

The influence of e-leaflet media in improving the skills of toddler Posyandu cadres

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Abstract:

Primary health service transformation implementation focuses on a lifecycle approach with promotive and preventive efforts and brings health services closer to cadres through Posyandu. Good integration of Primary Services requires efforts to improve the skills of posyandu cadres through E-Leaflet media. This study aims to determine the influence of e-leaflet media on improving toddler posyandu cadres' skills. This study used a quasi-experimental design with a one-size-fits-all posttest without a control group. The sample amounted to 43 posyandu cadres. The sampling technique is simple random sampling—data analysis with the Wilcoxon test. The p-value on the respondents' skills before and after being given the e-leaflet media was ($p=0.001$). There was a significant increase in skills after being given the e-leaflet media to the cadres of the Posyandu for toddlers. This statistically significant outcome confirms the efficacy of digital learning resources in strengthening frontline community health worker capabilities.

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INTRODUCTION

The Ministry of Health strives to succeed in the goal of health development to improve the community's quality of life. Health transformation is a policy of strategic and systematic change in health systems, services, or practices to improve the quality, accessibility, efficiency, and sustainability of services (Vaz et al., 2024). Indonesian Health Transformation is an initiative carried out by the Ministry of Health to carry out Health Transformation activities, which include six pillars, namely: primary service transformation, referral service transformation, health resilience transformation, health financing system transformation, health human resource transformation, and health technology transformation (Phooko et al., 2025).

Primary Health Service Transformation is by strengthening basic health services by encouraging the increase of promotive and preventive efforts, supported by innovation and the use of technology, and carried out with a strategic approach to the integration of primary health services, community empowerment, and multisectoral cooperation (Iyanna et al., 2022). In its implementation, the transformation of primary health services is focused on the life cycle approach by strengthening promotive and preventive efforts and bringing health services closer through Posyandu, carried out by three Posyandu cadres. For this reason, the skills of posyandu cadres are needed as movers, extension workers, and recorders to provide services for all life cycle goals through 25 fundamental skills of cadres (Chabibah & Agustina, 2023).

The implementation of Posyandu still has various problems, so the benefits are not optimal. Problems often faced in the field are low community participation, poorly trained cadres, and inadequate infrastructure (Suparto et al., 2021). In the evaluation of the posyandu coaching process by health promotion workers at the Pegatan 2 Health Center in Katingan Regency, it was shown that the problem that occurred where the limitation of cadres to be able to take part in training related to the skills of posyandu cadres was due to the distance from the village to the sub-district was traveled

by waterway with a travel time of 3-4 hours, so that many cadres did not take part in the training. The existence of new posyandu cadres in each village, who work in addition to being cadres, is also an obstacle to participating in the training.

There is a gap in the service quality of posyandu cadres. One of the causes is the low skill of posyandu cadres in conveying health information and implementing posyandu services optimally. The limitation of participating in periodic training and the lack of educational supporting media are often the main obstacles in increasing the capacity of cadres. This is a concern to be able to improve the skills of posyandu cadres to increase the achievement of health program targets (Kartika et al., 2024).

The educational background of posyandu cadres is related to the ability of posyandu cadres to internalize the information received in the learning process. Education can influence a person's behavior and be ready to play a role in implementing health programs (Islam et al., 2023). Educated people easily attract information and have better knowledge. Cadres who are highly educated are more likely to accept an idea, concept, and material in posyandu activities (Sari et al., 2022).

Media has different connotations, including social, mass, print, and visual media. Media technology makes communication easier. In this regard, there is no doubt that the internet is the number one and most effective media technology that can affect all aspects of human life (Bateman, 2021). E-leaflet media is an alternative media that can educate posyandu cadres differently and more interestingly. E-leaflet media is a medium that contains pictures and interesting writings that, in the delivery process, are easy to understand and not boring, so that people who can see the e-leaflet can understand the message conveyed. E-leaflets can also be considered part of mass media because they disseminate information to the public (Lestari et al., 2024; Pia et al., 2024).

The use of e-leaflet media in health learning can positively impact understanding, according to the conception that reveals that e-leaflet media can contribute a detailed explanation (Ramadhanti et al., 2025). Education can increase knowledge, and the most effective type of education involves the senses of hearing and sight (Siswati et al., 2022). An effective type of education, such as counseling that utilizes print media (booklets, leaflets, posters, and flip pages), counseling using audiovisual, counseling with short films, counseling with demonstrations, counseling with presentation methods, and counseling using social media, where mobile phones have various features that can be used to educate (Yuliasih et al., 2025).

The research aims to find out the influence of e-leaflet media on improving the skills of posyandu cadres in the work area of the Pegatan 2 Health Center, which needs to be carried out, because a strategy is needed to convey knowledge according to the needs of the community that does not require face-to-face interaction. Similar research has been carried out, but each region has different characteristics, so it needs to be adjusted to the characteristics of the cadres of the Posyandu for toddlers in Katingan Regency to get the most appropriate media.

METHOD

The design used is quasi-experimental with a one-group pretest-posttest without a control group. The population and sample in this study are all posyandu cadres in the working area of the Pegatan 2 Health Center, totaling 43 people. The research was conducted in the working area of the Pegatan 2 Health Center in Katingan Regency in 2025. The instrument or measurement tool used in the study is a competency checklist of 17 basic skills of posyandu cadres from the Ministry of Health to measure the skills of respondents.

The data collection process was carried out from May to June 2025. Respondents are given explanations and informed consent in advance to protect their privacy. Next, a questionnaire was filled out with a characteristic sheet, and a pretest for the skills of posyandu cadres. On the same day, respondents were given an intervention using e-leaflet media for research.

The e-leaflet media provided has undergone the media development process with six stages from Borg and Gall: potential and problem, data collection, product design, design validation, design revision, and product test. At the potential and problem stage, an analysis of potential problems for the right media is carried out, at the data collection stage, a literature review is carried out related to cadre skills as the basis for making e-leaflet media, the product design stage the researcher

conducts design, ideas, designs, at the design validity stage it is carried out by asking two experts in the field of health promotion media to validate the video media, then the design revision stage is revised according to input from expert validators, and the product test stage was carried out to assess the level of influence of e-leaflet media on improving the skills of posyandu cadres. Data analysis was carried out using the Wilcoxon statistical test. This research has received ethical approval from the ethics commission at KEPK FK UNNES.

RESULT

Before being given the e-leaflet media, respondents' skills were measured from pretest scores. The average results of respondents' skills before being given the e-leaflet media are as follows:

Table 1. Respondents' Skills Before Being Given the E-Leaflet Media

Characteristic	N	Mean	SD
Skills			
Before	43	9.60	2.48

*Statistical Test

Based on the table above, the average result of respondents' skill scores before being given the e-leaflet media was 9.60. The skills of the respondents after being given the e-leaflet media were measured from the posttest score. The average results of respondents' skills after being given the e-leaflet media are as follows:

Table 2. Respondents' Skills After Being Given E-Leaflet Media

Characteristic	N	Mean	SD
Skills			
After	43	10.47	2.52

*Statistical Test

Based on the table above, the average result of respondents' skill scores after being given the e-leaflet media is 10.47. Skill improvement in respondents before and after being given the e-leaflet media at the pretest and posttest to prove the research hypothesis. The first thing that was done was to test the normality of the data. The data normality test was carried out using the Shapiro-Wilk Test through the SPSS application with Asymp value results. Sig. (2-tailed) of $0.00 < 0.05$, it is concluded that the data is abnormally distributed. Next, the Wilcoxon test was carried out with the following results:

Table 3. The Influence of e-leaflet Media in Improving the Skills of Posyandu Cadres

Characteristic	Mean	N	t	P
Skills				
Before	9.60	43	-5.771	0.000
After	10.47	43		
Mean = 0.87				

*Statistical Test

Based on the table above, it is known that the average pretest result is 9.60 and the average posttest result is 10.47. The average difference in skill improvement is 0.87, with a percentage of skill improvement of 9.06%. The results of the skill analysis in the table above were obtained with a t-count value of -5.771 and a p-value of 0.000 (p-value < 0.05), so it can be concluded that H0 was rejected and H1 was accepted, which means that there is an influence between e-leaflet media in improving the skills of posyandu cadres under five.

DISCUSSION

Based on the validity of e-leaflet media by experts, it was found that e-leaflet media is suitable for use in this study. E-leaflet media is used as a research intervention to improve the skills of Posyandu cadres for toddlers with 17 skills. The skills of each individual are different, but can always be trained and developed through training or learning. With training, the skills are expected to be further improved to be applied to themselves and spread to the environment and the surrounding community (McGrath & Yamada, 2023).

Based on the analysis of the skills of posyandu cadres before being given e-leaflet media, the average score was 9.60, which was included in the category of bad scores, where the skill score was 5-8 or 25%-50% and the score after being given e-leaflet media intervention was 10.47, showing an increase in entering the Good category, which is in the range of 9-12 or 51%-75%, cadres have mastered 17 skills. The Skill Score is not 100% because the intervention is still carried out 1 time; there is still a need for further and repeated interventions to the posyandu cadres. Training interventions must be carried out at least 4 times to be goal setting (Suyatno et al., 2024).

Internal and external factors that affect cadres' performance are very complex and vary from region to region, in addition to internal factors such as age, length of dedication, experience, social status, economic circumstances, and family support. Meanwhile, external factors such as the condition of the community and health institutions also affect the motivation and retention of cadres. Non-financial benefits are also significant for the success of a cadre program (Asrianah et al., 2024).

Posyandu cadres for toddlers who are generally in remote villages and have difficulty accessing skills training, which is usually carried out in the sub-district due to the long distance, through this e-leaflet, the media can be an alternative for cadres to still be able to gain knowledge related to cadre skills. E-leaflet media is a form of digital information media easily accessed anywhere and anytime by posyandu cadres to improve their skills (Amalia et al., 2025). Using e-leaflet media to convey information makes accessing and disseminating information easier (Hidayat et al., 2025). E-leaflet media is considered to be effective in the context of information delivery, easy accessibility via mobile phones or computers, and reduces paper use and physical distribution costs, can include video links, and search features that are not possible on print leaflet media (Bechini et al., 2022).

The results of the analysis in the Wilcoxon test obtained a calculated t-value of -5,771 and a p-value of 0.000 (p-value < 0.005), so it can be concluded that there is an influence of e-leaflet media on improving the skills of posyandu cadres for toddlers at the Pegatan 2 Health Center. E-leaflet media learning can also be used as an independent learning resource or to enrich learning based on electronic text (Rostikawati et al., 2025). E-leaflet learning media provides many benefits, including increasing the attractiveness and interest in learning, facilitating the understanding of complex concepts or materials, increasing motivation, learning, and being accessible flexibly through various electronic devices such as laptops, tablets, or smartphones (Rodríguez-Bailón et al., 2021).

CONCLUSION

Based on the study's empirical findings, it is conclusively demonstrated that implementing e-leaflet media as an educational tool significantly enhances the practical competencies of posyandu cadres, specifically in managing toddler health services. The research provides concrete evidence of this improvement, revealing a 9.06% increase in the average skill proficiency score among the cadres following the intervention. Quantitatively, this advancement is reflected in the rise of the mean skill score from a pre-intervention baseline of 9.60 to a post-intervention level of 10.47, underscoring the tangible and positive impact of the e-leaflet medium in elevating the cadres' capacity to effectively perform their critical roles in toddler growth monitoring, nutrition assessment, and health promotion within the community posyandu setting. This statistically significant outcome confirms the efficacy of digital learning resources in strengthening frontline community health worker capabilities.

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CONFLICT OF INTEREST

The author states that this manuscript has no conflict of interest.

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