



The Effects of Using E-Leaflet and Lecture Methods on Maternal Knowledge Regarding Stunting Prevention in Toddlers

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ABSTRACT

Objective: The objective of this research is to assess the impact of utilizing e-leaflets and lecture methods on the knowledge of mothers with toddlers in stunting prevention.

Method: A quasi-experimental approach with a pre-test/post-test two-group research design was employed. The participants in this study consisted of 40 mothers of toddlers, and data collection was done using a questionnaire.

Result: The significance value (2-tailed) was found to be 0.0043, which is less than 0.05. This leads to the conclusion that there is a significant disparity in knowledge before and after providing the e-leaflet and lecture.

Conclusion: The research highlights a significant disparity in knowledge acquisition following the distribution of e-leaflets and lectures among mothers of toddlers.

Keywords: e-leaflet, lecture, stunting

Introduction

The issue of stunting is a significant challenge faced globally, particularly in impoverished and developing nations. Stunting is concerning due to its association with heightened risks of illness and mortality, suboptimal brain development leading to impaired motor skills and delayed mental growth (Suleman et al., 2021). In Indonesia, the prevalence of short stature in toddlers has shown relative stability over the years. For instance, data from the 2007 Indonesian Basic Health Survey indicated a stunting prevalence of 36.8%, which slightly decreased to 35.6% in 2010, but rose again to 37.2% in 2013. A survey in 2018 recorded stunting prevalence at 29.9% in children under two years old and 30.8% in toddlers; by 2019,

this figure had decreased to 27.67% (Laksono et al., 2022). Moreover, in West Java in the same year, the stunting rate was reported at 26.21% (Wulandari Leksono et al., 2021). Notably, in Pustu Buniseuri, there are 27 toddlers with 21 being short and 6 severely stunted.

Children affected by stunting face a 3.6 times higher risk of cognitive impairment compared to non-stunted children. Increasing nutritional intake for pregnant women and toddlers is a crucial step in stunting prevention (Mustakim et al., 2022). Immediate consequences of stunting can lead to brain disorders, reduced intelligence, compromised physical growth, and metabolic anomalies. Long-term impact includes diminished cognitive functions, learning deficits, weakened immunity, heightened disease susceptibility, elevated risks of diabetes, obesity, cardiovascular issues, cancer, stroke, disability in later life, and economic productivity decline (Mediani, 2022).

Stunting, attributed to inadequate nutrition during fetal development and early childhood, can contribute to learning challenges in schooling, reduced adult income, and social exclusion (United Nations-World Health Organization-The World Bank Group, 2019). Addressing stunting early is vital, as impacts extend into both short-term and long-term aspects of a child's health. Persistent malnutrition in the first 1,000 days from conception to 2 years old is a primary factor in stunting. This critical period marks a phase of rapid growth and development, necessitating optimal nutrition for adequate progression (Nurapandi et al., 2022).

Efforts to combat stunting must include health promotion and preventive measures to tackle risk factors effectively. Health promotion, characterized by influencing individual and community health management, focuses on enhancing wellbeing and quality of life (Femelia, W & Purnakarya, 2020). Health education initiatives, such as utilizing e-leaflets and lectures, are avenues for disseminating crucial knowledge on stunting prevention to mothers of toddlers. These interventions play a pivotal role in educating and empowering individuals to adopt healthier practices, ultimately combating child stunting.

Objective

The objective of this research is to assess the impact of utilizing e-leaflets and lecture methods on the knowledge of mothers with toddlers in stunting prevention.

Method

The study employed a Quasi-Experimental design with a pretest-posttest control two-group design methodology. Quasi-experimental design entails controlling various non-experimental variables with the inclusion of a control group for comparison to discern treatment effects (Latipun, 2015). Two distinct groups were utilized: the intervention group (received e-leaflet treatment) and the control group (received health education via lecture method). Prior to the intervention, both groups underwent a pretest, followed by a posttest after the intervention. A comparison was made between pre- and post-intervention results in the intervention and control groups to determine the influence of health education delivery through Android-based e-leaflets versus the lecture method. Paired t-test was utilized for the effect test due to the normal data distribution.

The study was conducted in the Pustu Buniseuri service area, involving mothers with toddlers aged 0-24 months who voluntarily participated by providing informed consent on September 12, 2023. Purposive sampling, a technique where samples are selected based on

specific considerations, was employed (Sugiyono, 2018). The research sample consisted of 40 individuals, with 20 participants in the experimental (e-leaflet) group and 20 participants in the control (lecture method) group. A validated questionnaire was utilized for data collection in this study.

Table 1. Method

Kelompok	Pretest	Intervention	Posttest
Experiment (e-leaflet)	O _{A1}	X ₁	O _{A2}
Control (lecture)	O _{B1}	X ₂	O _{B2}

Result

Table 2. Research Result

No.	Variable	Mean Difference	t	Sig (2-tailed)	Lower	Upper
1.	Pretest Post Test e-Leaflet	-1,850	-3,527	0,001	-2,912	-,788
2.	Pretest Post Test Lecture	-1,350	-2,571	0,014	-2,413	-,287
3.	Post Test e-Leaflet and Lecture	1,150	2,093	0,043	0,038	2,262

Based on the analysis of the output table, it can be concluded that there is a significant difference in maternal knowledge scores before and after receiving the e-leaflet intervention. The statistical significance value (2-tailed) of 0.001 indicates a notable improvement in knowledge levels post-e-leaflet, with a difference in scores ranging from -1.850, within a confidence interval of -2.912 to -0.788. Similarly, the analysis shows a significant knowledge enhancement following the lecture intervention, with a significant value (2-tailed) of 0.014. The knowledge score difference post-lecture falls within -1.350, with a confidence interval between -2.413 and -0.287. Furthermore, the comparison of e-leaflet and lecture effects demonstrates a discernible difference in knowledge levels, with a significant value (2-tailed) of 0.043. The observed knowledge improvement post-e-leaflet and lecture interventions is 1.150, within a confidence interval spanning from 0.038 to -2.262. Overall, both e-leaflets and lectures positively contribute to enhancing maternal knowledge in stunting prevention, with e-leaflets showing a slightly greater impact compared to the lecture method.

Discussion

In the study, the utilization of e-leaflets and lecture methods proved effective in enhancing maternal knowledge pertaining to toddler care for stunting prevention. The analysis revealed a noteworthy improvement in knowledge levels following the e-leaflet intervention, as indicated by a significant 2-tailed value of 0.001. This outcome underscores the successful communication of parenting guidance through e-leaflets, facilitating mothers' access to essential information that can be revisited at their convenience. The use of leaflet media not only aids in the delivery of health education during sessions but also enables

participants to reinforce their understanding of key concepts at home, as supported by previous research emphasizing the impact of leaflet-based health education approaches (Rizki, F. A., Hartoyo, M., & Sudiarto, 2019).

Furthermore, the results following the lecture intervention also demonstrated a considerable impact on enhancing maternal knowledge, supported by a significant 2-tailed value of 0.014. This approach effectively conveyed crucial information to mothers, empowering them with a deeper understanding of stunting prevention strategies. The positive outcomes observed from the lecture-based educational intervention resonate with prior studies illustrating the effectiveness of health education through lectures in equipping mothers with essential knowledge to mitigate the risk of stunting in toddlers (Suleman, 2021). The successful transmission of information through the lecture method signifies its pivotal role in augmenting maternal awareness and understanding of best practices for stunting prevention.

The comparison between the effects of e-leaflets and lectures on knowledge outcomes revealed a significant disparity post-intervention, indicated by a 2-tailed significance value of 0.043. The combined effect of both educational approaches highlighted a synergistic impact, showcasing a comprehensive improvement in maternal knowledge regarding stunting prevention strategies. This integrated approach aligns with the principles of health promotion, leveraging diverse media formats to effectively disseminate health information and empower mothers to make informed choices for their children's well-being (Suleman et al., 2021). The dual utilization of e-leaflets and lectures catered to different learning styles and reinforced the significance of continuous health education initiatives in promoting positive health outcomes for toddlers.

In conclusion, the study underscores the importance of leveraging multiple educational methods, such as e-leaflets and lecture sessions, to enhance maternal knowledge and promote effective stunting prevention practices. The findings provide valuable insights into the efficacy of tailored health education interventions in empowering mothers with the necessary knowledge to safeguard their children's health. By adopting a multidimensional approach that combines diverse educational modalities, health practitioners and educators can optimize maternal engagement and foster a culture of informed decision-making among caregivers. Moving forward, continued investment in health promotion strategies that utilize a combination of e-leaflets, lectures, and other interactive mediums can further enhance maternal understanding and support positive health behaviors in child-rearing practices (Heryani, et al., 2023a; Heryani, et al., 2023b).

The implications drawn from this data suggest that a multifaceted educational strategy incorporating both e-leaflets and lectures can yield significant improvements in maternal knowledge regarding stunting prevention. The observed difference between post-e-leaflet and post-lecture knowledge levels underscores the value of employing varied educational methodologies to cater to different learning preferences and reinforce key health messages effectively. This data highlights the importance of ongoing health promotion efforts that prioritize the use of diverse media formats to engage and educate mothers on essential child healthcare practices. By recognizing the impact of mixed educational approaches, stakeholders can enhance the efficacy of health education interventions, ultimately fostering a culture of informed decision-making and proactive health management among caregivers (Asmarani, et al. 2023).

Conclusion

The data analysis indicates a significant difference between knowledge outcomes following e-leaflet and lecture interventions, with a 2-tailed significance value of 0.0043 (< 0.05). This highlights the effectiveness of utilizing a combination of diverse educational methods to enhance maternal understanding of toddler care for stunting prevention. The findings underscore the value of tailored health education approaches in empowering mothers with essential knowledge and promoting positive health behaviors in child-rearing practices, emphasizing the importance of ongoing health promotion efforts that leverage various educational formats to engage caregivers and foster informed decision-making for optimal child health outcomes.

Conflict of interest

There is no conflict of interest.

Ethical approval

The ethical clearance is in College of Health Sciences Muhammadiyah Ciamis, the number of ethic 009/KEPK-STIKESMUCIS/VIII/2023.

Authors' contribution

Each author contributed equally in all the parts of the research. All authors have critically reviewed and approved the final draft and are responsible for the content and similarity index of the manuscript.

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