



Training and Introduction to Digital-Based Health Applications for Mothers of the Muhammadiyah Women's Organization (Aisyiyah) in Bansir Darat Branch

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ABSTRACT

Digital transformation in the health sector is a strategic step to increase literacy and access to public health services, including for the women's community such as members of the Muhammadiyah Aisyiyah Bansir Darat Branch. Although digital health apps have grown rapidly, there are still many mothers who find it difficult to use them due to low digital literacy and limited understanding of technology. This service program arises from the need to address the gap in the use of health technology, especially among women who play the role of the main manager of family health. The purpose of this service is to provide training and introduction to digital-based health applications to Aisyiyah members, so that they are able to independently access information, conduct health monitoring, and consult with medical personnel through digital services. The implementation method includes socialization, interactive hands-on training, practical assistance in using the application, and continuous evaluation. This approach is combined with the provision of visual, audio, and collaboration guides with local health centers for the sustainability of post-training support. The output targets of this activity include increasing participants' digital literacy, independence in managing application-based health, the formation of a health technology-aware community, and scientific publications in accredited national journals.

Keywords: *Training, Apps, Health, Digital*

Introduction

The advancement of digital technology in the telecommunications sector has brought about significant changes in everyday life, including in the healthcare sector. The emergence of digital health applications represents an innovative solution that facilitates public access to health information, enables individuals to monitor their health conditions independently, and provides opportunities for direct consultation with healthcare professionals. However, not all segments of society are able to utilize these technologies optimally, particularly women in the midlife stage following childbirth. During this stage, women experience changes in physical conditions, social roles, and responsibilities that differ from those encountered in earlier stages



of life, often creating additional challenges in adapting to technological developments (Annisa Permatasari et al., 2023). Limited digital literacy, restricted access, and insufficient understanding of smartphone-based applications have made it difficult for many mothers to maximize the use of digital health services (Andreanto & Handayani, 2022).

Similar challenges have also been identified among members of Aisyiyah. As a women's organization under the Muhammadiyah organization, Aisyiyah has long contributed to various social sectors, including efforts to improve the health and well-being of families and communities. However, in terms of utilizing digital health technologies, many members continue to face barriers related to limited knowledge and skills in using smartphone-based health applications (Menteri Kesehatan, 2024). The role of Aisyiyah is strategically important in promoting women's empowerment and improving community health. Therefore, strengthening digital health literacy among Aisyiyah members is essential to enable them to adapt to technological developments and actively contribute to maintaining their own health, supporting family health, and promoting health within their surrounding communities (Dwi et al., 2024).

This community service activity aims to improve the knowledge and skills of Aisyiyah members in utilizing digital health technologies. Low levels of digital literacy among women may result in delays in obtaining health information, limited awareness of preventive health practices, and reduced capacity for independent health monitoring. In the context of ongoing digital transformation, digital health has become an important instrument for developing healthcare services that are efficient, inclusive, and sustainable (Gaber, 2019). Through structured digital literacy training, Aisyiyah members are expected not only to understand and use digital health applications but also to integrate these technologies into their daily activities and community health programs.

To address these challenges, the community service program was designed through several stages, including providing information on the importance of digital health literacy, conducting practical training on the use of smartphone-based health applications, and providing continuous assistance to enable participants to independently utilize digital health services (Manurung et al., 2024). Furthermore, integrating the use of digital health applications into Aisyiyah's routine activities represents an innovative strategy to ensure that the technology becomes more relevant and beneficial in participants' everyday lives. Through this approach, the program is expected to address the needs of the partner community while establishing a sustainable model



of community empowerment.

The primary objectives of this activity are to improve Aisyiyah members' knowledge and skills in using digital health applications, promote women's independence in monitoring their own health and that of their families, and strengthen the organization's role in supporting the transformation of digitally based healthcare services. Accordingly, this activity is expected to serve as a model of women's empowerment through technology that is inclusive, adaptive, and sustainable.

Several previous studies support the importance of such interventions. Nuruniyah et al. (2024) emphasize that digital health applications can improve the effectiveness of healthcare services and facilitate access to health information. Erlirianto et al. (2015) explain that the midlife stage is characterized by changes in social roles and physical conditions that may create challenges in adapting to new technologies. Shidi Laksono (2022) found that limited digital literacy represents a major barrier for women in utilizing digital health services, while Gaber (2019) emphasizes that digital health constitutes an important strategy for developing a sustainable healthcare system. Based on these findings, digital health literacy training for Aisyiyah members represents a strategic effort to bridge the gap between technological advancement and its effective utilization by community members.

The primary challenge faced by mothers in the Muhammadiyah organization, particularly within the Aisyiyah Branch of Bansir Darat, is their limited ability to utilize smartphone-based health technologies. Many participants experience difficulties in using health applications due to limited knowledge of smartphone operation and restricted access to digital health information (Andreanto & Handayani, 2022). This situation is further exacerbated by limited awareness of health applications that can facilitate independent health monitoring, such as medication reminders, online consultation features, and health-tracking functions. These conditions indicate that limited digital literacy among mothers constitutes a significant barrier, resulting in greater reliance on conventional healthcare facilities and face-to-face services (Shidi Laksono, 2022).

In addition to technical limitations, another challenge is the relatively low level of motivation and awareness regarding the importance of utilizing digital health technologies. Some Aisyiyah members remain more comfortable with conventional approaches, such as visiting healthcare facilities directly or consulting healthcare professionals in person. Limited dissemination of information regarding the benefits and potential of digital health applications has also resulted



in many mothers not yet perceiving these technologies as practical solutions for their everyday healthcare needs. Despite this, rapid technological development has made digital health services an increasingly effective means of improving access to and the quality of healthcare services (Saputra, 2023). Therefore, a more intensive, systematic, and sustainable educational approach is required to encourage mothers to become more receptive to digital innovations in healthcare.

Based on these challenges, the needs of the partner community are clearly identified, particularly the need for training that can improve knowledge, practical skills, and digital literacy in utilizing smartphone-based health applications. This community service activity is therefore designed to provide practical education on the use of health applications, increase awareness of the importance of digital technology for family health monitoring, and strengthen participants' motivation and independence in utilizing digital healthcare services.

The targeted outputs achieved through this community service activity encompass several important aspects. First, the activity is expected to improve the knowledge and skills of Aisyiyah members in using digital health applications, including their ability to access valid and reliable health information. Second, improved digital literacy is expected to enable participants to use smartphones and health applications more independently and effectively. Third, a training module in the form of an application-use guide is provided as a sustainable learning resource, complemented by documentation of the activity, including photographs, videos, and a final report, which can be used for evaluation and dissemination purposes. Fourth, the establishment of a digital health community network through online communication platforms, such as WhatsApp or Telegram, is expected to facilitate discussion, knowledge sharing, and continued interaction among members.

In addition, the program is expected to generate significant long-term impacts, including increased participation of Aisyiyah members in digital health programs initiated by government institutions and private organizations. The program may also promote greater independence among participants in improving family well-being through the effective use of digital technologies. Another important output is the dissemination of the program's results through an official report for the Muhammadiyah organization and publication in a community service journal. Consequently, the program is expected not only to address the immediate needs of the partner community but also to generate sustainable outcomes and contribute to the broader academic discourse on women's empowerment, digital health literacy, and community-



based healthcare transformation.

Method

The implementation of this community service program was designed through several interconnected and sequential stages. The initial stage involved socialization and orientation sessions for members of the Muhammadiyah Aisyiyah organization to introduce the benefits, objectives, and practical relevance of training on smartphone-based health applications (Novarita, 2023). This stage was intended to build participants' awareness and motivation by providing an overview of how digital health technologies can support health information access, personal health monitoring, and the utilization of healthcare services.

The program then proceeded to the training stage, which employed a simple, practical, and participant-oriented approach to ensure that the materials could be easily understood and followed. The training covered the basic use of digital health applications, an introduction to essential smartphone features, and practical instructions for operating health applications independently. The instructional process was adapted to participants' varying levels of digital literacy, with demonstrations and step-by-step guidance provided to facilitate comprehension and reduce potential difficulties in using the technology.

The subsequent stage focused on technology implementation through hands-on practice. Participants were directly guided in using the selected health applications, including the installation process, account registration where required, navigation of key features, and practical utilization of the applications for everyday health-related needs. Direct practice was accompanied by individual and group assistance to ensure that participants were able to perform the required steps independently rather than merely observing the demonstrations.

The program then continued with a mentoring and periodic evaluation stage to assess participants' ability to utilize the applications after the training sessions. Mentoring was conducted to identify technical difficulties, provide additional guidance, and reinforce participants' confidence in using digital health services independently. The evaluation focused on participants' understanding, practical skills, and ability to apply the knowledge gained during the training in their daily activities. This stage also served as a basis for identifying aspects of the training that required further improvement or reinforcement.

The selected applications were chosen based on their simple interface, user-friendly design, and ease of navigation, making them relatively accessible to participants with varying levels of digital literacy, including older adults. These characteristics were considered important to



minimize technical barriers and encourage sustained use of digital health applications after the completion of the community service program.

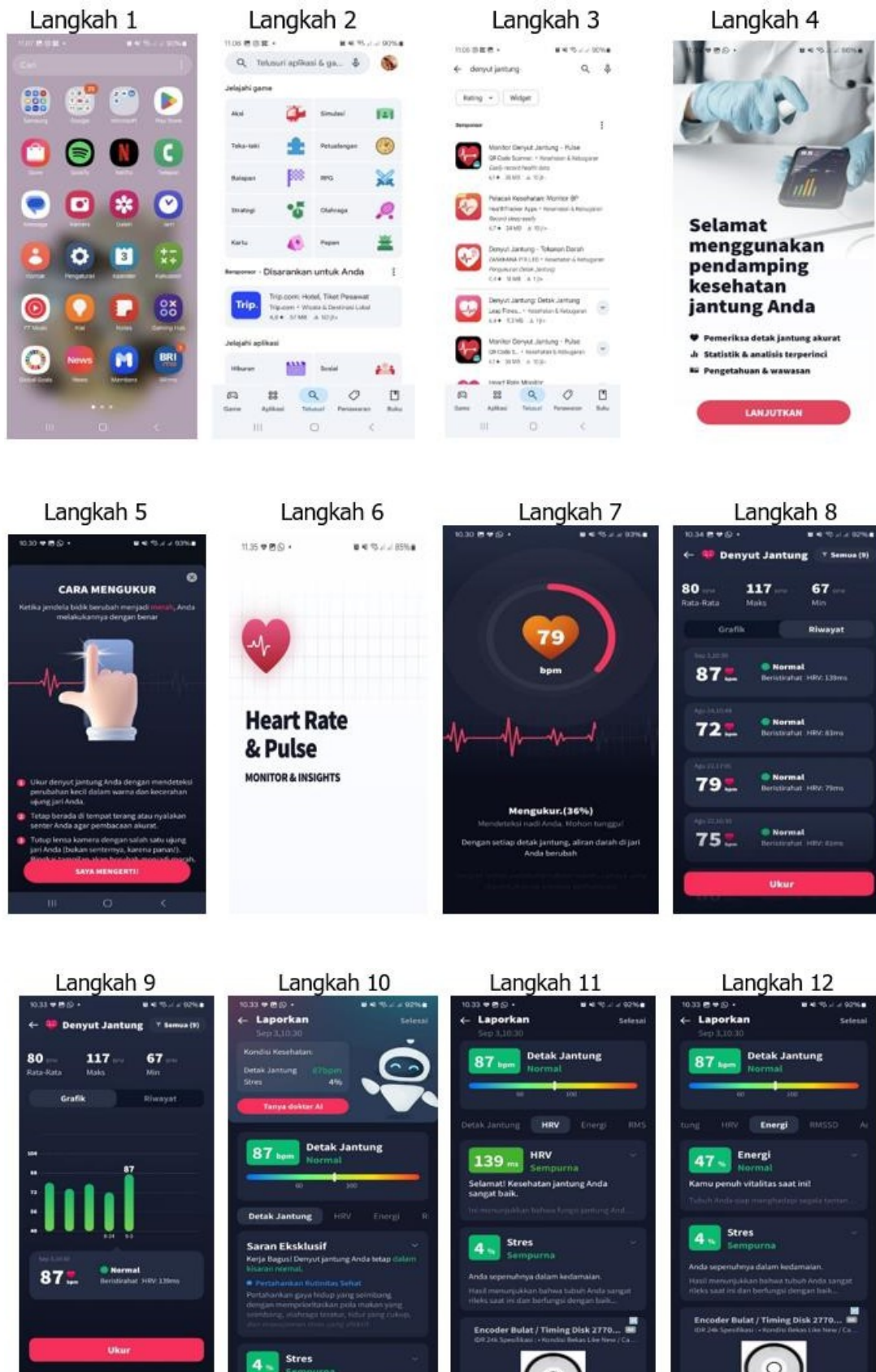




Figure 1. Procedure for Measuring Heart Rate Using a Smartphone

Results and Discussion

The implementation of the community service program on the use of a smartphone-based heart rate monitoring application provided several positive outcomes for the mothers of the Aisyiyah organization. Following the training, participants demonstrated a better understanding of the importance of monitoring heart rate as part of preventive efforts to reduce the risk of cardiovascular disease. The activity also increased participants' awareness of their personal health conditions and strengthened their understanding of preventive measures that can be undertaken independently (Manurung et al., 2024).

The training also improved participants' practical skills in operating the heart rate monitoring application on their smartphones. Participants were able to follow the application procedures independently, from accessing the application to obtaining and interpreting basic heart rate measurements. This ability provides participants with greater independence in conducting routine health monitoring and reduces their reliance on healthcare personnel for basic monitoring activities. Nevertheless, the application is intended as a supporting tool for health monitoring and not as a substitute for professional medical diagnosis or consultation.

Furthermore, the participants reported tangible benefits from the introduction of modern digital technology in supporting family health management. The ability to use a smartphone as a simple health monitoring tool provides an accessible and practical approach that can be



incorporated into everyday activities. Through this training, participants were not only introduced to the technological aspects of the application but also encouraged to develop greater awareness of the importance of regular health monitoring and preventive health behavior.

The improvement in participants' knowledge and practical abilities following the training can be observed from the evaluation results presented in the following table.

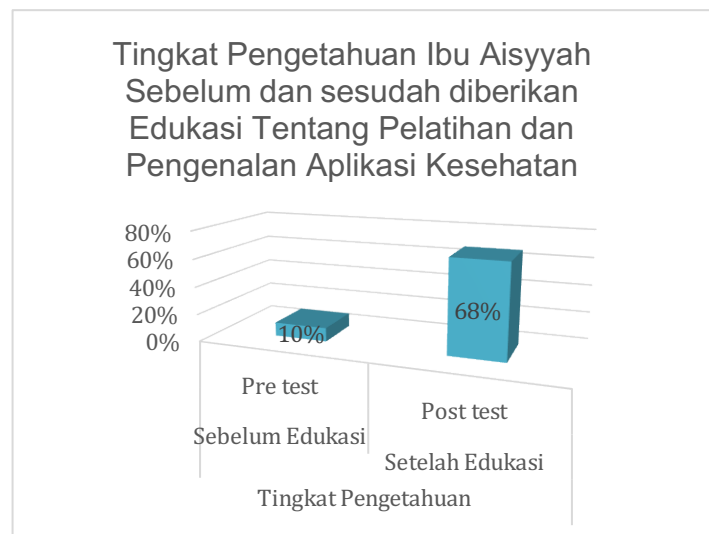


Figure 2. Participants' Level of Knowledge

This activity demonstrates that a simple, practical, and inclusive technology-based educational approach can generate a significant positive impact (Masdah et al., 2025) among mothers of the Aisyiyah organization in promoting and maintaining the health of themselves and their families.



Figure 3. Implementation of the Community Service Activity

Conclusion

This community service activity, entitled "Training and Introduction to Digital Health



Applications for Mothers of Aisyiyah, Muhammadiyah Branch of Bansir Darat,” successfully achieved its intended outcomes by improving participants’ knowledge, practical skills, and independence in utilizing technology-based health monitoring. The training was delivered through a simple and accessible approach, supported by direct hands-on assistance, which enabled participants to understand and apply the technology effectively. This approach addressed the identified challenges related to limited digital health literacy and provided tangible benefits for both individual and family health management, while also strengthening social interaction among participants.

For future community service activities, it is recommended that advanced training materials and continuous mentoring be provided to reinforce participants’ knowledge and skills. Sustained assistance is expected to encourage participants to consistently apply the skills acquired during the program and to further strengthen their independence in utilizing digital health technologies for personal and family health management.

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