew voluntarily, or were unable to complete follow-up assessments would be excluded from the final analysis. However, no participants dropped out or were excluded during the study period; therefore, all 34 participants were included in the final analysis. As below: “To minimize potential bias, the same inclusion and exclusion criteria were applied to both the intervention and control groups. Maternal stress was assessed at the same measurement points in both groups, namely before the intervention, at week 2, and at week 4. To reduce contamination bias, the intervention and control groups were managed separately, and the control group did not receive five-finger hypnosis therapy during the study period. Participants who missed at least two intervention sessions, withdrew voluntarily, or were unable to complete follow-up assessments would be excluded from the final analysis. However, no participants dropped out or were excluded during the study period; therefore, all 34 participants were included in the final analysis.”
3	Method Please provide details of your data analysis software.	Thank you for your helpful comment. We have revised the Data Analyses section by adding clearer details of the statistical software used to perform the analyses. As below: “All statistical analyses were performed using Jamovi statistical software version 2.6.45, and statistical significance was set at $p < 0.05$.”
4	Result Authors can create graphs to illustrate the progress made.	Thank you for your helpful suggestion. We have added a line graph after Table 3 to illustrate the progress of maternal stress reduction in both groups across the three measurement points. The figure is entitled “Figure 1. Changes in Mean Maternal Stress Scores Across Measurement Points.” As below: “Figure 1 illustrates the changes in mean maternal stress scores in the intervention and control groups across the three measurement points. The intervention group showed a progressive decrease in mean stress scores from pretest to week 2 and week 4, whereas the control group showed only a slight reduction over the same period. Specifically, the mean stress score in the intervention group decreased from 18.4 at pretest to 16.4 at week 2 and further to 14.5 at week 4. In comparison, the control group showed a smaller decline, from 18.9 at pretest to 17.9 at week 2 and 17.6 at week 4. This visual trend supports the finding that maternal stress reduction was greater in the intervention group than in the control group.”
5	Conclusion The conclusion must address the objectives of this study.	Thank you for your constructive comment. We have revised the Conclusion section to ensure that it directly addresses the objective of the study. The revised conclusion now explicitly states that the study examined the effect of telenursing-based five-finger hypnosis therapy on maternal stress levels among mothers of children with stunting. We also clarified the main finding by stating that mothers

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		of children with stunting who received the intervention experienced a greater reduction in maternal stress than those who received routine care. As below: “The findings showed that mothers of children with stunting who received telenursing-based five-finger hypnosis therapy experienced a greater reduction in maternal stress than mothers of children with stunting who received routine care. The reduction in stress scores was observed progressively from baseline to week 2 and week 4, indicating that the intervention may contribute to improving maternal psychological well-being during community-based stunting care. Therefore, telenursing-based five-finger hypnosis therapy may be considered a supportive psychosocial nursing intervention to complement routine stunting management services. However, given the quasi-experimental design and small sample size, further studies with larger samples, randomized designs, and longer follow-up periods are needed to confirm these findings.”
6	Additional The reviewer provided several positive comments on the title, abstract, keywords, background, design, instrument, statistical tests, ethics, findings, discussion, and practical implications.	We appreciate the reviewer’s positive evaluation of the manuscript. We have carefully revised the sections highlighted for improvement while maintaining the strengths noted by the reviewer, including the clarity of the title, relevance of the keywords, current references, appropriateness of the quasi-experimental design, reliability of the instrument, and alignment of the findings with the study objectives.

Title Manuscript	:	The Effect of Telenursing-Based Five-Finger Hypnosis Therapy on Maternal Stress Among Mothers of Stunted Children: A Quasi-Experimental Study
ID Manuscript	:	29001

No.	Comment Reviewer 2	Response
1	Abstract Clarify design as: “quasi-experimental non-randomized controlled study”	We appreciate the reviewer’s helpful comment. We have revised the Methods part of the Abstract to clarify the study design as a quasi-experimental non-randomized controlled study with a pretest-posttest design. We also replaced “assigned” with “allocated” to avoid implying random assignment. As below: “A quasi-experimental non-randomized controlled study with a pretest-posttest design was conducted from March to May 2024 in Wanaraja Village, Garut Regency, Indonesia. A total of 34 mothers of children with stunting were recruited using purposive sampling and allocated to an intervention group (n = 17) and a control group (n = 17).”
2	Introduction Strong background linking stunting, maternal stress, and caregiving. Some repetition in explaining the impact of maternal stress on child outcomes. Could be more concise without losing clarity.	We appreciate the reviewer’s helpful observation. We have revised the Introduction section to reduce repetition in explaining the impact of maternal stress on caregiving and child outcomes while maintaining clarity. The overlapping explanation was condensed into a clearer sentence describing the pathway from persistent maternal stress to depression, anxiety, reduced emotional regulation, and compromised nurturing care at home. As below: “Persistent maternal stress may increase the risk of depression and anxiety and reduce emotional regulation, which in turn may compromise the quality of nurturing care provided at home (O’Dea et al., 2023; Wang et al., 2024).”
3	Method - Design The quasi-experimental pre-post control group design is appropriate for the study objective. Concern: Lack of randomization introduces potential selection bias. This limitation should be more explicitly emphasized.	Thank you for this important comment. We have revised the Design subsection in the Methods section to clarify that this study used a quasi-experimental non-randomized controlled design with pretest and posttest assessments. We also explicitly acknowledged that the absence of random assignment may introduce potential selection bias. To address this concern, we clarified that the same inclusion and exclusion criteria were applied to both groups and that all eligible participants underwent baseline assessment of maternal stress before group allocation. As below: “This study employed a quasi-experimental non-randomized controlled design with pretest and posttest assessments. It was conducted from March to May 2024 in Wanaraja Village, Garut Regency, West Java, Indonesia. A total of 34 mothers of children with stunted growth were recruited using purposive sampling; 17 participants were allocated to the intervention group and 17 to the control group. Group allocation was determined based on the study setting and participant eligibility within the community health service area, as random assignment was not applied in this study. Because the participants were not randomly assigned, potential selection bias could not be completely ruled out and should be considered when interpreting the findings. To reduce this potential bias, the same inclusion and exclusion criteria were applied to both groups, and all eligible participants first underwent a baseline assessment of maternal stress before being allocated to either the intervention or control group.”
4	Method - Intervention Lack of detail on standardization, e.g., hypnosis protocol/script. Qualifications of the intervention provider are not clearly described.	We appreciate the reviewer’s constructive comment. We have revised the Intervention section by adding more detailed information on the standardization of the telenursing-based five-finger hypnosis therapy and clarifying the intervention provider. We clarified that the intervention was implemented using a written Standard Operating Procedure (SOP) and a structured five-finger hypnosis action format. We also added details on the number of sessions, duration, delivery media, session structure, and the key steps of the five-finger hypnosis procedure. In addition, we clarified that the intervention was delivered by the principal investigator using the standardized SOP to ensure consistency across sessions. As below: “The intervention was standardized using a written Standard Operating Procedure (SOP) for telenursing-based stress management and a five-finger hypnosis action format. The intervention was delivered over seven sessions during four weeks, with each session lasting approximately 10–15 minutes and conducted twice a week through a WhatsApp Messenger group and video conference. Each session followed the same general structure, including introduction, stress assessment using the modified DASS-42 questionnaire, explanation of the intervention, group communication through WhatsApp, stress education, coping-related discussion, participant sharing, and evaluation. The five-finger hypnosis component followed a structured procedure consisting of preparation, implementation, and evaluation phases. During the implementation phase, participants were guided to sit or lie in a comfortable position, perform deep breathing, close their eyes, and sequentially touch the thumb to each finger while recalling positive experiences, including being healthy, being with loved ones, receiving appreciation, and being in a comfortable place. The intervention

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		was delivered by the principal investigator using the standardized SOP to ensure consistency across sessions.”
5	Method - Instrument The process of modification is not fully explained. No clear description of validation procedure after modification.	We appreciate this helpful suggestion. We have revised the Instrument section by providing a clearer explanation of the DASS-42 modification process and the validation procedure conducted after modification. We clarified that the study used the 14 stress-domain items from the DASS-42 and adapted the wording of several items to make them more specific to maternal stress experiences related to caring for children with stunting, without changing the core construct of stress. We also added details on the validation procedure, including pilot testing in 30 mothers of children with stunting in Wanasari Village, item validity testing using item-total correlation analysis, the validity criterion based on the r-table value of 0.361, and reliability testing using Cronbach’s alpha. As below: “Maternal stress was measured using the stress domain of the DASS-42 questionnaire, which was modified to fit the context of mothers caring for children with stunting. The modification process involved selecting the 14 stress-domain items from the DASS-42 and adapting the wording of several items to make them more specific to maternal stress experiences related to caring for a child with stunting, without changing the core construct of stress being measured. After modification, the questionnaire was pilot-tested in 30 mothers of children with stunting in Wanasari Village before being used in the main study. The validation procedure included item validity testing using item-total correlation analysis. An item was considered valid when the item-total correlation coefficient met or exceeded the r-table value of 0.361. The item-total correlation coefficients ranged from 0.361 to 0.730, indicating that all 14 items met the validity criterion. Reliability was assessed using Cronbach’s alpha, and the modified questionnaire showed good internal consistency reliability, with a Cronbach’s alpha value of 0.841. Each item was scored on a 4-point scale ranging from 0 (never) to 3 (very often), with higher total scores indicating higher levels of stress. Total scores were categorized as normal (0–14), mild (15–18), moderate (19–25), severe (26–33), and extremely severe (>34).”
6	Method - Data Analyses This is one of the strongest components of the manuscript. Justification for choosing non-parametric tests could be slightly elaborated.	We appreciate the reviewer’s helpful suggestion. We have revised the Data Analyses section by providing a clearer justification for the use of non-parametric tests. Specifically, we clarified that the Shapiro-Wilk test was selected because the sample size was relatively small, with 17 participants in the intervention group and 17 participants in the control group. We also explained that non-parametric tests were used because the maternal stress score data were not normally distributed. As below: “Data were analyzed using Jamovi statistical software version 2.6.45. Descriptive statistics included frequencies, percentages, means, and standard deviations. Normality was assessed using the Shapiro-Wilk test because the sample size was relatively small, with 17 participants in the intervention group and 17 participants in the control group. The normality test showed that the maternal stress score data were not normally distributed. Therefore, non-parametric tests were used for inferential analysis, as these tests are more appropriate for repeated and between-group comparisons when the assumption of normality is not met. Changes in maternal stress scores across the three measurement points within each group were analyzed using the Friedman test, whereas between-group differences in change scores (post-test 1-pre-test and post-test 2-pre-test) were analyzed using the Mann-Whitney U test. The effect size for the between-group comparison was estimated using rank-biserial correlations. Statistical significance was set at $p < 0.05$.”
7	Results - Both intervention and control groups show significant improvement. This is a critical finding that requires deeper interpretation. - Lack of statistical testing for categorical changes. Could be strengthened with additional analysis. - Limited explanation of clinical significance. Focus is more on statistical significance.	We appreciate the reviewer’s valuable suggestion. We have revised the Results section by adding an additional categorical analysis to examine changes in maternal stress categories. Categorical improvement was defined as a shift to a lower stress category from pretest to week 2 or week 4, and Fisher’s exact test was used to compare the proportion of participants who improved between the intervention and control groups. We also expanded the interpretation of clinical significance by explaining that the intervention group showed a meaningful shift toward lower stress categories, while the control group showed only a small reduction in mean stress scores without categorical improvement. As below: “Additional categorical analysis showed that the proportion of participants who improved by at least one stress category was higher in the intervention group than in the control group. At week 2, 6 of 17 mothers in the intervention group showed categorical improvement, whereas no mothers in the control group improved (Fisher’s exact test, $p = 0.018$). At week 4, all 17 mothers in the intervention group showed categorical improvement, whereas no categorical improvement was observed in the control group (Fisher’s exact test, $p < 0.001$). These findings indicate that the intervention was associated not only with lower mean stress scores but also with a clinically relevant shift toward lower stress categories among mothers of children with stunting.” We also added further interpretation of changes in mean stress scores as below:

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		“However, the magnitude and practical meaning of the change differed between groups. The intervention group showed a larger reduction in mean stress score from pretest to week 4 than the control group. This was supported by the between-group comparison of change scores, which showed a moderate effect at week 2 and a large effect at week 4. Although the control group also showed a statistically significant change over time, the mean reduction was smaller and was not accompanied by a shift to lower stress categories. Therefore, the statistically significant change in the control group should be interpreted cautiously, as its clinical relevance appeared limited compared with the intervention group.”
8	Discussion - Control group improvement not sufficiently addressed. Possible explanations, such as natural recovery and external factors, should be discussed. - Mild overinterpretation. Some statements suggest causality despite non-randomized design. - Implementation claims should be more cautious due to lack of feasibility and cost analysis.	We appreciate the reviewer’s valuable observations. We have revised the Discussion section to address these concerns more comprehensively. First, we added a more detailed interpretation of the slight reduction in maternal stress observed in the control group by discussing possible explanations, including routine community health services, natural adaptation over time, repeated exposure to stress assessment, and external support from family or community health workers. Second, we revised the wording throughout the Discussion to avoid causal overinterpretation, considering the non-randomized quasi-experimental design. Third, we revised the implementation implication to clarify that the findings remain preliminary because the study focused on maternal stress outcomes and did not assess implementation processes or service-level outcomes, including feasibility, acceptability, fidelity, resource requirements, and cost-effectiveness. As below: “Although participants in the control group did not receive five-finger hypnosis therapy, they continued to receive routine community health services, and their slight improvement may also be explained by natural adaptation, repeated assessment, and external support from family or community health workers. Previous studies have shown that maternal stress and caregiving burden are influenced by psychosocial and environmental factors, including social support and caregiving context. However, the reduction in the control group was smaller than that in the intervention group and was not accompanied by categorical improvement. This suggests that telenursing-based five-finger hypnosis therapy may have provided additional psychosocial support beyond routine care.” The implementation implication was also revised as follows: “From a nursing management perspective, the findings suggest that nurse-led telenursing-based stress management may be a supportive component of community stunting programs. Nevertheless, this implication remains preliminary, as the present study focused on maternal stress outcomes and did not evaluate implementation processes or service-level outcomes. Further research is needed to assess the feasibility of delivery within routine community health services, the acceptability of the intervention among mothers and nurses, fidelity of implementation, resource requirements, and cost-effectiveness. Such evidence is important to determine whether this intervention can be appropriately incorporated into family-centered community nursing care.”
9	Limitations Explicitly include non-randomization bias.	We appreciate the reviewer’s important suggestion. We have revised the Limitations section by explicitly acknowledging the potential non-randomization bias in this study. We clarified that the non-randomized quasi-experimental design may have introduced selection bias because participants were not randomly assigned to the intervention and control groups. We also added that, although the same inclusion and exclusion criteria were applied to both groups, potential baseline differences or unmeasured confounding factors could not be completely ruled out; therefore, causal interpretation should be made cautiously. As below: “This study has several limitations. First, the non-randomized quasi-experimental design may have introduced selection bias, as participants were not randomly assigned to the intervention and control groups. Although the same inclusion and exclusion criteria were applied to both groups, potential baseline differences or unmeasured confounding factors could not be completely ruled out; therefore, causal interpretation should be made cautiously. Second, the relatively small sample size and use of self-report measures may limit the generalizability and objectivity of the findings. Third, the study did not assess longer-term outcomes; therefore, the sustainability of the intervention effect remains unclear. Fourth, implementation-related outcomes, such as feasibility, acceptability, fidelity, resource requirements, and cost-effectiveness, were not evaluated, which limits conclusions regarding the scalability and routine integration of the intervention into community health services. Therefore, future research should employ randomized controlled designs with larger samples, longer follow-up periods, and broader outcome measures, including caregiving practices and child growth indicators, while also examining implementation aspects before wider adoption can be recommended.”
10	Conclusion	We appreciate the reviewer’s helpful suggestion. We have revised the Conclusion section to highlight the practical implication of the findings more clearly. Specifically, we clarified that telenursing-based five-finger hypnosis therapy may offer a brief and accessible

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	• Could briefly highlight practical implications more clearly.	psychosocial strategy for nurses to support maternal stress management as a complement to routine stunting management services. We also maintained a cautious statement regarding the quasi-experimental design, small sample size, and the need for further implementation-related evaluation before wider implementation in community health service settings can be recommended. As below: “The findings showed that mothers of children with stunting who received telenursing-based five-finger hypnosis therapy experienced a greater reduction in maternal stress than mothers of children with stunting who received routine care. The reduction in stress scores was observed progressively from baseline to week 2 and week 4, indicating that the intervention may contribute to improving maternal psychological well-being during community-based stunting care. From a practical perspective, this nurse-delivered intervention may offer a brief and accessible psychosocial strategy to support maternal stress management as a complement to routine stunting management services. However, given the quasi-experimental design, small sample size, and limited implementation-related evaluation, further studies with larger samples, randomized designs, longer follow-up periods, and assessments of feasibility, acceptability, fidelity, resource requirements, and cost-effectiveness are needed before wider implementation in community health service settings can be recommended.”



The Effect of Telenursing-Based Five-Finger Hypnosis Therapy on Maternal Stress Among Mothers of Stunted Children: A Quasi-Experimental Study

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Track Record Article	Abstract
Revised: 11 April 2026 Accepted: 19 June 2026 Published: 24 June 2026 How to cite : Wahyudi, I., Suryawantie, T., & Hamidah, I. (2026). The Effect of Telenursing-Based Five-Finger Hypnosis Therapy on Maternal Stress Among Mothers of Stunted Children: A Quasi-Experimental Study. <i>Contagion : Scientific Periodical of Public Health and Coastal Health</i>, 8(2), 252–267.	<i>Stunting remains a major public health problem in developing countries, including Indonesia. In addition to nutritional factors, maternal psychological stress may indirectly affect caregiving quality and child well-being. Objective: This study aimed to examine the effect of telenursing-based five-finger hypnosis therapy on maternal stress levels among mothers of children with stunting. A quasi-experimental non-randomized controlled study with a pretest-posttest design was conducted from March to May 2024 in Wanaraja Village, Garut Regency, Indonesia. A total of 34 mothers of children with stunting were recruited using purposive sampling and allocated to an intervention group (n = 17) and a control group (n = 17). The intervention group received telenursing-based five-finger hypnosis therapy for seven sessions over four weeks, while the control group received routine care from the community health centers. Maternal stress was measured using a 14-item maternal stress scale adapted from the stress domain of the DASS-42 questionnaire. Data were analyzed using Jamovi statistical software version 2.6.45, with the Friedman test for within-group comparisons and the Mann-Whitney U test for between-group comparisons. Maternal stress in the intervention group decreased progressively from pretest to posttest 1 and posttest 2. The mean maternal stress score in the intervention group decreased from 18.4 (SD = 3.12) at baseline to 16.4 (SD = 2.50) at week 2 and 14.5 (SD = 2.40) at week 4. In the control group, the mean score decreased slightly from 18.9 (SD = 2.29) at baseline to 17.9 (SD = 2.77) at week 2 and 17.6 (SD = 2.50) at week 4. The reduction in maternal stress was significantly greater in the intervention group than in the control group at week 2 (p = 0.036) and week 4 (p < 0.001). These findings suggest that telenursing-based five-finger hypnosis therapy may be a supportive psychosocial nursing intervention for reducing maternal stress among mothers of children with stunting. Further studies with larger samples and randomized designs are needed to confirm these findings</i> Keywords: <i>Stunting, Maternal Stress, Five-Finger Hypnosis, Telenursing, Community Health Nursing</i>

INTRODUCTION

Stunting remains a persistent public health challenge that affects child growth and development globally (Mulyani et al., 2025; Soliman et al., 2024). The World Health Organization reported that stunting affects millions of children worldwide, particularly in low- and middle-income countries (WHO, 2025). In Indonesia, the prevalence of stunting remains above the WHO threshold, indicating ongoing public health concerns. Stunting prevention has been prioritized through multisectoral strategies involving nutrition-specific and nutrition-sensitive interventions (Kemenkes, 2025; WHO, 2026).

In addition to nutritional inadequacy and infectious diseases, indirect determinants, such as maternal caregiving practices and psychological well-being, play a crucial role in child

growth outcomes (Muzzamil et al., 2025; Rana et al., 2024). Mothers of children with stunting frequently experience psychological stress due to caregiving burden, social stigma, economic constraints, and limited social support (Febristi et al., 2023; Saripah, 2022). Persistent maternal stress may increase the risk of depression and anxiety, reduce emotional regulation, which in turn may compromise the quality of nurturing care provided at home (O'Dea et al., 2023; Wang et al., 2024; Pan et al., 2025; Ren et al., 2025). In community health centers, nurses are strategically positioned to provide psychosocial interventions. Nevertheless, the delivery of psychosocial support is often constrained by a high workload, limited time, geographical barriers, and uneven access to in-person counseling, especially in rural areas **(Kenwright et al., 2024; Rafi et al., 2026)**.

Various non-pharmacological interventions have been developed to manage stress in nursing practice, including relaxation techniques (Toussaint et al., 2021). One such intervention is five-finger hypnosis therapy, which combines tactile stimulation with positive imagery to induce relaxation (Valentine et al., 2019). Previous studies have demonstrated that five-finger hypnosis effectively reduces stress and anxiety among caregivers (Hansen et al., 2022; Wati et al., 2021). Hypnosis-based and relaxation interventions have demonstrated effectiveness in reducing stress and anxiety across various populations, including caregivers, and may enhance coping and self-efficacy (Cardoso et al., 2025; Padilla et al., 2026).

Digital health and telehealth innovations have expanded rapidly in recent years and have been recommended as feasible strategies for strengthening primary health care systems through improved continuity of care, remote monitoring, and health education (Forslund et al., 2024; Sriati et al., 2024). Telenursing offers a promising approach to expanding access to nursing care by using telecommunications to deliver education, monitoring, and supportive interventions. Telenursing enables the provision of education, counseling, and psychosocial support without geographical barriers (Emalia & Nilasari, 2021; Nishigaki et al., 2025).

However, empirical evidence regarding the use of nurse-led five-finger hypnosis delivered through tele-health specifically for mothers of children with stunting within community health center programs remains limited. This evidence gap is relevant to nursing practice in community health centers, as psychosocial interventions may help strengthen caregiver capacity and complement nutrition-focused stunting programs (Yehuda et al., 2024). Therefore, this study aimed to examine the effect of tele-health-based five-finger hypnosis therapy on maternal stress levels among mothers of children with stunting. The

findings may provide preliminary evidence to inform caregiver psychosocial support in community-based stunting services.

METHODS

This study employed a quasi-experimental pretest-posttest control group design. It was conducted from March to May 2024 in Wanaraja Village, Garut Regency, West Java, Indonesia. A total of 34 mothers of children with stunted growth were recruited using purposive sampling; 17 participants were allocated to the intervention group and 17 to the control group. As this was a preliminary quasi-experimental study, the sample size was intended to provide initial evidence regarding the potential effect of the intervention in a real community-based primary healthcare setting. This number was considered sufficient to explore the direction and magnitude of change in maternal stress before conducting larger randomized studies. The reporting of this study was guided by the Transparent Reporting of Evaluations with Nonrandomized Designs (TREND) statement.

Group allocation was determined based on participant eligibility within the service area of the community-based primary healthcare setting, as random assignment was not applied in this study. All eligible participants first underwent a baseline assessment of maternal stress before being assigned to either the intervention or control group. Because participants were not randomly assigned, potential selection bias could not be completely ruled out and should be considered when interpreting the findings. To reduce this potential bias, the same inclusion and exclusion criteria were applied to both groups. The inclusion criteria were as follows: (1) mothers with mild-to-moderate stress levels, defined as a total score of 15–25 on the Maternal Stress Scale adapted from the DASS-42 stress domain; (2) mothers of stunted children aged 0–23 months; (3) mothers who were the primary caregivers; (4) mothers who owned a smartphone and were able to use WhatsApp Messenger; and (5) children diagnosed with stunting within the previous six months. The exclusion criteria were as follows: (1) refusal to participate, (2) communication barriers, and (3) ongoing psychological or other stress-related therapy. Participants who missed at least two intervention sessions or withdrew during the study were excluded from the final analysis.

A total of 34 participants were enrolled in the study, comprising 17 mothers in the intervention group and 17 mothers in the control group. No participants withdrew or were excluded during the study period. All participants were included in the final analysis. In the intervention group, adherence to the intervention was monitored across seven scheduled sessions, and all participants met the predefined attendance criteria.

The five-finger hypnosis technique used in this study was adapted from previous nursing studies on stress management and relaxation (Wati et al., 2021; Safitri & Tresya, 2023). The intervention was standardized using a written Standard Operating Procedure (SOP) for telenursing-based stress management and a five-finger hypnosis protocol. The intervention was delivered by the researcher with support from two trained research assistants. To ensure intervention fidelity, all sessions followed the same SOP, intervention materials, sequence of activities, and session duration. Standardized session checklists were used to document the delivery of each session and to ensure that all planned intervention components were implemented consistently across participants and sessions.

The intervention consisted of seven structured sessions delivered over four weeks through a WhatsApp Messenger group and video conferencing. Each session lasted approximately 10–15 min, and most sessions were conducted twice weekly. Outcome assessments were conducted separately and were not counted as intervention sessions. Maternal stress was assessed at baseline before the first intervention session. The intervention included stress education, coping-related discussions, participant sharing, evaluation activities, and five-finger hypnosis practice. During the hypnosis practice, participants were guided to associate positive memories and calming experiences with sequential finger-touch cues. Participants were also encouraged to practice the technique independently between sessions to strengthen the relaxation effect. Participants in the control group did not receive the structured intervention program. Instead, they received routine care for stunting management at the community-based primary healthcare setting and did not receive the five-finger hypnosis intervention. A detailed description of the intervention protocol, including the content and activities of each session, is presented in Table 1.

Table 1. Protocol of Telenursing-Based Five-Finger Hypnosis Intervention

Session	Main Content	Activities	Duration
1	Introduction and stress education	Introduction, explanation of program objectives, discussion of maternal stress related to caring for children with stunting	10–15 min
2	Understanding stress and stressors	Identification of stressors, discussion of participants' experiences, and coping needs assessment	10–15 min
3	Coping strategies for stress management	Education regarding adaptive coping techniques and emotional regulation	10–15 min
4	Participant sharing and evaluation	Sharing experiences, peer support, discussion of coping implementation, and mid-intervention evaluation	10–15 min
5	Reinforcement of stress management skills	Review of stress management materials, preparation for five-finger hypnosis practice	10–15 min

Session	Main Content	Activities	Duration
6	Five-finger hypnosis implementation	Guided practice of the five-finger hypnosis technique through video conference	10–15 min
7	Five-finger hypnosis reinforcement and evaluation	Repeated hypnosis practice, participant feedback, evaluation of intervention outcomes, and encouragement of independent practice	10–15 min

Maternal stress was assessed at baseline (pretest), week 2, and week 4 using the modified maternal stress questionnaire. Data were collected remotely through an online questionnaire form distributed via WhatsApp Messenger. Completed questionnaires were collected and reviewed by the researcher with assistance from two trained research assistants. To reduce contamination bias, the intervention and control groups were managed separately, and the control group did not receive five-finger hypnosis therapy during the study period. Maternal stress was measured using a 14-item Maternal Stress Scale adapted from the stress domain of the DASS-42 questionnaire. The instrument was modified to fit the context of mothers caring for children with stunting. The modification process involved selecting the 14 items from the stress domain of the DASS-42 and revising the wording of several items to make them more relevant to maternal stress experiences related to caring for a child with stunting. After modification, the questionnaire was pilot-tested among 30 mothers of children with stunting in Wanasari Village before being used in the main study. A different village was intentionally selected for the pilot test to prevent participant overlap and to minimize potential contamination or testing effects that could influence the main study results in Wanaraja Village.

The validation procedure included item validity testing using item-total correlation analysis. An item was considered valid when the item-total correlation coefficient met or exceeded the *r*-table value of 0.361. The item-total correlation coefficients ranged from 0.361 to 0.730, indicating that all 14 items met the validity criterion. Reliability was assessed using Cronbach's alpha, and the modified questionnaire showed good internal consistency reliability, with a Cronbach's alpha value of 0.841. Each item was scored on a 4-point scale ranging from 0 (never) to 3 (very often), with higher total scores indicating higher levels of stress. Total scores were categorized as normal (0–14), mild (15–18), moderate (19–25), severe (26–33), and extremely severe (≥ 34).

Data were analyzed using Jamovi version 2.6.45. Descriptive statistics included frequencies, percentages, means, and standard deviations. Baseline equivalence between the intervention and control groups was assessed before evaluating the intervention effect. Before evaluating the effect of the intervention, baseline equivalence between the intervention and control groups was assessed. Baseline maternal stress scores were compared using the Mann–Whitney U test, while categorical demographic characteristics, such as age group and

education, were compared using Fisher's exact test because of the small sample size. The normality of the data was tested using the Shapiro–Wilk test, as each group consisted of 17 participants.

The results showed that the maternal stress score was not normally distributed. Therefore, non-parametric tests were used for inferential analysis. Changes in maternal stress scores across the three measurement points within each group were analyzed using the Friedman test. When the Friedman test showed a significant result, pairwise post-hoc comparisons were performed using the Wilcoxon signed-rank test. The comparisons were conducted between the pre-test and week 2, the pre-test and week 4, and week 2 and week 4. A Bonferroni correction was applied to adjust for multiple comparisons, with an adjusted significance level of $p < 0.0167$. Between-group differences in change scores, including post-test 1 minus pre-test and post-test 2 minus pre-test, were analyzed using the Mann–Whitney U test. The effect size for the between-group comparison was estimated using rank-biserial correlation. Statistical significance was set at $p < 0.05$.

Ethical approval was obtained from the Ethics Committee of STIKes Karsa Husada Garut (No. 001188/KEP STIKes Karsa Husada Garut/2024). Written informed consent was obtained from all participants, and all procedures were conducted in accordance with the Helsinki Declaration.

RESULTS

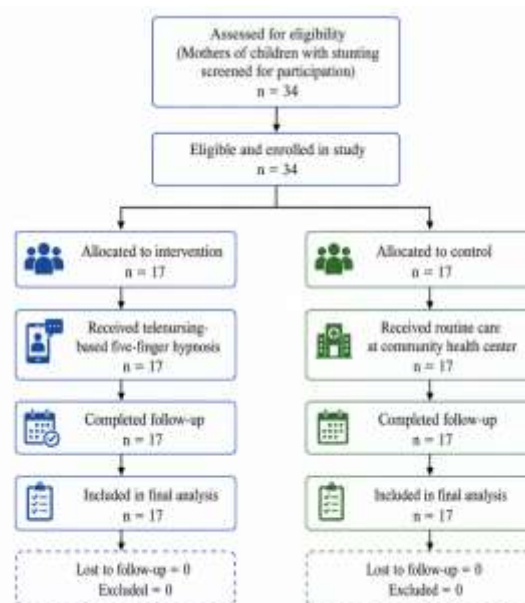


Figure 1. Participant Flow Diagram

A total of 34 participants completed the study and were included in the final analysis. No participants withdrew or were excluded during the study period. In the

intervention group, adherence to the intervention was monitored across seven scheduled sessions, and all participants met the predefined attendance criteria.

Characteristics of Respondents

Table 2 presents the characteristics of the respondents in the intervention and control groups. The age distributions were similar in both groups, with most respondents aged 31–45 years. Regarding education, most respondents in both groups had a senior high school education, with a higher proportion observed in the intervention group than in the control group. Baseline equivalence testing showed no statistically significant differences between the intervention and control groups in age group, education, and baseline maternal stress scores. As shown in Table 2, there were no significant differences in age group ($p = 1.000$), education ($p = 0.438$), or baseline maternal stress scores ($p = 0.313$). These findings indicate that the two groups were relatively comparable before the intervention.

Table 2. Characteristics of respondents

Characteristics	Intervention (n=17)	Control (n=17)	<i>p-value</i>
Age, n (%)			1.000
20 – 30 years	8 (47.1%)	8 (47.1%)	
31 – 45 years	9 (52.9%)	9 (52.9%)	
Education, n (%)			0.438
Junior high school (SMP)	3 (17.6%)	6 (35.3%)	
Senior high school (SMA)	14 (82.4%)	11 (64.7%)	

Note: p-values were obtained using Fisher's exact test for categorical variables

Baseline Maternal Stress Scores Between Groups

As shown in Table 3, the baseline maternal stress score was slightly lower in the intervention group than in the control group, with mean scores of 18.4 (SD = 3.12) and 18.9 (SD = 2.29), respectively. However, the Mann–Whitney U test showed that this difference was not statistically significant ($p = 0.313$). This indicates that the intervention and control groups had comparable maternal stress levels before the intervention was delivered.

Table 3. Comparison of Baseline Maternal Stress Scores Between Groups

Characteristics	Intervention (n=17)	Control (n=17)	<i>p-value</i>
Baseline maternal stress score, mean (SD)	18.4 (3.12)	18.9 (2.29)	0.313

Note: p-value was obtained using the Mann–Whitney U test.

Stress levels in the intervention and control groups

Table 4 presents the distribution of maternal stress categories in the intervention and control groups across measurement points. At baseline, most mothers in both groups were classified as having mild or moderate stress, with no participants in the normal category. In the intervention group, the proportion of mothers categorized as normal increased from 0.0% at

pretest to 23.5% at posttest 1 (week 2) and 64.7% at posttest 2 (week 4), while the proportion with moderate stress decreased from 41.2% at baseline to 29.4% at posttest 1 (week 2) and 0.0% at posttest 2 (week 4). In contrast, the distribution of stress categories in the control group remained unchanged across all three measurement points, with 52.9% of mothers categorized as having mild stress and 47.1% as having moderate stress.

Additional categorical analysis showed that the proportion of participants who improved by at least one stress category was higher in the intervention group than in the control group. At week 2, 6 of 17 mothers in the intervention group showed categorical improvement, whereas no mothers in the control group improved (Fisher's exact test, $p = 0.018$). At week 4, all 17 mothers in the intervention group showed categorical improvement, whereas no categorical improvement was observed in the control group (Fisher's exact test, $p < 0.001$). These findings indicate that the intervention was associated not only with lower mean stress scores but also with a clinically relevant shift toward lower stress categories among mothers of children with stunting.

Table 4. Distribution of stress in the groups

Measurement	Normal, n (%)	Mild, n (%)	Moderate, n (%)
Intervention group			
Pretest	0 (0.0%)	10 (58.8%)	7 (41.2%)
Posttest (week 2)	4 (23.5%)	8 (47.1%)	5 (29.4%)
Posttest (week 4)	11 (64.7%)	6 (35.3%)	0 (0.0%)
Control group			
Pretest	0 (0.0%)	9 (52.9%)	8 (47.1%)
Posttest 1 (week 2)	0 (0.0%)	9 (52.9%)	8 (47.1%)
Posttest 2 (week 4)	0 (0.0%)	9 (52.9%)	8 (47.1%)

Changes in mean stress scores

Post-hoc pairwise comparisons were then performed using the Wilcoxon signed-rank test with Bonferroni correction, with an adjusted significance level of $p < 0.0167$. In the intervention group, significant reductions in maternal stress scores were found across all pairwise comparisons. This indicates a continuous decrease in maternal stress from baseline to week 2 and from week 2 to week 4. In the control group, significant reductions were found when each post-test score was compared with the baseline score. However, no significant difference was found between week 2 and week 4, suggesting that the improvement did not continue after week 2. Overall, the intervention group showed a greater reduction in maternal stress scores than the control group, particularly at week 4. This finding was supported by the between-group comparison of change scores, which showed a moderate effect at week 2 and a large effect at week 4. Although the control group also showed statistically significant changes

over time, the reduction was smaller and was not accompanied by a shift to a lower stress category. Detailed results of the post-hoc Wilcoxon signed-rank tests are presented in Table 5.

Table 5. Post-hoc Pairwise Comparisons of Maternal Stress Scores Using the Wilcoxon Signed-Rank Test with Bonferroni Correction

Group	Comparison	Test statistic	p-value	Bonferroni-adjusted Significance ($\alpha = 0.0167$)
Intervention	Pretest vs Week 2	$p < 0.001$	<0.001	Significant
	Pretest vs Week 4	$p < 0.001$	<0.001	Significant
	Week 2 vs Week 4	$p < 0.001$	<0.001	Significant
Control	Pretest vs Week 2	$W = 81.0$	0.012	Significant
	Pretest vs Week 4	$W = 124.0$	0.003	Significant
	Week 2 vs Week 4	$W = 10.0$	0.095	Not Significant

Table 6 shows the changes in mean maternal stress scores at three measurement points in both groups. In the intervention group, the mean stress score decreased progressively from 18.4 (SD = 3.12) at pre-test to 16.4 (SD = 2.50) at post-test 1, or week 2, and 14.5 (SD 2.40) at post-test 2 or week 4. In the control group, the mean stress score also decreased, but the reduction was smaller. The mean score declined from 18.9 (SD = 2.29) at pre-test to 17.9 (SD = 2.77) at week 2 and 17.6 (SD = 2.50) at week 4. The Friedman test showed significant changes over time in maternal stress scores over time in both groups ($p < 0.001$).

Table 6. Stress score in the groups

Group	Pretest Mean (SD)	Posttest 1 Mean (SD)	Posttest 2 Mean (SD)	Friedman X^2	p-value
Intervention	18.4 (3.12)	16.4 (2.50)	14.5 (2.40)	33.0	<0.001
Control	18.9 (2.29)	17.9 (2.77)	17.6 (2.50)	20.4	<0.001

Note: p-values were obtained from the Friedman test.

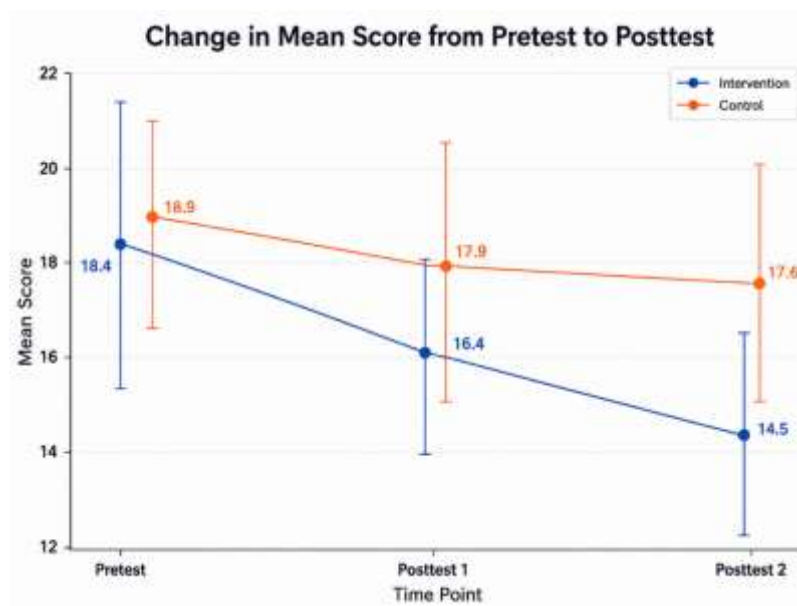


Figure 2. Changes in Mean Maternal Stress Scores Across Measurement Points

Figure 2 illustrates the changes in mean maternal stress scores in the intervention and control groups across the three measurement points. The intervention group showed a progressive decrease in mean stress scores from pretest to week 2 and week 4, whereas the control group showed only a slight reduction over the same period. Specifically, the mean stress score in the intervention group decreased from 18.4 at pretest to 16.4 at week 2 and further to 14.5 at week 4. In comparison, the control group showed a smaller decline, from 18.9 at pretest to 17.9 at week 2 and 17.6 at week 4. This visual trend supports the finding that maternal stress reduction was greater in the intervention group than in the control group.

Table 5 presents the between-group differences in changes in maternal stress scores from baseline to week 2 and week 4. The intervention group showed greater reductions in maternal stress scores than the control group at both time points. For posttest 1–pretest, the between-group difference was significant (Mann–Whitney $U = 86.0$, $p = 0.036$) with a moderate effect size (rank biserial correlation = -0.405). For posttest 2–pretest, the difference was also significant (Mann–Whitney $U = 18.0$, $p < 0.001$) with a large effect size (rank biserial correlation = -0.875). Within the study sample, these findings suggest the potential effectiveness of telenursing-based five-finger hypnosis therapy in reducing maternal stress compared with routine care alone, with a larger between-group difference observed after four weeks of intervention.

Table 5. Between-Group Differences in Changes in Maternal Stress Scores

Change Score	Intervention Mean (SD)	Control Mean (SD)	Mean Difference (I–C)	Mann-Whitney U	p-value	Effect Size	Interpretation
Posttest 1 – Pretest (week 2)	-1.94 (1.25)	-0.94 (1.09)	-1.00	86.0	0.036	-0.405	Moderate
Posttest 2 – Pretest (week 4)	-3.88 (1.36)	-1.29 (1.21)	-2.59	18.0	<0.001	-0.875	Large

Note: Negative values indicate greater reductions in maternal stress scores in the intervention group. The effect size was estimated using rank biserial correlation

DISCUSSION

This study found that telenursing-based five-finger hypnosis therapy was associated with greater reductions in maternal stress levels among mothers of stunted children. Stress scores in the intervention group decreased progressively from baseline to week 2 and week 4. Although participants in the control group did not receive five-finger hypnosis therapy, they continued to receive routine community health services, and their slight improvement may also be explained by natural adaptation, repeated assessment, and external support from family or

community health workers. Previous studies have shown that maternal stress and caregiving burden are influenced by psychosocial and environmental factors, including social support and caregiving context. (Booth et al., 2018). However, the reduction in the control group was smaller than that in the intervention group and was not accompanied by categorical improvement. This suggests that telenursing-based five-finger hypnosis therapy may have provided additional psychosocial support beyond routine care.

These findings indicate that a structured, brief psychosocial intervention delivered remotely by nurses may provide measurable benefits for caregiver well-being in community stunting contexts. These findings are consistent with previous studies reporting the effectiveness of five-finger hypnosis in reducing stress and anxiety (Safitri & Tresya, 2023; Wati et al., 2021). The present study extends this evidence by applying five-finger hypnosis through a telenursing approach among mothers of children with stunting in a community-based community health center setting. This context is important because maternal stress may affect caregiving quality, while access to regular in-person psychosocial support in community settings can be limited. Therefore, the novelty of this study lies in integrating a brief five-finger hypnosis intervention with telenursing delivery to support maternal stress management in community-based stunting care.

Hypnosis may reduce stress through two interconnected pathways: physiological regulation and psychological modulation (Valentine et al., 2019). Physiologically, hypnosis may reduce psychophysiological arousal by modulating the autonomic nervous system activity, as reflected in changes in heart rate, heart rate variability, electrodermal activity, and respiratory rate, thereby promoting a more relaxed state (Batra et al., 2024). Psychologically, hypnosis may help focus attention, reduce reactivity to stressors, and enhance emotional self-regulation, enabling mothers to better manage anxiety, tension, and feelings of being overwhelmed (De Benedittis, 2024; Leo et al., 2024). Recent evidence shows that hypnosis remains a relevant psychological intervention, with generally positive effects on mental disorders, including outcomes related to stress and anxiety (Rosendahl et al., 2024). Five-finger hypnosis may be particularly suitable for community nursing because of its simplicity, short duration, and minimal resource requirements. The technique also promotes self-efficacy because mothers can practice the cues independently between sessions, potentially reinforcing sustained stress management. The stress reduction observed in this study may be explained by the physiological relaxation response induced by hypnosis-based techniques, which promote parasympathetic activation and emotional regulation (De Benedittis, 2024; Fernandez et al.,

2021). By integrating this intervention into a telenursing framework, accessibility may be improved, particularly in community and rural settings.

Maternal stress may negatively influence caregiving behaviors, including feeding consistency, emotional responsiveness, and engagement in stimulating activities, which can indirectly contribute to poor growth trajectories. Therefore, interventions that strengthen maternal coping and emotional regulation are increasingly recognized as complementary components of stunting prevention and rehabilitation programs (Almaatani et al., 2023; Pan et al., 2025). Importantly, the delivery of five-finger hypnosis through telenursing may help address one of the common barriers in primary healthcare, namely, limited opportunities for frequent in-person psychosocial support. Digital health and telehealth have been increasingly recommended as approaches to strengthen primary healthcare systems, improve continuity of care, and expand access to interventions for populations facing geographic or logistical constraints (Sriati et al., 2024; WHO, 2021). In Indonesian community health center settings, where nurses often manage high caseloads across multiple programs, telenursing may have potential as an additional strategy to support caregiver psychosocial well-being (Adrian et al., 2021). However, the present study did not directly assess implementation outcomes, such as feasibility, acceptability, fidelity, or cost-effectiveness. Therefore, these findings should be interpreted as preliminary evidence of effectiveness rather than evidence supporting routine large-scale implementation.

From a nursing management perspective, the findings suggest that nurse-led telenursing-based stress management may be a supportive component of community stunting programs. Nevertheless, this implication remains preliminary, as the present study focused on maternal stress outcomes and did not evaluate implementation processes or service-level outcomes. Further research is needed to assess the feasibility of delivery within routine community health centers, the acceptability of the intervention among mothers and nurses, the fidelity of implementation, resource requirements, and the cost-effectiveness. Such evidence is important to determine whether this intervention can be appropriately incorporated into family-centered community nursing care.

Limitations

This study has several limitations. First, the non-randomized quasi-experimental design may have introduced selection bias, as participants were not randomly assigned to the intervention and control groups. Although the same inclusion and exclusion criteria were applied to both groups, potential baseline differences or unmeasured confounding factors could not be completely ruled out; therefore, causal interpretation should be made cautiously. Second,

the relatively small sample size and use of self-report measures may limit the generalizability and objectivity of the findings. Third, the study did not assess longer-term outcomes; therefore, the sustainability of the intervention effect remains unclear. Fourth, implementation-related outcomes, such as feasibility, acceptability, fidelity, resource requirements, and cost-effectiveness, were not evaluated, which limits conclusions regarding the scalability and routine integration of the intervention into community health centers. Therefore, future research should employ randomized controlled designs with larger samples, longer follow-up periods, and broader outcome measures, including caregiving practices and child growth indicators, while also examining implementation aspects before wider adoption can be recommended.

CONCLUSION

The findings showed that mothers of children with stunting who received telenursing-based five-finger hypnosis therapy experienced a greater reduction in maternal stress than mothers of children with stunting who received routine care. The reduction in stress scores was observed progressively from baseline to week 2 and week 4, indicating that the intervention may contribute to improving maternal psychological well-being during community-based stunting care. From a practical perspective, this nurse-delivered, telenursing-based five-finger hypnosis therapy may be considered a supportive psychosocial nursing intervention may offer a brief and accessible psychosocial strategy to support maternal stress management as a complement to routine stunting management services. However, given the quasi-experimental design, small sample size, and limited implementation-related evaluation, further studies with larger samples, randomized designs, and longer follow-up periods, and assessments of feasibility, acceptability, fidelity, resource requirements, and cost-effectiveness are needed before wider implementation in community health center settings can be recommended to confirm these findings.

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The Effect of Telenursing-Based Five-Finger Hypnosis Therapy on Maternal Stress Among Mothers of Stunted Children: A Quasi-Experimental Study

Track Record Article Accepted: Published:	Abstract Background: Stunting remains a major public health problem in developing countries, including Indonesia. In addition to nutritional factors, maternal psychological stress may indirectly affect caregiving quality and child well-being. Objective: This study aimed to examine the effect of telenursing-based five-finger hypnosis therapy on maternal stress levels among mothers of children with stunting. Methods: A quasi-experimental non-randomized controlled study with a pretest-posttest design was conducted from March to May 2024 in Wanaraja Village, Garut Regency, Indonesia. A total of 34 mothers of children with stunting were recruited using purposive sampling and allocated to an intervention group (n = 17) and a control group (n = 17). The intervention group received telenursing-based five-finger hypnosis therapy for seven sessions over four weeks, while the control group received routine community health centers. Maternal stress was measured using 14 items derived from a modified DASS-42 questionnaire. Data were analyzed using Jamovi statistical software version 2.6.45, with the Friedman test for within-group comparisons and the Mann-Whitney U test for between-group comparisons. Results: Maternal stress in the intervention group decreased progressively from pretest to posttest 1 and posttest 2, with mean scores declining from 18.4 (SD 3.12) to 16.4 (SD 2.50) and 14.5 (SD 2.40), respectively. The control group also showed a slight reduction, from 18.9 (SD 2.29) to 17.9 (SD 2.77) and 17.6 (SD 2.50). However, the reduction in maternal stress was significantly greater in the intervention group than in the control group at week 2 (p = 0.036) and week 4 (p < 0.001), with a larger effect observed at week 4. Conclusion: Telenursing-based five-finger hypnosis therapy was associated with a greater reduction in maternal stress among mothers of children with stunting than routine care alone. This intervention may serve as a supportive psychosocial strategy in community-based stunting management programs. Keywords: Stunting, Maternal Stress, Five-Finger Hypnosis, Telenursing, Community Health Nursing
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INTRODUCTION

Stunting remains a persistent public health challenge that affects child growth and development globally (Mulyani et al., 2025; Soliman et al., 2024). The World Health Organization reported that stunting affects millions of children worldwide, particularly in low-and middle-income countries (WHO, 2025). In Indonesia, the prevalence of stunting remains above the WHO threshold, indicating ongoing public health concerns. Stunting prevention has been prioritized through multisectoral strategies involving nutrition-specific and nutrition-sensitive interventions (Kemenkes, 2025; WHO, n.d.).

In addition to nutritional inadequacy and infectious diseases, indirect determinants, such as maternal caregiving practices and psychological well-being, play a crucial role in child growth outcomes (Muzzamil et al., 2025; Rana et al., 2024). Mothers of children with stunting frequently experience psychological stress due to caregiving burden, social stigma, economic constraints, and limited social support (Febristi et al., 2023; Saripah, 2022). Persistent maternal stress may increase the risk of depression and anxiety, reduce emotional regulation, which in turn may compromise the quality of nurturing care provided at home (O'Dea et al., 2023; Wang et al., 2024; Pan et al., 2025; Ren et al., 2025). In the context of community health centers, nurses are strategically positioned to provide psychosocial interventions. Nevertheless, the delivery of psychosocial support is often constrained by a high workload, limited time, geographical barriers, and uneven access to in-person counseling, especially in rural areas (Kenwright et al., 2024; Rafi et al., 2026).

Various non-pharmacological interventions have been developed to manage stress in nursing practice, including relaxation techniques (Toussaint et al., 2021). One such intervention is five-finger hypnosis therapy, which combines tactile stimulation with positive imagery to induce relaxation (Valentine et al., 2019). Previous studies have demonstrated that five-finger hypnosis effectively reduces stress and anxiety among caregivers (Hansen et al., 2022; Wati et al., 2021). Hypnosis-based and relaxation interventions have demonstrated effectiveness in reducing stress and anxiety across various populations, including caregivers, and may enhance coping and self-efficacy (Cardoso et al., 2025; Padilla et al., 2026). [Click or tap here to enter text.](#)[Click or tap here to enter text.](#)

Digital health and telehealth innovations have expanded rapidly in recent years and have been recommended as feasible strategies for strengthening primary health care systems through improved continuity of care, remote monitoring, and health education (Forslund et al., 2024; Sriati et al., 2024). Telenursing offers a promising approach to expanding access to nursing care by using telecommunications to deliver education, monitoring, and supportive interventions. Telenursing enables the provision of education, counseling, and psychosocial support without geographical barriers (Emalia & Nilasari, 2021; Nishigaki et al., 2025).

However, empirical evidence regarding the use of nurse-led five-finger hypnosis delivered through tele-health specifically for mothers of children with stunting within community health center programs remains limited. This evidence gap is relevant to nursing practice in community health center, as psychosocial interventions may help strengthen caregiver capacity and

complement nutrition-focused stunting programs (Yehuda et al., 2024). Therefore, this study aimed to examine the effect of tele-health-based five-finger hypnosis therapy on maternal stress levels among mothers of children with stunting. The findings may provide preliminary evidence to inform caregiver psychosocial support in community-based stunting services.

METHODS

Design

This study employed a quasi-experimental pretest-posttest control group design. It was conducted from March to May 2024 in Wanaraja Village, Garut Regency, West Java, Indonesia. A total of 34 mothers of children with stunted growth were recruited using purposive sampling; 17 participants were allocated to the intervention group and 17 to the control group. Group allocation was determined based on the study setting and participant eligibility within the community health centers area, as random assignment was not applied in this study. All eligible participants first underwent a baseline assessment of maternal stress before being assigned to either the intervention or control group. Because the participants were not randomly assigned, potential selection bias could not be completely ruled out and should be considered when interpreting the findings. To reduce this potential bias, the same inclusion and exclusion criteria were applied to both groups, and all eligible participants first underwent a baseline assessment of maternal stress before being allocated to either the intervention or control group.

Inclusion and Exclusion Criteria

The inclusion criteria were as follows: (1) mothers with mild-to-moderate stress levels; (2) mothers of stunted children aged 0–23 months; (3) mothers who were the primary caregivers; (4) mothers who owned a smartphone and were able to use WhatsApp Messenger; and (5) children diagnosed with stunting within the previous six months. The exclusion criteria were as follows: (1) refusal to participate, (2) communication barriers, and (3) ongoing psychological or other stress-related therapy. Participants who missed at least two intervention sessions or withdrew during the study were excluded from the final analysis. A total of 34 participants were enrolled in the study, comprising 17 mothers in the intervention group and 17 mothers in the control group. No participants withdrew or were excluded during the study period. All participants were included in the final analysis. In the intervention group, adherence to the intervention was monitored across seven scheduled sessions, and all participants met the predefined attendance criteria.

Intervention

The intervention was standardized using a written Standard Operating Procedure (SOP) for telenursing-based stress management and a five-finger hypnosis action format. The intervention was delivered remotely over seven sessions during four weeks, with each session lasting approximately 10–15 minutes and conducted twice a week through a WhatsApp Messenger group and video conference. The intervention was delivered by the researcher using the standardized SOP to ensure consistency across sessions. Baseline assessment of maternal stress was conducted before the first intervention session. In general, the sessions included stress education, coping-related discussions, participant sharing, and evaluations, while the final sessions emphasized the implementation of the five-finger hypnosis technique. The control group received routine community health centers for stunting management without hypnosis intervention.

To minimize potential bias, the same inclusion and exclusion criteria were applied to both the intervention and control groups. Maternal stress was assessed at the same measurement points in both groups, namely before the intervention, at week 2, and at week 4. To reduce contamination bias, the intervention and control groups were managed separately, and the control group did not receive five-finger hypnosis therapy during the study period. Participants who missed at least two intervention sessions, withdrew voluntarily, or were unable to complete follow-up assessments would be excluded from the final analysis. However, no participants dropped out or were excluded during the study period; therefore, all 34 participants were included in the final analysis.

Instrument

Maternal stress was measured using the stress domain of the DASS-42 questionnaire, which was modified to fit the context of mothers caring for children with stunting. The modification process involved selecting the 14 stress-domain items from the DASS-42 and adapting the wording of several items to make them more specific to maternal stress experiences related to caring for a child with stunting, without changing the core construct of stress being measured. After modification, the questionnaire was pilot-tested in 30 mothers of children with stunting in Wanasari Village before being used in the main study. The validation procedure included item validity testing using item-total correlation analysis. An item was considered valid when the item-total correlation coefficient met or exceeded the *r*-table value of 0.361. The item-

total correlation coefficients ranged from 0.361 to 0.730, indicating that all 14 items met the validity criterion. Reliability was assessed using Cronbach's alpha, and the modified questionnaire showed good internal consistency reliability, with a Cronbach's alpha value of 0.841. Each item was scored on a 4-point scale ranging from 0 (never) to 3 (very often), with higher total scores indicating higher levels of stress. Total scores were categorized as normal (0–14), mild (15–18), moderate (19–25), severe (26–33), and extremely severe (>34).

Data Analyses

Data were analyzed using Jamovi version 2.6.45. Descriptive statistics included frequencies, percentages, means, and standard deviations. Normality was assessed using the Shapiro–Wilk test because the sample size was relatively small, with 17 participants in the intervention group and 17 participants in the control group. The normality test showed that the maternal stress score data were not normally distributed. Therefore, non-parametric tests were used for inferential analysis, as these tests are more appropriate for repeated and between-group comparisons when the assumption of normality is not met. Changes in maternal stress scores across the three measurement points within each group were analyzed using the Friedman test, whereas between-group differences in change scores (post-test 1–pre-test and post-test 2–pre-test) were analyzed using the Mann–Whitney U test. The effect size for the between-group comparison was estimated using rank-biserial correlations. All statistical analyses were performed using Jamovi statistical software version 2.6.45, and statistical significance was set at $p < 0.05$.

Ethics approval and consent to participate

Ethical approval was obtained from the Ethics Committee of STIKes Karsa Husada Garut (No. 001188/KEP STIKes Karsa Husada Garut/2024). Written informed consent was obtained from all participants, and all procedures were conducted in accordance with the Helsinki Declaration.

RESULTS

Characteristics of Respondents

Table 1 presents the characteristics of the respondents in the intervention and control groups. The age distributions were similar in both groups, with most respondents aged 31–45 years. Regarding

education, most respondents in both groups had senior high school education, with a higher proportion observed in the intervention group than in the control group.

Table 1. Characteristics of respondents

Characteristics	Intervention (n=17)	Control (n=17)
Age, n (%)		
20 – 30 years	8 (47.1%)	8 (47.1%)
31 – 45 years	9 (52.9%)	9 (52.9%)
Education, n (%)		
Junior high school (SMP)	3 (17.6%)	6 (35.3%)
Senior high school (SMA)	14 (82.4%)	11 (64.7%)

Stress levels in the intervention and control groups.

Table 2 presents the distribution of maternal stress categories in the intervention and control groups across measurement points. At baseline, most mothers in both groups were classified as having mild or moderate stress, with no participants in the normal category. In the intervention group, the proportion of mothers categorized as normal increased from 0.0% at pretest to 23.5% at posttest 1 (week 2) and 64.7% at posttest 2 (week 4), while the proportion with moderate stress decreased from 41.2% at baseline to 29.4% at posttest 1 (week 2) and 0.0% at posttest 2 (week 4). In contrast, the distribution of stress categories in the control group remained unchanged across all three measurement points, with 52.9% of mothers categorized as having mild stress and 47.1% as having moderate stress.

Additional categorical analysis showed that the proportion of participants who improved by at least one stress category was higher in the intervention group than in the control group. At week 2, 6 of 17 mothers in the intervention group showed categorical improvement, whereas no mothers in the control group improved (Fisher's exact test, $p = 0.018$). At week 4, all 17 mothers in the intervention group showed categorical improvement, whereas no categorical improvement was observed in the control group (Fisher's exact test, $p < 0.001$). These findings indicate that the intervention was associated not only with lower mean stress scores but also with a clinically relevant shift toward lower stress categories among mothers of children with stunting.

Table 2. Distribution of stress in the groups

Measurement	Normal, n (%)	Mild, n (%)	Moderate, n (%)
Intervention group			
Pretest	0 (0.0%)	10 (58.8%)	7 (41.2%)
Posttest (week 2)	4 (23.5%)	8 (47.1%)	5 (29.4%)
Posttest (week 4)	11 (64.7%)	6 (35.3%)	0 (0.0%)
Control group			
Pretest	0 (0.0%)	9 (52.9%)	8 (47.1%)
Posttest 1 (week 2)	0 (0.0%)	9 (52.9%)	8 (47.1%)
Posttest 2 (week 4)	0 (0.0%)	9 (52.9%)	8 (47.1%)

Changes in mean stress scores.

Table 3 presents the changes in mean maternal stress scores across the three measurement points in both groups. In the intervention group, the mean stress score decreased progressively from 18.4 (SD 3.12) at pretest to 16.4 (SD 2.50) at posttest 1 (week 2) and 14.5 (SD 2.40) at posttest 2 (week 4). In the control group, the mean stress score also decreased slightly from 18.9 (SD 2.29) at pretest to 17.9 (SD 2.77) at posttest 1 (week 2) and 17.6 (SD 2.50) at posttest 2 (week 4). The Friedman test showed significant changes over time in both groups ($p < 0.001$). However, the magnitude and practical meaning of the change differed between groups. The intervention group showed a larger reduction in mean stress score from pretest to week 4 than the control group. This was supported by the between-group comparison of change scores, which showed a moderate effect at week 2 and a large effect at week 4. Although the control group also showed a statistically significant change over time, the mean reduction was smaller and was not accompanied by a shift to lower stress categories. Therefore, the statistically significant change in the control group should be interpreted cautiously, as its clinical relevance appeared limited compared with the intervention group.

Table 3. Stress score in the groups

Group	Pretest Mean (SD)	Posttest 1 Mean (SD)	Posttest 2 Mean (SD)	Friedman χ^2	<i>p-value</i>
Intervention	18.4 (3.12)	16.4 (2.50)	14.5 (2.40)	33.0	<0.001

Control	18.9 (2.29)	17.9 (2.77)	17.6 (2.50)	20.4	<0.001
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Note: *P-values* were obtained from the Friedman test.

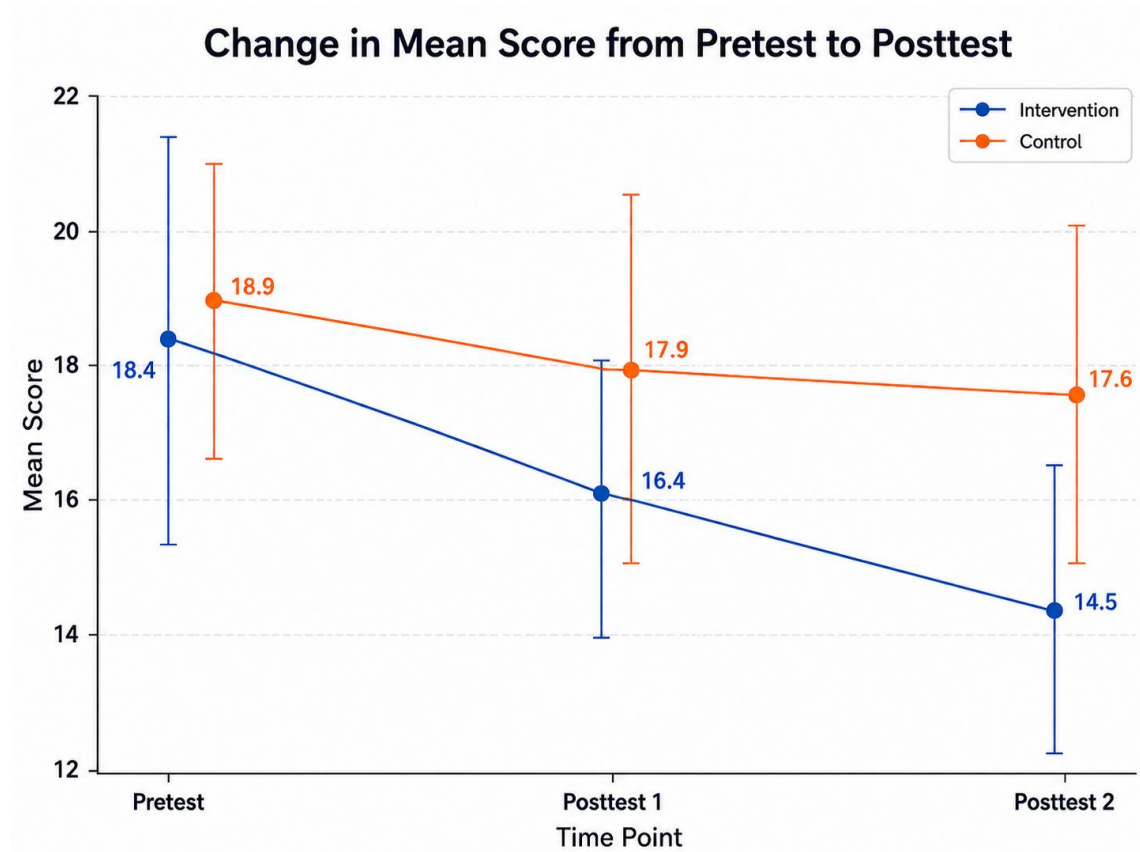


Figure 1. Changes in Mean Maternal Stress Scores Across Measurement Points

Figure 1 illustrates the changes in mean maternal stress scores in the intervention and control groups across the three measurement points. The intervention group showed a progressive decrease in mean stress scores from pretest to week 2 and week 4, whereas the control group showed only a slight reduction over the same period. Specifically, the mean stress score in the intervention group decreased from 18.4 at pretest to 16.4 at week 2 and further to 14.5 at week 4. In comparison, the control group showed a smaller decline, from 18.9 at pretest to 17.9 at week 2 and 17.6 at week 4. This visual trend supports the finding that maternal stress reduction was greater in the intervention group than in the control group.

Table 4 presents the between-group differences in changes in maternal stress scores from baseline to week 2 and week 4. The intervention group showed greater reductions in maternal stress scores than the control group at both time points. For posttest 1–pretest, the between-group

difference was significant (Mann–Whitney $U = 86.0$, $p = 0.036$) with a moderate effect size (rank biserial correlation = -0.405). For posttest 2–pretest, the difference was also significant (Mann–Whitney $U = 18.0$, $p < 0.001$) with a large effect size (rank biserial correlation = -0.875). Within the study sample, these findings suggest the potential effectiveness of telenursing-based five-finger hypnosis therapy in reducing maternal stress compared with routine care alone, with a larger between-group difference observed after four weeks of intervention.

Table 4. Between-Group Differences in Changes in Maternal Stress Scores

Change Score	Intervention Mean (SD)	Control Mean (SD)	Mean Difference (I–C)	Mann-Whitney U	<i>p</i> -value	Effect Size	Interpretation
Posttest 1 – Pretest (week 2)	-1.94 (1.25)	-0.94 (1.09)	-1.00	86.0	0.036	-0.405	Moderate
Posttest 2 – Pretest (week 4)	-3.88 (1.36)	-1.29 (1.21)	-2.59	18.0	<0.001	-0.875	Large

Note: Negative values indicate greater reductions in maternal stress scores in the intervention group. The effect size was estimated using rank biserial correlation.

DISCUSSION

This study found that telenursing-based five-finger hypnosis therapy was associated with greater reductions in maternal stress levels among mothers of stunted children. Stress scores in the intervention group decreased progressively from baseline to week 2 and week 4. Although participants in the control group did not receive five-finger hypnosis therapy, they continued to receive routine community health centers, and their slight improvement may also be explained by natural adaptation, repeated assessment, and external support from family or community health workers. Previous studies have shown that maternal stress and caregiving burden are influenced by psychosocial and environmental factors, including social support and caregiving context (Booth et al., 2018). However, the reduction in the control group was smaller than that in the intervention group and was not accompanied by categorical improvement. This suggests that telenursing-based five-finger hypnosis therapy may have provided additional psychosocial support beyond routine care.

These findings indicate that a structured, brief psychosocial intervention delivered remotely by nurses may provide measurable benefits for caregiver well-being in community stunting contexts. These findings are consistent with previous studies reporting the effectiveness of five-finger hypnosis in reducing stress and anxiety (Safitri & Tresya, 2023; Wati et al., 2021). The present study extends this evidence by applying five-finger hypnosis through a telenursing approach among mothers of children with stunting in a community-based community health centers setting. This context is important because maternal stress may affect caregiving quality, while access to regular in-person psychosocial support in community settings can be limited. Therefore, the novelty of this study lies in integrating a brief five-finger hypnosis intervention with telenursing delivery to support maternal stress management in community-based stunting care.

Hypnosis may reduce stress through two interconnected pathways: physiological regulation and psychological modulation (Valentine et al., 2019). Physiologically, hypnosis may reduce psychophysiological arousal by modulating autonomic nervous system activity, as reflected in changes in heart rate, heart rate variability, electrodermal activity, and respiratory rate, thereby promoting a more relaxed state (Batra et al., 2024). Psychologically, hypnosis may help focus attention, reduce reactivity to stressors, and enhance emotional self-regulation, enabling mothers to better manage anxiety, tension, and feelings of being overwhelmed (De Benedittis, 2024; Leo et al., 2024). Recent evidence shows that hypnosis remains a relevant psychological intervention, with generally positive effects on mental disorders, including outcomes related to stress and anxiety (Rosendahl et al., 2024). Five-finger hypnosis may be particularly suitable for community nursing because of its simplicity, short duration, and minimal resource requirements. The technique also promotes self-efficacy because mothers can practice the cues independently between sessions, potentially reinforcing sustained stress management. The stress reduction observed in this study may be explained by the physiological relaxation response induced by hypnosis-based techniques, which promote parasympathetic activation and emotional regulation (De Benedittis, 2024; Fernandez et al., 2021). By integrating this intervention into a telenursing framework, accessibility may be improved, particularly in community and rural settings.

Maternal stress may negatively influence caregiving behaviors, including feeding consistency, emotional responsiveness, and engagement in stimulating activities, which can indirectly contribute to poor growth trajectories. Therefore, interventions that strengthen maternal

coping and emotional regulation are increasingly recognized as complementary components of stunting prevention and rehabilitation programs (Almaatani et al., 2023; Pan et al., 2025). Importantly, the delivery of five-finger hypnosis through telenursing may help address one of the common barriers in primary healthcare, namely, limited opportunities for frequent in-person psychosocial support. Digital health and telehealth have been increasingly recommended as approaches to strengthen primary healthcare systems, improve continuity of care, and expand access to interventions for populations facing geographic or logistical constraints (Sriati et al., 2024; WHO, 2021). In Indonesian community health centers settings, where nurses often manage high caseloads across multiple programs, telenursing may have potential as an additional strategy to support caregiver psychosocial well-being (Adrian et al., 2021). However, the present study did not directly assess implementation outcomes, such as feasibility, acceptability, fidelity, or cost-effectiveness. Therefore, these findings should be interpreted as preliminary evidence of effectiveness rather than evidence supporting routine large-scale implementation.

From a nursing management perspective, the findings suggest that nurse-led telenursing-based stress management may be a supportive component of community stunting programs. Nevertheless, this implication remains preliminary, as the present study focused on maternal stress outcomes and did not evaluate implementation processes or service-level outcomes. Further research is needed to assess the feasibility of delivery within routine community health centers, the acceptability of the intervention among mothers and nurses, fidelity of implementation, resource requirements, and the cost-effectiveness. Such evidence is important to determine whether this intervention can be appropriately incorporated into family-centered community nursing care.

Limitations

This study has several limitations. First, the non-randomized quasi-experimental design may have introduced selection bias, as participants were not randomly assigned to the intervention and control groups. Although the same inclusion and exclusion criteria were applied to both groups, potential baseline differences or unmeasured confounding factors could not be completely ruled out; therefore, causal interpretation should be made cautiously. Second, the relatively small sample size and use of self-report measures may limit the generalizability and objectivity of the

findings. Third, the study did not assess longer-term outcomes; therefore, the sustainability of the intervention effect remains unclear. Fourth, implementation-related outcomes, such as feasibility, acceptability, fidelity, resource requirements, and cost-effectiveness, were not evaluated, which limits conclusions regarding the scalability and routine integration of the intervention into community health centers. Therefore, future research should employ randomized controlled designs with larger samples, longer follow-up periods, and broader outcome measures, including caregiving practices and child growth indicators, while also examining implementation aspects before wider adoption can be recommended.

CONCLUSION

The findings showed that mothers of children with stunting who received telenursing-based five-finger hypnosis therapy experienced a greater reduction in maternal stress than mothers of children with stunting who received routine care. The reduction in stress scores was observed progressively from baseline to week 2 and week 4, indicating that the intervention may contribute to improving maternal psychological well-being during community-based stunting care. From a practical perspective, this nurse-delivered telenursing-based five-finger hypnosis therapy may be considered a supportive psychosocial nursing intervention that may offer a brief and accessible psychosocial strategy to support maternal stress management as a complement to routine stunting management services. However, given the quasi-experimental design, and small sample size, and limited implementation-related evaluation, further studies with larger samples, randomized designs, and longer follow-up periods, and assessments of feasibility, acceptability, fidelity, resource requirements, and cost-effectiveness are needed before wider implementation in community health centers settings can be recommended to confirm these findings.

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COMMENTS:

- The title is concise and informative, clearly identifying the intervention (Telenursing-based Five-Finger Hypnosis), the population (Mothers of stunted children), and the study design (Quasi-experimental).
- The abstract effectively covers the background, objective, methods, results, and conclusions within a structured format.
- Keywords are relevant and aligned with MeSH (Medical Subject Headings) standards, aiding in high discoverability.
- The abstract accurately reflects the key finding that telenursing-based hypnosis significantly reduces maternal stress over a 4-week period compared to routine care.
- The introduction incorporates global context by citing WHO 2025 reports on stunting prevalence in low- and middle-income countries.
- The background effectively narrows from the global stunting crisis to the specific psychological burden of Indonesian mothers, creating a clear "problem pyramid".
- The manuscript identifies a critical gap: while stunting is traditionally managed through nutrition, the psychosocial support for caregivers—especially via digital platforms—is under-researched.
- The study offers novelty by combining a traditional relaxation technique (five-finger hypnosis) with modern telenursing delivery (WhatsApp/Video) specifically for the stunting context.
- The objectives are clear and testable, focusing on the reduction of stress scores as a measurable outcome.
- Citations are highly current (including 2024–2026 sources), which is essential for an International journal to demonstrate the study's relevance to the current state of the art.
- The quasi-experimental pretest-posttest control group design is appropriate for testing a nursing intervention in a community setting where randomization may be logistically challenging.
- A total of 34 participants (17 per group) were recruited via purposive sampling; while sufficient for a pilot/quasi-experiment, the manuscript correctly acknowledges this small size as a limitation.
- The use of a modified DASS-42 (stress domain) is appropriate, and the reported Cronbach's alpha (0.841) confirms the instrument's reliability for this population.
- The independent variable (Telenursing Hypnosis) and dependent variable (Maternal Stress) are clearly defined.
- The use of the Friedman test (within-group) and Mann-Whitney U test (between-group) is statistically sound given the non-normal distribution of data.
- Ethical approval and informed consent procedures are explicitly stated, adhering to the Helsinki Declaration.
- The author needs to explain how to avoid bias.
- How does the author replace participants if they are excluded or drop out during the study?
- Findings directly address the study objectives by quantifying the intervention's impact at two different time points (week 2 and week 4).
- The discussion interprets the findings through both physiological (autonomic nervous system regulation) and psychological (emotional self-regulation) lenses.

- The study compares its findings with both Indonesian and international literature, situating the results within the global digital health trend.
- The authors successfully argue that telenursing can bridge the gap in primary healthcare for rural or overburdened community settings.
- The conclusions are well-supported by the significant p-values and observed categorical shifts in stress levels (e.g., 64.7% of the intervention group reaching "Normal" stress by week 4).
- The manuscript articulates practical implications for Puskesmas (community health centers) and suggests that psychosocial support should complement nutritional interventions.

The Effect of Telenursing-Based Five-Finger Hypnosis Therapy on Maternal Stress Among Mothers of Stunted Children: A Quasi-Experimental Study

Track Record Article	Abstract
Accepted: Published:	Background: Stunting remains a major public health problem in developing countries, including Indonesia. In addition to nutritional factors, maternal psychological stress may indirectly affect caregiving quality and child well-being. Objective: This study aimed to examine the effect of telenursing-based five-finger hypnosis therapy on maternal stress levels among mothers of children with stunting. Methods: A quasi-experimental <u>non-randomized controlled study with a pretest-posttestpretest-posttest control group</u> design was conducted from March to May 2024 in Wanaraja Village, Garut Regency, Indonesia. A total of 34 mothers of children with stunting were recruited using purposive sampling and <u>assigned-allocated</u> to an intervention group (n = 17) and a control group (n = 17). The intervention group received telenursing-based five-finger hypnosis therapy for seven sessions over four weeks, while the control group received routine <u>puskesmas servicecommunity health centers</u>s. Maternal stress was measured using 14 items derived from a modified DASS-42 questionnaire. <u>Data were analyzed using Jamovi statistical software version 2.6.45, with the Friedman test for within-group comparisons and the Mann-Whitney U test-</u> <u>for between-group comparisons.Data were analyzed using the Friedman test and Mann-Whitney test.</u> Results: Maternal stress in the intervention group decreased progressively from pretest to posttest 1 and posttest 2, with mean scores declining from 18.4 (SD 3.12) to 16.4 (SD 2.50) and 14.5 (SD 2.40), respectively. The control group also showed a slight reduction, from 18.9 (SD 2.29) to 17.9 (SD 2.77) and 17.6 (SD 2.50). However, the reduction in maternal stress was significantly greater in the intervention group than in the control group at week 2 ($p = 0.036$) and week 4 ($p < 0.001$), with a larger effect observed at week 4. Conclusion: Telenursing-based five-finger hypnosis therapy was associated with a greater reduction in maternal stress among mothers of children with stunting than routine care alone. This intervention may serve as a supportive psychosocial strategy in community-based stunting management programs. Keywords: Stunting, Maternal Stress, Five-Finger Hypnosis, Telenursing, Community Health Nursing

INTRODUCTION

Stunting remains a persistent public health challenge that affects child growth and development globally (Mulyani et al., 2025; Soliman et al., 2024). The World Health Organization reported that stunting affects millions of children worldwide, particularly in low-and middle-income countries (WHO, 2025). In Indonesia, the prevalence of stunting remains above the WHO threshold, indicating ongoing public health concerns. Stunting prevention has been prioritized

Commented [AI1]:
Clarify design as: “quasi-experimental non-randomized controlled study”

Commented [i2R1]: Thank you for your helpful comment. We have revised the Methods part of the Abstract to clarify the study design as a quasi-experimental non-randomized controlled study with a pretest-posttest design. We also replaced “assigned” with “allocated” to avoid implying random assignment.

through multisectoral strategies involving nutrition-specific and nutrition-sensitive interventions (Kemenkes, 2025; WHO, n.d.).

In addition to nutritional inadequacy and infectious diseases, indirect determinants, such as maternal caregiving practices and psychological well-being, play a crucial role in child growth outcomes (Muzzamil et al., 2025; Rana et al., 2024). Mothers of children with stunting frequently experience psychological stress due to caregiving burden, social stigma, economic constraints, and limited social support (Febristi et al., 2023; Saripah, 2022). Persistent maternal stress may increase is associated with a higher the risk of depression and anxiety, reduce emotional regulation,- which in turn ~~which~~ may compromise the quality of nurturing care provided at home (O'Dea et al., 2023; Wang et al., 2024); :-

~~Prolonged maternal stress may impair emotional regulation and caregiving quality, potentially exacerbating child growth problems. Studies have shown that unmanaged stress among caregivers is associated with maladaptive coping and reduced caregiving responsiveness (Pan et al., 2025; Ren et al., 2025).~~ In the context of ~~community health service~~ community health centers, nurses are strategically positioned to provide psychosocial interventions. Nevertheless, the delivery of psychosocial support is often constrained by a high workload, limited time, geographical barriers, and uneven access to in-person counseling, especially in rural areas (Kenwright et al., 2024; Rafi et al., 2026).

Various non-pharmacological interventions have been developed to manage stress in nursing practice, including relaxation techniques (Toussaint et al., 2021). One such intervention is five-finger hypnosis therapy, which combines tactile stimulation with positive imagery to induce relaxation (Valentine et al., 2019). Previous studies have demonstrated that five-finger hypnosis effectively reduces stress and anxiety among caregivers (Hansen et al., 2022; Wati et al., 2021). Hypnosis-based and relaxation interventions have demonstrated effectiveness in reducing stress and anxiety across various populations, including caregivers, and may enhance coping and self-efficacy (Cardoso et al., 2025; Padilla et al., 2026). ~~Various non-pharmacological interventions have been developed to manage stress in nursing practice, including relaxation techniques. One such intervention is five-finger hypnosis therapy, which combines tactile stimulation with positive imagery to induce relaxation. Previous studies have demonstrated that five-finger hypnosis effectively reduces stress and anxiety among caregivers (Hansen et al., 2022; Wati et al., 2021). Hypnosis based and relaxation interventions have demonstrated effectiveness in reducing stress~~

Commented [AR3]: Reference?

Commented [i4R3]: We appreciate the reviewer's suggestion. We have added a supporting reference to the Introduction section to strengthen the statement that non-pharmacological interventions, including relaxation techniques, have been used to manage stress in nursing practice.

Commented [AR5]: Reference?

Commented [i6R5]: We have revised the Introduction section by adding a reference to support the description of five-finger hypnosis therapy as an intervention involving tactile stimulation and positive imagery to induce relaxation.

and anxiety across various populations, including caregivers, and may enhance coping and self-efficacy (Cardoso et al., 2025; Padilla et al., 2026).

Digital health and telehealth innovations have expanded rapidly in recent years and have been recommended as feasible strategies for strengthening primary health care systems through improved continuity of care, remote monitoring, and health education (Forslund et al., 2024; Sriati et al., 2024). Telenursing offers a promising approach to expanding access to nursing care by using telecommunications to deliver education, monitoring, and supportive interventions. Telenursing enables the provision of education, counseling, and psychosocial support without geographical barriers (Emalia & Nilasari, 2021; Nishigaki et al., 2025).

However, empirical evidence regarding the use of nurse-led five-finger hypnosis delivered through tele-health specifically for mothers of children with stunting within community health community health center programs remains limited. This evidence gap is relevant to nursing practice in Puskesmas community health center, as psychosocial interventions may help strengthen caregiver capacity and complement nutrition-focused stunting programs (Yehuda et al., 2024). Therefore, this study aimed to examine the effect of tele-health-based five-finger hypnosis therapy on maternal stress levels among mothers of children with stunting. The findings may provide preliminary evidence to inform caregiver psychosocial support in community-based stunting services.

METHODS

Design

This study employed a quasi-experimental pretest-posttest control group design. It was conducted from March to May 2024 in Wanaraja Village, Garut Regency, West Java, Indonesia. A total of 34 mothers of children with stunted growth were recruited using purposive sampling; 17 participants were allocated to the intervention group and 17 to the control group. Group allocation was determined based on the study setting and participant eligibility within the community health service community health centers area, as random assignment was not applied in this study. All eligible participants first underwent a baseline assessment of maternal stress before being assigned to either the intervention or control group. -Because the participants were not randomly assigned, potential selection bias could not be completely ruled out and should be considered when interpreting the findings. To reduce this potential bias, the same inclusion and exclusion criteria

Commented [AR7]: Reference?

Commented [i8R7]: We have revised the statement on the evidence gap to make it more cautious and specific. Rather than making an overly broad claim, we clarified that empirical evidence remains limited regarding the use of nurse-led five-finger hypnosis delivered through telehealth specifically for mothers of children with stunting within community health programs. This revision better frames the rationale for the present study.

Commented [AR9]: Reference?

Commented [i10R9]: We have added a supporting reference to strengthen the statement on the relevance of psychosocial interventions for caregiver capacity and nutrition-focused stunting programs.

Commented [AI11]: Strong background linking stunting, maternal stress, and caregiving.

Some repetition in explaining the impact of maternal stress on child outcomes. Could be more concise without losing clarity

Commented [i12R11]: Thank you for your constructive comment. We have revised the Introduction section to reduce repetition in explaining the impact of maternal stress on caregiving and child outcomes. The overlapping explanation was condensed into a clearer sentence describing the pathway from persistent maternal stress to depression, anxiety, reduced emotional regulation, and compromised nurturing care at home.

were applied to both groups, and all eligible participants first underwent a baseline assessment of maternal stress before being allocated to either the intervention or control group.-

Inclusion and Exclusion Criteria

The inclusion criteria were as follows: (1) mothers with mild-to-moderate stress levels; (2) mothers of stunted children aged 0–23 months; (3) mothers who were the primary caregivers; (4) mothers who owned a smartphone and were able to use WhatsApp Messenger; and (5) children diagnosed with stunting within the previous six months. The exclusion criteria were as follows: (1) refusal to participate, (2) communication barriers, and (3) ongoing psychological or other stress-related therapy. Participants who missed at least two intervention sessions or withdrew during the study were excluded from the final analysis. A total of 34 participants were enrolled in the study, comprising 17 mothers in the intervention group and 17 mothers in the control group. No participants withdrew or were excluded during the study period. All participants were included in the final analysis. In the intervention group, adherence to the intervention was monitored across seven scheduled sessions, and all participants met the predefined attendance criteria.

Intervention

The intervention was standardized using a written Standard Operating Procedure (SOP) for telenursing-based stress management and a five-finger hypnosis action format. The intervention was delivered remotely over seven sessions during four weeks, with each session lasting approximately 10–15 minutes and conducted twice a week. The intervention was delivered through a WhatsApp Messenger group and video conference. The intervention was delivered by the researcher using the standardized SOP to ensure consistency across sessions. Baseline assessment of maternal stress was conducted before the first intervention session. The intervention was administered over four weeks in seven sessions, with each session lasting approximately 10–15 minutes. In general, the sessions included stress education, coping-related discussions, participant sharing, and evaluations, while the final sessions emphasized the implementation of the five-finger hypnosis technique. Maternal stress was reassessed at the fourth and seventh meetings. The control group received routine Puskesmas services at community health centers for stunting management without hypnosis intervention.

Commented [SS13]: 1.How do you avoid bias?
2.What would you do if a participant were to drop out whilst the research is ongoing?

Commented [i14R13]: Thank you for your constructive comment. We have revised the Intervention section by adding a clearer explanation of the procedures used to minimize potential bias and manage participant withdrawal or dropout during the study. We clarified that the same inclusion and exclusion criteria were applied to both the intervention and control groups, maternal stress was assessed at the same measurement points in both groups, and the intervention and control groups were managed separately to reduce contamination bias. We also clarified that participants who missed at least two intervention sessions, withdrew voluntarily, or were unable to complete follow-up assessments would be excluded from the final analysis. However, no participants dropped out or were excluded during the study period; therefore, all 34 participants were included in the final analysis. The revised paragraph reads as follows:

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Commented [A115]: Lack of detail on standardization (e.g., hypnosis protocol/script). Qualifications of the intervention provider are not clearly described

Commented [i16R15]: Thank you for your constructive comment. We have revised the Intervention section by adding more detailed information on the standardization of the telenursing-based five-finger hypnosis therapy and clarifying the intervention provider. We clarified that the intervention was implemented using a written Standard Operating Procedure (SOP) and a structured five-finger hypnosis action format. We also added details on the number of sessions, duration, delivery media, session structure, and the key steps of the five-finger hypnosis procedure. In addition, we clarified that the intervention was delivered by the principal investigator using the standardized SOP to ensure consistency across sessions.

To minimize potential bias, the same inclusion and exclusion criteria were applied to both the intervention and control groups. Maternal stress was assessed at the same measurement points in both groups, namely before the intervention, at week 2, and at week 4. To reduce contamination bias, the intervention and control groups were managed separately, and the control group did not receive five-finger hypnosis therapy during the study period. Participants who missed at least two intervention sessions, withdrew voluntarily, or were unable to complete follow-up assessments would be excluded from the final analysis. However, no participants dropped out or were excluded during the study period; therefore, all 34 participants were included in the final analysis.

Instrument

Maternal stress was measured using the stress domain of the ~~a modified~~ DASS-42 questionnaire, which was modified to fit the context of mothers caring for children with stunting focusing on the stress domain. The modification process involved selecting the 14 stress-domain items from the DASS-42 and adapting the wording of several items to make them more specific to maternal stress experiences related to caring for a child with stunting, without changing the core construct of stress being measured. After modification, the questionnaire was pilot-tested in 30 mothers of children with stunting in Wanasari Village before being used in the main study. The validation procedure included item validity testing using item-total correlation analysis. An item was considered valid when the item-total correlation coefficient met or exceeded the r-table value of 0.361. The item-total correlation coefficients ranged from 0.361 to 0.730, indicating that all 14 items met the validity criterion. Reliability was assessed using Cronbach's alpha, and the modified questionnaire showed good internal consistency reliability, with a Cronbach's alpha value of 0.841. The instrument consisted of 14 items adapted to reflect the stress experienced by mothers of stunted children. Each item was scored on a 4-point scale ranging from 0 (never) to 3 (very often), with higher total scores indicating higher levels of stress. Total scores were categorized as normal (0–14), mild (15–18), moderate (19–25), severe (26–33), and extremely severe (>34). ~~Prior to the main study, the instrument was tested in 30 mothers of stunted children in Wanasari Village. The item-total correlation coefficients ranged from 0.361 to 0.730, and the instrument showed good reliability (Cronbach's alpha = 0.841).~~

Data Analyses

Data were analyzed using Jamovi version 2.6.45. Descriptive statistics included frequencies, percentages, means, and standard deviations. Normality was assessed using the

Commented [A117]: The process of modification is not fully explained. No clear description of validation procedure after modification

Commented [i18R17]: Thank you for your constructive comment. We have revised the Instrument section by providing a clearer explanation of the DASS-42 modification process and the validation procedure conducted after modification. We clarified that the study used the 14 stress-domain items from the DASS-42 and adapted the wording of several items to make them more specific to maternal stress experiences related to caring for children with stunting, without changing the core construct of stress. We also added details on the validation procedure, including pilot testing in 30 mothers of children with stunting in Wanasari Village, item validity testing using item-total correlation analysis, the validity criterion based on the r-table value of 0.361, and reliability testing using Cronbach's alpha.

Shapiro–Wilk test because the sample size was relatively small, with 17 participants in the intervention group and 17 participants in the control group. The normality test showed that the maternal stress score data were not normally distributed, which showed that the data were not normally distributed. Therefore, non-parametric tests were used for inferential analysis, as these tests are more appropriate for repeated and between-group comparisons when the assumption of normality is not met. Changes in maternal stress scores across the three measurement points within each group were analyzed using the Friedman test, whereas between-group differences in change scores (post-test 1–pre-test and post-test 2–pre-test) were analyzed using the Mann–Whitney U test. The effect size for the between-group comparison was estimated using rank-biserial correlations. All statistical analyses were performed using Jamovi statistical software version 2.6.45, and statistical significance was set at $p < 0.05$. Statistical significance was set at $p < 0.05$.

Ethics approval and consent to participate

Ethical approval was obtained from the Ethics Committee of STIKes Karsa Husada Garut (No. 001188/KEP STIKes Karsa Husada Garut/2024). Written informed consent was obtained from all participants, and all procedures were conducted in accordance with the Helsinki Declaration.

RESULTS

Characteristics of Respondents

Table 1 presents the characteristics of the respondents in the intervention and control groups. The age distributions were similar in both groups, with most respondents aged 31–45 years. Regarding education, most respondents in both groups had senior high school education, with a higher proportion observed in the intervention group than in the control group.

Table 1. Characteristics of respondents

Characteristics	Intervention (n=17)	Control (n=17)
Age, n (%)		
20 – 30 years	8 (47.1%)	8 (47.1%)

Commented [SS19]: Please provide details of your data analysis software.

Commented [i20R19]: Thank you for your helpful comment. We have revised the Data Analyses section by adding clearer details of the statistical software used to perform the analyses. The revised sentence reads as follows:

Commented [AI21]: This is one of the strongest components of the manuscript. Justification for choosing non-parametric tests could be slightly elaborated

Commented [i22R21]: We appreciate the reviewer's helpful suggestion. We have revised the Data Analyses section by providing a clearer justification for the use of non-parametric tests. Specifically, we clarified that the Shapiro–Wilk test was selected because the sample size was relatively small, with 17 participants in the intervention group and 17 participants in the control group. We also explained that non-parametric tests were used because the maternal stress score data were not normally distributed.

Commented [AI23]: Both intervention and control groups show significant improvement. This is a critical finding that requires deeper interpretation

Lack of statistical testing for categorical changes. Could be strengthened with additional analysis

Limited explanation of clinical significance. Focus is more on statistical significance

Commented [i24R23]: We appreciate the reviewer's valuable suggestion. We have revised the Results section by adding an additional categorical analysis to examine changes in maternal stress categories. Categorical improvement was defined as a shift to a lower stress category from pretest to week 2 or week 4, and Fisher's exact test was used to compare the proportion of participants who improved between the intervention and control groups. We also expanded the interpretation of clinical significance by explaining that the intervention group showed a meaningful shift toward lower stress categories, while the control group showed only a small reduction in mean stress scores without categorical improvement.

31 – 45 years	9 (52.9%)	9 (52.9%)
Education, n (%)		
Junior high school (SMP)	3 (17.6%)	6 (35.3%)
Senior high school (SMA)	14 (82.4%)	11 (64.7%)

Stress levels in the intervention and control groups.

Table 2 presents the distribution of maternal stress categories in the intervention and control groups across measurement points. At baseline, most mothers in both groups were classified as having mild or moderate stress, with no participants in the normal category. In the intervention group, the proportion of mothers categorized as normal increased from 0.0% at pretest to 23.5% at posttest 1 (week 2) and 64.7% at posttest 2 (week 4), while the proportion with moderate stress decreased from 41.2% at baseline to 29.4% at posttest 1 (week 2) and 0.0% at posttest 2 (week 4). In contrast, the distribution of stress categories in the control group remained unchanged across all three measurement points, with 52.9% of mothers categorized as having mild stress and 47.1% as having moderate stress.

[Additional categorical analysis showed that the proportion of participants who improved by at least one stress category was higher in the intervention group than in the control group. At week 2, 6 of 17 mothers in the intervention group showed categorical improvement, whereas no mothers in the control group improved \(Fisher's exact test, \$p = 0.018\$ \). At week 4, all 17 mothers in the intervention group showed categorical improvement, whereas no categorical improvement was observed in the control group \(Fisher's exact test, \$p < 0.001\$ \). These findings indicate that the intervention was associated not only with lower mean stress scores but also with a clinically relevant shift toward lower stress categories among mothers of children with stunting.](#)

Table 2. Distribution of stress in the groups

Measurement	Normal, n (%)	Mild, n (%)	Moderate, n (%)
Intervention group			
Pretest	0 (0.0%)	10 (58.8%)	7 (41.2%)
Posttest (week 2)	4 (23.5%)	8 (47.1%)	5 (29.4%)
Posttest (week 4)	11 (64.7%)	6 (35.3%)	0 (0.0%)

Control group			
Pretest	0 (0.0%)	9 (52.9%)	8 (47.1%)
Posttest 1 (week 2)	0 (0.0%)	9 (52.9%)	8 (47.1%)
Posttest 2 (week 4)	0 (0.0%)	9 (52.9%)	8 (47.1%)

Changes in mean stress scores.

Table 3 presents the changes in mean maternal stress scores across the three measurement points in both groups. In the intervention group, the mean stress score decreased progressively from 18.4 (SD 3.12) at pretest to 16.4 (SD 2.50) at posttest 1 (week 2) and 14.5 (SD 2.40) at posttest 2 (week 4). In the control group, the mean stress score also decreased slightly from 18.9 (SD 2.29) at pretest to 17.9 (SD 2.77) at posttest 1 (week 2) and 17.6 (SD 2.50) at posttest 2 (week 4). ~~The Friedman test showed significant changes over time in both groups ($p < 0.001$). The~~ Friedman test showed significant changes over time in both groups ($p < 0.001$). However, the magnitude and practical meaning of the change differed between groups. The intervention group showed a larger reduction in mean stress score from pretest to week 4 than the control group. This was supported by the between-group comparison of change scores, which showed a moderate effect at week 2 and a large effect at week 4. Although the control group also showed a statistically significant change over time, the mean reduction was smaller and was not accompanied by a shift to lower stress categories. Therefore, the statistically significant change in the control group should be interpreted cautiously, as its clinical relevance appeared limited compared with the intervention group.

Table 3. Stress score in the groups

Group	Pretest Mean (SD)	Posttest 1 Mean (SD)	Posttest 2 Mean (SD)	Friedman χ^2	<i>p</i> -value
Intervention	18.4 (3.12)	16.4 (2.50)	14.5 (2.40)	33.0	<0.001
Control	18.9 (2.29)	17.9 (2.77)	17.6 (2.50)	20.4	<0.001

Note: *P*-values were obtained from the Friedman test.

Commented [SS25]: Authors can create graphs to illustrate the progress made.

Commented [i26R25]: Thank you for your helpful suggestion. We have added a line graph after Table 3 to illustrate the progress of maternal stress reduction in both groups across the three measurement points. The figure is entitled "Figure 1. Changes in Mean Maternal Stress Scores Across Measurement Points." The revised sentence reads as follows:

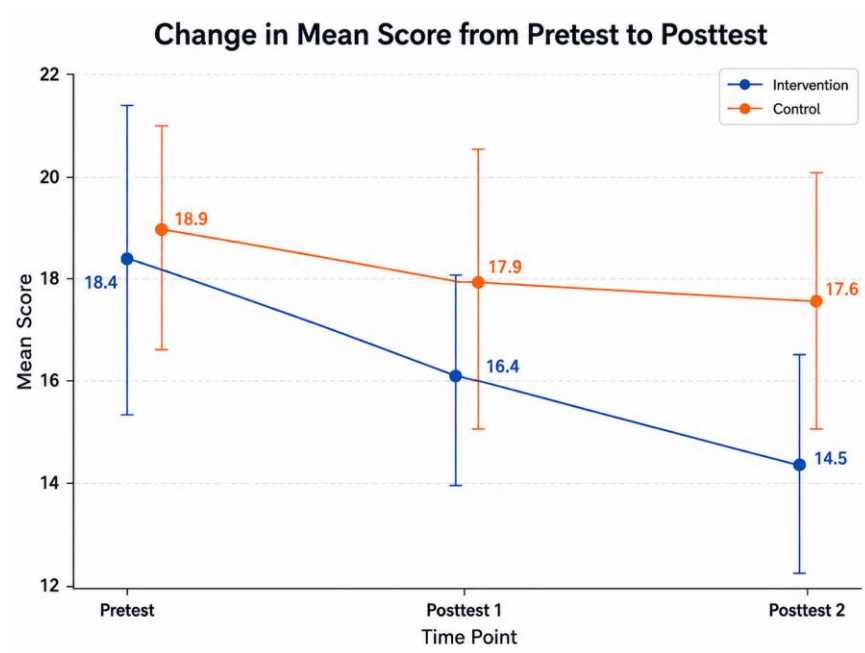


Figure 1. Changes in Mean Maternal Stress Scores Across Measurement Points

Figure 1 illustrates the changes in mean maternal stress scores in the intervention and control groups across the three measurement points. The intervention group showed a progressive decrease in mean stress scores from pretest to week 2 and week 4, whereas the control group showed only a slight reduction over the same period. Specifically, the mean stress score in the intervention group decreased from 18.4 at pretest to 16.4 at week 2 and further to 14.5 at week 4. In comparison, the control group showed a smaller decline, from 18.9 at pretest to 17.9 at week 2 and 17.6 at week 4. This visual trend supports the finding that maternal stress reduction was greater in the intervention group than in the control group.

Table 4 presents the between-group differences in changes in maternal stress scores from baseline to week 2 and week 4. The intervention group showed greater reductions in maternal stress scores than the control group at both time points. For posttest 1–pretest, the between-group difference was significant (Mann–Whitney $U = 86.0$, $p = 0.036$) with a moderate effect size (rank biserial correlation = -0.405). For posttest 2–pretest, the difference was also significant (Mann–

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Whitney U = 18.0, $p < 0.001$) with a large effect size (rank biserial correlation = - 0.875). Within the study sample, these findings suggest the potential effectiveness of telenursing-based five-finger hypnosis therapy in reducing maternal stress compared with routine care alone, with a larger between-group difference observed after four weeks of intervention. These findings indicate that the intervention produced a stronger reduction in maternal stress than routine care alone, and that the effect became more pronounced after four weeks of intervention.

Commented [AR27]: Isn't this an overclaim considering the small sample size? Perhaps it could add "within the study sample" or rephrased as "suggests potential effectiveness"?

Table 4. Between-Group Differences in Changes in Maternal Stress Scores

Change Score	Intervention Mean (SD)	Control Mean (SD)	Mean Difference (I-C)	Mann-Whitney U	p-value	Effect Size	Interpretation
Posttest 1 – Pretest (week 2)	-1.94 (1.25)	-0.94 (1.09)	-1.00	86.0	0.036	-0.405	Moderate
Posttest 2 – Pretest (week 4)	-3.88 (1.36)	-1.29 (1.21)	-2.59	18.0	<0.001	-0.875	Large

Note: Negative values indicate greater reductions in maternal stress scores in the intervention group. The effect size was estimated using rank biserial correlation.

DISCUSSION

This study demonstrated that telenursing-based five-finger hypnosis therapy was associated with greater reductions in maternal stress levels among mothers of stunted children. Stress reduction in the intervention group occurred progressively from baseline to week 2 and week 4. Although the control group also showed a slight reduction in mean stress scores over time, the decrease was substantially greater in the intervention group. These findings suggest that the intervention provided additional benefits beyond routine care alone. This study demonstrated found that telenursing-based five-finger hypnosis therapy was associated with greater reductions in maternal stress levels among mothers of stunted children. Stress reduction scores in the intervention group occurred decreased progressively from baseline to week 2 and week 4. Although participants in the control group did not receive five-finger hypnosis therapy, they continued to receive routine community health centers, and their slight improvement may also be explained by natural adaptation, repeated assessment, and external support from family or community health workers. Previous studies have shown that maternal stress and caregiving

Commented [AI28]: Control group improvement not sufficiently addressed. Possible explanations (natural recovery, external factors) should be discussed

Mild overinterpretation. Some statements suggest causality despite non-randomized design

Implementation claims. Should be more cautious due to lack of feasibility and cost analysis

Commented [i29R28]: We appreciate the reviewer's valuable observations. We have revised the Discussion section to address these concerns more comprehensively. First, we added a more detailed interpretation of the slight reduction in maternal stress observed in the control group by discussing possible explanations, including routine Community health service services, natural adaptation over time, repeated exposure to stress assessment, and external support from family or community health workers. Second, we revised the wording throughout the Discussion to avoid causal overinterpretation, considering the non-randomized quasi-experimental design. We used more cautious terms such as "was associated with," "may have provided," and "should be interpreted cautiously." Third, we revised the implementation implication to clarify that the findings remain preliminary because the study focused on maternal stress outcomes and did not assess implementation processes or service-level outcomes, including feasibility, acceptability, fidelity, resource requirements, and cost-effectiveness.

burden are influenced by psychosocial and environmental factors, including social support and caregiving context (Booth et al., 2018). However, the reduction in the control group was smaller than that in the intervention group and was not accompanied by categorical improvement. This suggests that telenursing-based five-finger hypnosis therapy may have provided additional psychosocial support beyond routine care. Although the control group also showed a slight reduction in mean stress scores over time, the decrease was substantially greater in the intervention group. These findings suggest that the intervention provided additional benefits beyond routine care alone. This study demonstrated that telenursing-based five-finger hypnosis therapy was associated with greater reductions in maternal stress levels among mothers of stunted children. Stress reduction in the intervention group occurred progressively from baseline to week 2 and week 4. Although the control group also showed a slight reduction in mean stress scores over time, the decrease was substantially greater in the intervention group. These findings suggest that the intervention provided additional benefits beyond routine care alone.

These findings indicate that a structured, brief psychosocial intervention delivered remotely by nurses may provide measurable benefits for caregiver well-being in community stunting contexts. These findings are consistent with previous studies reporting the effectiveness of five-finger hypnosis in reducing stress and anxiety (Safitri & Tresya, 2023; Wati et al., 2021). The present study extends this evidence by applying five-finger hypnosis through a telenursing approach among mothers of children with stunting in a community-based community health centers setting. This context is important because maternal stress may affect caregiving quality, while access to regular in-person psychosocial support in community settings can be limited. Therefore, the novelty of this study lies in integrating a brief five-finger hypnosis intervention with telenursing delivery to support maternal stress management in community-based stunting care.

Hypnosis may reduce stress through two interconnected pathways: physiological regulation and psychological modulation (Valentine et al., 2019). Physiologically, hypnosis may reduce psychophysiological arousal by modulating autonomic nervous system activity, as reflected in changes in heart rate, heart rate variability, electrodermal activity, and respiratory rate, thereby promoting a more relaxed state (Batra et al., 2024). Psychologically, hypnosis may help focus attention, reduce reactivity to stressors, and enhance emotional self-regulation, enabling mothers to better manage anxiety,

Commented [AR30]: Is there any novelty in these findings compared to previous studies?

Commented [i31R30]: We have revised the Discussion section by clarifying the novelty of the present study compared with previous studies. We explained that previous studies have examined five-finger hypnosis or relaxation-based interventions in other populations, whereas this study integrates five-finger hypnosis with telenursing delivery and focuses specifically on mothers of children with stunting in a community-based health service context.

Commented [AR32]: Reference?

Commented [i33R32]: We have strengthened the Discussion section by adding references to support the proposed mechanisms of hypnosis in stress reduction. The revised discussion explains that hypnosis may reduce stress through physiological regulation and psychological modulation, including reduced psychophysiological arousal, improved relaxation, focused attention, reduced reactivity to stressors, and enhanced emotional self-regulation.

Commented [AR34]: Reference?

Commented [i35R34]: We have added recent references to support the physiological mechanism of hypnosis, particularly its potential influence on autonomic nervous system activity and psychophysiological arousal.

tension, and feelings of being overwhelmed (De Benedittis, 2024; Leo et al., 2024). Recent evidence shows that hypnosis remains a relevant psychological intervention, with generally positive effects on mental disorders, including outcomes related to stress and anxiety (Rosendahl et al., 2024). Five-finger hypnosis may be particularly suitable for community nursing because of its simplicity, short duration, and minimal resource requirements. The technique also promotes self-efficacy because mothers can practice the cues independently between sessions, potentially reinforcing sustained stress management. The stress reduction observed in this study may be explained by the physiological relaxation response induced by hypnosis-based techniques, which promote parasympathetic activation and emotional regulation (De Benedittis, 2024; Fernandez et al., 2021). By integrating this intervention into a telenursing framework, accessibility may be improved, particularly in community and rural settings.

Maternal stress may negatively influence caregiving behaviors, including feeding consistency, emotional responsiveness, and engagement in stimulating activities, which can indirectly contribute to poor growth trajectories. Therefore, interventions that strengthen maternal coping and emotional regulation are increasingly recognized as complementary components of stunting prevention and rehabilitation programs (Almaatani et al., 2023; Pan et al., 2025). Importantly, the delivery of five-finger hypnosis through telenursing may help address one of the common barriers in primary healthcare, namely, limited opportunities for frequent in-person psychosocial support. Digital health and telehealth have been increasingly recommended as approaches to strengthen primary healthcare systems, improve continuity of care, and expand access to interventions for populations facing geographic or logistical constraints (Sriati et al., 2024; WHO, 2021). In Indonesian [Puskesmas](#) community health centers settings, where nurses often manage high caseloads across multiple programs, telenursing may have potential as an additional strategy to support caregiver psychosocial well-being (Adrian et al., 2021). However, the present study did not directly assess implementation outcomes, such as feasibility, acceptability, fidelity, or cost-effectiveness. Therefore, these findings should be interpreted as preliminary evidence of effectiveness rather than evidence supporting routine large-scale implementation.

From a nursing management perspective, the findings suggest that nurse-led telenursing-based stress management may be a supportive component of community stunting programs.

Commented [AR36]: Reference?

Commented [i37R36]: We have revised the Discussion section by adding a supporting reference to the statement regarding the potential role of telenursing in Indonesian Community health service settings.

Nevertheless, this implication remains preliminary, as the present study focused on maternal stress outcomes and did not evaluate implementation processes or service-level outcomes. Further research is needed to assess the feasibility of delivery within routine community health centers, the acceptability of the intervention among mothers and nurses, fidelity of implementation, resource requirements, and the cost-effectiveness. Nevertheless, this implication should be interpreted cautiously, as the present study focused on maternal stress outcomes and did not evaluate implementation processes or service level outcomes. Before wider adoption is considered, further research is needed to assess the feasibility of delivery within routine Puskesmas services, acceptability of the intervention among mothers and nurses, fidelity of implementation, and resources required to sustain the program. Such evidence is important to determine whether this intervention can be appropriately incorporated into ~~family-centered~~family-centered community nursing care.

Limitations

~~This study has several limitations.~~This study has several limitations. First, the non-randomized quasi-experimental design may have introduced selection bias, as participants were not randomly assigned to the intervention and control groups. Although the same inclusion and exclusion criteria were applied to both groups, potential baseline differences or unmeasured confounding factors could not be completely ruled out; therefore, causal interpretation should be made cautiously. Second~~First~~, the relatively small sample size and use of self-report measures may limit the generalizability and objectivity of the findings. Third~~Second~~, the study did not assess longer-term outcomes; therefore, the sustainability of the intervention effect remains unclear. Fourth~~Third~~, implementation-related outcomes, such as feasibility, acceptability, fidelity, resource requirements, and cost-effectiveness, were not evaluated, which limits conclusions regarding the scalability and routine integration of the intervention into **Puskesmas services** community health centers. Therefore, future research should employ randomized controlled designs with larger samples, longer follow-up periods, and broader outcome measures, including caregiving practices and child growth indicators, while also examining implementation aspects before wider adoption can be recommended.~~This study has several limitations. First, the relatively small sample size and use of self-report measures may limit the generalizability and objectivity of the findings. Second, the study did not assess longer term outcomes; therefore, the sustainability of the intervention~~

Commented [A138]: Explicitly include non-randomization bias

Commented [i39R38]: We appreciate the reviewer's important suggestion. We have revised the Limitations section by explicitly acknowledging the potential non-randomization bias in this study. We clarified that the non-randomized quasi-experimental design may have introduced selection bias because participants were not randomly assigned to the intervention and control groups. We also added that, although the same inclusion and exclusion criteria were applied to both groups, potential baseline differences or unmeasured confounding factors could not be completely ruled out; therefore, causal interpretation should be made cautiously.

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effect remains unclear. Third, implementation-related outcomes, such as feasibility, acceptability, fidelity, and cost-effectiveness, were not evaluated, which limits conclusions regarding the scalability and routine integration of the intervention into Puskesmas services. Therefore, future research should employ randomized controlled designs with larger samples, longer follow-up periods, and broader outcome measures, including caregiving practices and child growth indicators, while also examining implementation aspects before wider adoption can be recommended.

CONCLUSION

The findings showed that mothers of children with stunting who received telenursing-based five-finger hypnosis therapy experienced a greater reduction in maternal stress than mothers of children with stunting who received routine care. The reduction in stress scores was observed progressively from baseline to week 2 and week 4, indicating that the intervention may contribute to improving maternal psychological well-being during community-based stunting care. From a practical perspective, this nurse-delivered telenursing-based five-finger hypnosis therapy may be considered a supportive psychosocial nursing intervention that may offer a brief and accessible psychosocial strategy to support maternal stress management as a complement to routine stunting management services. However, given the quasi-experimental design, and small sample size, and limited implementation-related evaluation, further studies with larger samples, randomized designs, and longer follow-up periods, and assessments of feasibility, acceptability, fidelity, resource requirements, and cost-effectiveness are needed before wider implementation in community health centers settings can be recommended to confirm these findings. Nurse-delivered telenursing-based five-finger hypnosis therapy administered over four weeks in seven sessions was associated with greater reductions in maternal stress among mothers of stunted children. These findings suggest that the intervention may be considered a supportive psychosocial approach in community-based stunting programs. However, further studies are needed to evaluate its feasibility, acceptability, fidelity, and cost-effectiveness before it can be recommended for wider implementation in Puskesmas settings.

Commented [S540]: The conclusion must address the objectives of this study.

Commented [i41R40]: Thank you for your constructive comment. We have revised the Conclusion section to ensure that it directly addresses the objective of the study. The revised conclusion now explicitly states that the study examined the effect of telenursing-based five-finger hypnosis therapy on maternal stress levels among mothers of children with stunting. We also clarified the main finding by stating that mothers of children with stunting who received the intervention experienced a greater reduction in maternal stress than those who received routine care.

Commented [A142]: Could briefly highlight practical implications more clearly

Commented [i43R42]: We appreciate the reviewer's helpful suggestion. We have revised the Conclusion section to highlight the practical implication of the findings more clearly. Specifically, we clarified that telenursing-based five-finger hypnosis therapy may offer a brief and accessible psychosocial strategy for nurses to support maternal stress management as a complement to routine stunting management services. We also maintained a cautious statement regarding the quasi-experimental design, small sample size, and the need for further implementation-related evaluation before wider implementation in community health worker settings can be recommended.

ACKNOWLEDGMENTS

The authors thank the participating mothers, nurses, and [Puskesmas–community health centers/ Puskesmas](#) staff in the Wanaraja Village for their support.

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COMMENTS:

- The title is concise and informative, clearly identifying the intervention (Telenursing-based Five-Finger Hypnosis), the population (Mothers of stunted children), and the study design (Quasi-experimental).
- The abstract effectively covers the background, objective, methods, results, and conclusions within a structured format.
- Keywords are relevant and aligned with MeSH (Medical Subject Headings) standards, aiding in high discoverability.
- The abstract accurately reflects the key finding that telenursing-based hypnosis significantly reduces maternal stress over a 4-week period compared to routine care.
- The introduction incorporates global context by citing WHO 2025 reports on stunting prevalence in low- and middle-income countries.
- The background effectively narrows from the global stunting crisis to the specific psychological burden of Indonesian mothers, creating a clear "problem pyramid".
- The manuscript identifies a critical gap: while stunting is traditionally managed through nutrition, the psychosocial support for caregivers—especially via digital platforms—is under-researched.
- The study offers novelty by combining a traditional relaxation technique (five-finger hypnosis) with modern telenursing delivery (WhatsApp/Video) specifically for the stunting context.
- The objectives are clear and testable, focusing on the reduction of stress scores as a measurable outcome.
- Citations are highly current (including 2024–2026 sources), which is essential for an International journal to demonstrate the study's relevance to the current state of the art.
- The quasi-experimental pretest-posttest control group design is appropriate for testing a nursing intervention in a community setting where randomization may be logistically challenging.
- A total of 34 participants (17 per group) were recruited via purposive sampling; while sufficient for a pilot/quasi-experiment, the manuscript correctly acknowledges this small size as a limitation.
- The use of a modified DASS-42 (stress domain) is appropriate, and the reported Cronbach's alpha (0.841) confirms the instrument's reliability for this population.
- The independent variable (Telenursing Hypnosis) and dependent variable (Maternal Stress) are clearly defined.
- The use of the Friedman test (within-group) and Mann-Whitney U test (between-group) is statistically sound given the non-normal distribution of data.
- Ethical approval and informed consent procedures are explicitly stated, adhering to the Helsinki Declaration.
- The author needs to explain how to avoid bias.
- How does the author replace participants if they are excluded or drop out during the study?
- Findings directly address the study objectives by quantifying the intervention's impact at two different time points (week 2 and week 4).
- The discussion interprets the findings through both physiological (autonomic nervous system regulation) and psychological (emotional self-regulation) lenses.

- [The study compares its findings with both Indonesian and international literature, situating the results within the global digital health trend.](#)
- [The authors successfully argue that telenursing can bridge the gap in primary healthcare for rural or overburdened community settings.](#)
- [The conclusions are well-supported by the significant p-values and observed categorical shifts in stress levels \(e.g., 64.7% of the intervention group reaching "Normal" stress by week 4\).](#)
- [The manuscript articulates practical implications for Puskesmas \(community health centers\) and suggests that psychosocial support should complement nutritional interventions.](#)