

# DEVELOPMENT OF ANDROID-BASED EDUGARLIN APPLICATION FOR OPTIMIZING THE QUALITY OF POSTPARTUM FITNESS

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## ABSTRACT

*Postpartum fitness plays an important role in improving the quality of life of mothers, so that they are able to take good care of themselves and their babies. Mothers who are physically fit will be more adaptable to their new role as mothers, have more energy, and feel more confident. The postpartum period is a great time to take advantage of health education.*

*The purpose of this study was to produce and describe the feasibility of a product to help provide postpartum education for postpartum mothers. This study used a development research design. The development model used refers to the Borg and Gall Research and Development (R&D) development model. The application design refers to the Social Learning Theory. This theory states that individuals learn through observation, imitation, and modeling. field tests totaled 10 people (3 experts and 7 postpartum mothers). The research data were in the form of quantitative and qualitative data to explore responses and suggestions from material experts and midwife practitioners regarding the edugarlin application. The instrument used was a questionnaire. The data was processed descriptively. the media development at each stage showed an increase in scores towards the very feasible criteria (89.3%). media development at each stage shows an increase in scores towards the very feasible criteria (93.8%).*

*This study produced an android-based application to improve postpartum fitness. Based on expert tests, this media is included in the very feasible category and based on field tests, this media is included in the very feasible category for use in postpartum services.*

*Conclusion of the study The Android-based Edugarlin application can be used by clients and midwives in the field in an effort to improve postpartum fitness. The use of the edurgarlin application has the potential for awareness and practice of improving the quality of postpartum fitness*

**Keywords: Edugarlin Application; Android; Education; Quality of Postpartum Fitness**

## ABSTRAK

*Kebugaran pasca persalinan berperan penting dalam meningkatkan kualitas hidup ibu, sehingga mereka mampu merawat diri sendiri dan bayi dengan baik. Ibu yang bugar secara fisik akan lebih mudah beradaptasi dengan peran baru sebagai ibu, memiliki lebih banyak energi, dan merasa lebih percaya diri. Periode post partum adalah waktu yang tepat untuk memanfaatkan pendidikan kesehatan.*

*Tujuan penelitian ini adalah menghasilkan dan mendeskripsikan kelayakan produk untuk membantu pemberian edukasi pada ibu pasca persalinan untuk ibu nifas. Penelitian ini menggunakan rancangan penelitian pengembangan. Model pengembangan yang digunakan mengacu pada model pengembangan Research and Development (R&D) Borg and Gall Rancangan aplikasi mengacu pada Teori Pembelajaran Sosial (Social Learning Theory). Teori ini menyatakan bahwa individu belajar melalui observasi, imitasi, dan pemodelan. uji lapangan berjumlah 10 orang ( 3 pakar dan 7 ibu nifas). Data penelitian berupa data kuantitatif dan kualitatif untuk menggali respon dan saran dari ahli materi dan praktisi bidang terhadap aplikasi edugarlin. Instrumen yang digunakan adalah kuisisioner. Data diolah dengan deskriptif. Hasil pengembangan media pada setiap tahap menunjukkan peningkatan skor hingga mencapai kriteria sangat layak, yaitu sebesar 89,3%. Pada tahap selanjutnya, pengembangan media terus menunjukkan peningkatan skor yang signifikan, mencapai kriteria sangat layak sebesar 93,8%.*

*Penelitian ini menghasilkan sebuah aplikasi berbasis android untuk peningkatan kebugaran pasca persalinan. Berdasarkan uji ahli, media ini termasuk dalam kategori sangat layak dan berdasarkan uji lapangan media ini termasuk dalam kategori sangat layak untuk digunakan dalam pelayanan pasca persalinan.*

*Kesimpulan penelitian Aplikasi Edugarlin berbasis android ini bisa digunakan oleh klien maupun bidan dilapangan dalam upaya meningkatkan kebugaran pasca persalinan. Penggunaan aplikasi edugarlin berpotensi kesadaran dan praktik peningkatan kualitas nifas bugar*

***Kata Kunci: Aplikasi Edugarlin; Android; Edukasi ; Kualitas Nifas Bugar***

## **BACKGROUND**

Midwifery care is a series of activities based on the decision-making process and actions carried out by midwives in accordance with their authority and scope of practice based on midwifery knowledge and tips. The Continuity Of Midwifery Care (CoMC) model is the provision of professional health services by midwives to women throughout the reproductive cycle from pre-conception of pregnancy. Postpartum delivery, whether risky or not, services are provided in community health centers, independent practice, midwives and hospitals so that a mother can give birth safely and satisfactorily and the child born can grow and develop healthily.(Aprianti et al., 2023)

Maternal Mortality Rate (MMR) and Infant Mortality Rate (IMR) are indicators important in measuring the level of health of a country. Based on results Inter-Census Population Survey (SUPAS) in 2015, the MMR in Indonesia is still high, namely 305/100,000 live births (KH). Meanwhile, AKB complied The 2017 Indonesian Health Demographic Survey (SDKI) is 24/1000 KH, where Newborn deaths account for the largest number of infant deaths. Number Newborn/Neonatal Deaths (AKN), namely babies aged 0-28 days, amounted to 15/1,000 KH. The 2030 SDGs targets for MMR 70/100,000 KH, AKN 7/1,000 KH and AKB 12/1,000 KH. (Kemenkes RI, 2019)

Sample Registration System from the Health Research and Development Agency (Balitbangkes, 2016) shows data on the cause of maternal death is disturbance hypertension (33.07%), obstetric bleeding (27.03%), non-obstetric complications (15.7%), other obstetric complications (12.04%), infections in pregnancy (6.06%) and others (4.81%). Meanwhile, the causes of death of newborn babies are: intrapartum complications (28%), cardiovascular and respiratory disorders (21%), LBW and prematurity (19%), congenital and malformations (15%), infections (7%), conditions other neonatal (6%), growth disorders (1%), and birth trauma (0.2%) (Kemenkes RI, 2018)

The 2018 Family Health Directorate's routine report also shows this that the coverage of postpartum visits is quite good. First postpartum visit 77 %, first neonatal visit 97 %, but data from several surveys such as from Balitbangkes 2012 shows that maternal deaths during the postpartum period were 61.59%. (Sopiah et al., 2020).This shows the quality of postnatal care for mothers and newborn babies is still low, especially now that there are still some problems of access and integration of postnatal care with services other health(Centers for Disease, 2021).

Postnatal care is a health service provided to the mother and newborns within 6 hours to 42 days after birth, which is implemented in an integrated and comprehensive manner. Postpartum mothers and new babies Healthy births are sent home after 24 hours postpartum, so before At home, it is hoped that the mother and baby will receive 1 postnatal service. Postnatal care is integrated with other programs, namely with programs on Nutrition, Infectious Diseases, Non-Communicable Diseases, Immunization, Life and others. Comprehensive postnatal care is a service Postpartum is given starting from anamnesis, physical examination, examination support (including laboratory), postpartum family planning services, management cases, IEC, and referrals if necessary.(Feroz et al., 2017)

Postpartum care is needed during this period because a mother will experience many changes, both physical and psychological, to restore the health and fitness of the postpartum mother. The principles in the current practice of postpartum and breastfeeding midwifery care emphasize that postpartum mothers are healthy mothers and are a physiological event, so that service delivery activities carried out by midwives in the form of midwifery care are mother-centered. This means considering mother and baby care from a holistic perspective, including physical, emotional, psychological, spiritual, social and cultural contexts as well as respecting women's rights or choices, ensuring women are aware of the care being provided. Postnatal services are a continuation of the Continuous Midwifery Care (CoMc) model of care after pregnancy and delivery (El et al., 2022)

In a world of increasing use of information and communication technology, mobile and internet applications, postpartum applications are very popular media for women or mothers who have just given birth who are looking for health information related to the health of postpartum mothers. The increasing use of this media has the potential to increase the understanding and knowledge of women, especially mothers. postpartum about health and personal health care options and increase their ability to make the most appropriate choices for postpartum however barriers still prevent some mothers from engaging with postpartum educational material this is a concern for health professionals Remembering that health literacy during postpartum is critical for the health of the mother and the health of the baby(Sardi et al., 2020).

The popularity of Android-based postpartum apps has now increased regardless of socioeconomic status while there is strong support for the use of mobile technology in childbirth and pregnancy education. Several postnatal apps have undergone examination to evaluate the accuracy of the information they provide and their alignment with current obstetric guidelines. Postpartum mothers are technologically literate and able to navigate the internet and mobile applications for independent education(Dianti et al., 2021)

The post partum period is a great time to utilize health education. Various obstacles experienced by mothers after giving birth should be communicated to midwives as providers of care or services to women. This service should be accessible easily and quickly so that maternal confusion can be resolved immediately. (Widyastutik et al., 2021).

The main goal of building a postpartum fitness improvement app is to support mothers in their physical and mental recovery process after childbirth by providing safe, accessible, and effective guidance. Here are some specific goals: Providing Safe and Targeted Exercise Guidance: This application aims to provide a safe and appropriate physical exercise program for postpartum recovery, both for normal and cesarean deliveries. This guide will help mothers improve core muscle strength, pelvic floor, and overall body fitness ; Accelerating Physical Recovery: The application helps mothers gradually recover their physical condition after childbirth, strengthen weakened muscles, and reduce back and waist pain, as well as improve posture ; Managing Mental Health: Through exercises that focus on relaxation, breathing, and stress management, this application also aims to reduce the risk of postpartum depression and anxiety by providing support that can be accessed at any time. Providing Education about Postpartum Fitness: The application can provide important information regarding the benefits of postpartum fitness, risks to watch out for, and recommendations based on individual health conditions. This will help mothers better understand their recovery process; Encourage Healthy Routines and Habits: With features like reminders or workout plans, apps can help mothers establish a regular routine for maintaining fitness, even while caring for a baby. Track Fitness Progress: Apps can also offer features to track physical progress, such as weight, strength, and stamina, so mothers can see their recovery progress and stay motivated; Facilitate Access to Expert Support: Some apps can add a one-on-one consultation feature with a health professional, such as a physiotherapist, postpartum fitness coach, or psychologist, who can help mothers navigate postpartum fitness challenges; Build Community: Apps can serve as a platform for building a community of postpartum mothers so they can share experiences, provide moral support, and motivate each other; With these goals in mind, postpartum fitness apps can be an important tool in supporting mothers in returning to a healthy and fit physical and mental state after giving birth.(Feroz et al., 2017)

Research conducted by (Herawati, 2021) from the results of android-based research in the Effect of the SEMASA Application (Postpartum Period Education System) on the Care Behavior of Postpartum mothers at Humana Prima Bandung Hospital” based on research in percentage of the results of the study there are from the results of the T test obtained p value = , where the p value <0.05, so it can be concluded that the results of the study there are differences in knowledge,

attitudes and actions in the intervention group and control group. the SEMASA application has an effect in increasing the knowledge, attitudes and actions of postpartum women in postpartum care. Another study conducted by (Sardi et al., 2020) regarding the Mobile Health Application-Based Postnatal Education Program (Home-but not Alone) showed that the use of applications as a medium for postnatal education is very useful, especially for new parents. (Daehn et al., 2023) developed the SmartMoms application - a web application to raise awareness and provide information about postpartum depression. The study showed that 62.2% of mothers who accessed the postpartum depression self-screening showed positive results and received help more quickly.

## **METHODS**

The research method used is Research and Development. The Research and Development (R&D) approach was adapted for the postpartum fitness app research because it enables the development and evaluation of innovative and practical products. Here are some reasons why the R&D approach was chosen over other methods; 1) Innovative Product Development: R&D focuses on creating and improving new products, such as postpartum fitness apps. This approach allows researchers to design, test, and refine the app until it reaches its most effective and user-friendly form; 2). Structured Evaluation: The R&D process involves a systematic evaluation stage, including piloting and collecting feedback from users. This ensures that the developed app truly matches the needs and preferences of the target users; 3) Practical and Applied Approach: R&D enables research that is directly applied in real life, rather than just theoretically. Postpartum fitness apps produced through R&D can be directly utilized by postpartum mothers to improve their health and fitness.; 4) Effectiveness and Efficiency: By adopting an R&D approach, researchers can identify and address issues that arise during product development, resulting in more effective and efficient solutions compared to other methods that may be less focused on practical application; 5). Evidence-Based Interventions: The R&D approach ensures that the applications developed are based on scientific research and solid evidence. This enhances the credibility and effectiveness of the app as a trustworthy health tool. The R&D approach provides a comprehensive framework for developing apps that are not only innovative, but also practically beneficial to users. Therefore, this approach was chosen for the postpartum fitness app research. This development research is in the form of creating an android-based application as a medium for detecting knowledge and attitudes about postpartum fitness which is expected to improve the quality of fit postpartum. The population and sample of the study were 3 experts in the field of obstetrics and 7 postpartum mothers. The development model used refers to the Borg and Gall Research and Development

(R&D) development model which has been modified by Sugiyono with the following steps: 1) analyzing potential and problems, 2) designing products, 3) collecting materials, 4) making initial products, 5) conducting expert tests, 6) revising products; 7) conducting field tests. The research was conducted in April - October 2024. The android-based application named the Edugarlin Application has obtained IPR with the number C00202490751.

The data in this development research was obtained through interviews and distributing questionnaires to respondents. Interview guidelines were used for needs analysis and to obtain information on how the edugarlin application can help improve knowledge and attitudes in postpartum mothers in achieving postpartum fitness.

The selection of respondents was carried out using a purposive sampling technique to ensure that the information obtained was relevant to the research context. The experts involved in this study were midwifery lecturers and content creators who had experience and expertise in the field of midwifery education as well as inspirational YouTubers who discussed maternal and child health with tens of thousands of viewers and more than ten years of experience in the world of midwifery education. The second expert, the Head of the Health Center in East Jakarta who is 50 years old with a Masters in Health Administration, has served for 12 years and understands the importance of comprehensive health policies, especially for postpartum mothers, and a Certified Midwife Practitioner in Yoga, Lactation Counselor. 43 years old with a Masters in Midwifery, is a certified practitioner in Yoga, Hypnobirthing and Lactation Counselor who has made major contributions in the fields of midwifery and health education. These three experts provide valuable insights into the challenges and strategies in efforts to improve the physical and psychological health of postpartum mothers to achieve a healthy postpartum quality.

This study used a mixed approach, namely combining qualitative and quantitative methods to provide a deeper understanding of the characteristics of the respondents and assess the effectiveness of the educational materials presented. The research design was descriptive with two stages of data collection: first, qualitative analysis through in-depth interviews with experts and postpartum mothers; second, quantitative measurement through questionnaires. The research sample consisted of ten respondents consisting of three experts and seven postpartum mothers.

On the other hand, the seven postpartum mothers who were participants in the study showed interesting diversity of characteristics. Their average age was 24 years, with an age range of 22 to 28 years. Their education varied, where three of them had completed their Bachelor's degree (S1), while the other four were still in the process of completing their Bachelor's degree. In terms of

employment, two people worked in the private sector, three were students, and two were civil servants. All postpartum mothers had access to information about postpartum maternal health and nutrition, but their level of understanding of postpartum fitness varied. Some of them stated that they had attended pregnancy classes before where they also learned how to become a new mother, but not all of them received in-depth information about postpartum fitness. This shows that there is a great need to provide more comprehensive and easy-to-understand educational materials.

The data collection process is carried out in two stages. The first stage is an in-depth interview with experts, which is conducted face-to-face or online, depending on the availability of respondents. During the interview, data is recorded and documented for further analysis. This interview raises various topics in the application.

For expert validation testing, this application is assessed by material experts and media experts using a questionnaire about expert responses and input regarding the edugarlin application that has been designed to assess product feasibility. The questionnaire sheet is also used to collect product assessment data in an effort to improve the quality of nifas bugar regarding the appearance, content of the material and benefits of the product. The formula used is: the number of scores obtained: the highest score x 100%. the results of the assessment are then averaged from a number of trial sample subjects and converted into an assessment statement to determine the feasibility of the resulting product as follows:

**Tabel 1 : konversi skor penilaian**

Average Score	Classification
➤ 85 %	Very Eligible
71 % – 85 %	Eligible
56 % – 70 %	Quite Eligible
0 % – 55 %	Less Eligible

Source : Suyanto (2009)

In the "Edugarlin" application, there is information including recognition of postpartum danger signs, nutritional fulfillment, physical adaptation of postpartum and breastfeeding mothers, the process of achieving the role of motherhood, adaptation to parenthood, health promotion for healthy living behavior, prevention of postpartum diseases and complications, family planning and success of exclusive breastfeeding. It's just that in the application there are videos on increasing the capacity of postpartum mothers such as postnatal yoga, adaptation to parenthood, baby massage



and breastfeeding is important which can be enjoyed after completing the knowledge and attitude questionnaire.

The results of this interview indicate that there is a consensus among experts regarding the importance of postpartum mothers having sufficient knowledge and skills such as lactation massage and postpartum gymnastics to improve postpartum fitness. They emphasized that a good understanding of balanced nutrition for postpartum mothers, physical exercise for postpartum mothers and the importance of exclusive breastfeeding can help postpartum mothers prepare themselves to support their child's growth and development.

The second stage involves distributing questionnaires to postpartum mothers. The questionnaire was prepared to measure postpartum mothers' knowledge of physical and psychological changes in postpartum mothers, balanced nutritional needs for postpartum mothers and the ins and outs of exclusive breastfeeding. They were given education before and after receiving educational materials in the form of an android-based application. Data collection was carried out online and offline to ensure wider participation. Quantitative data from the questionnaire were then analyzed using descriptive statistics to describe the characteristics of respondents and their understanding of postpartum fitness. Statistical tests such as the t-test or Wilcoxon test were used to compare knowledge before and after using the edugarlin application depending on the distribution of the data.

Qualitative analysis of in-depth interviews resulted in key themes related to improving the quality of postpartum fitness. Experts agree that educational approaches involving postpartum mothers must be carried out in an interactive and interesting way. Effective media, such as android-based applications, can increase audience engagement and understanding. Therefore, choosing the right educational format is very important. The Edugarlin application is expected to be an interesting media to convey important information and facilitate more interactive learning. From the results of a survey conducted on postpartum mothers.

Ethical approval was granted by the Research Ethics Committee of Jakarta Health Polytechnic III. This research has passed the Ethics Review with Number 532/SK.KEPK/UNR/VIII/2024. , and all participants gave their informed consent before participating in the study. They were informed of their rights, including the ability to withdraw from the study at any time without facing any consequences. The research process upholds confidentiality and non-identity, maintaining the identity and personal information of participants.

## **RESULTS AND DISCUSSION**

### **Stage 1: Potential and Problem Analysis**

Potential and problem analysis was conducted using interview techniques with 3 experts to support the content of the application on postpartum danger sign detection, assessment of Readiness to go home from health facilities/place of delivery; Postpartum fitness self-assessment; Self-assessment of knowledge about postpartum fitness; Assessment of attitudes about postpartum fitness; Assessment of recognition of depression symptoms; Mental health assessment; EPDS assessment, educational materials on nutritional fulfillment, physical adaptation of postpartum and breastfeeding mothers, the process of achieving the role of motherhood, adaptation to parenthood, health promotion for healthy living behavior, prevention of postpartum diseases and complications, family planning and success of exclusive breastfeeding. As well as lactation massage videos, postpartum yoga. Expert input on common problems that occur during postpartum mothers was mentioned by the 50-year-old Head of the Health Center expert who has a Masters in Health Administration and has served for 12 years. He said that good health policies must include comprehensive postpartum services, especially for new mothers. With her background in public health policy, she explained that many postpartum issues can be addressed by improving knowledge and practice at the family level. The 38-year-old midwife practitioner is a researcher who has made significant contributions to public health and health education. Her experience in providing maternal and child health services provides a strong academic perspective on the need for an evidence-based approach to educational materials. Furthermore, the seven postpartum mothers who participated in this study showed interesting diversity in characteristics. Their average age was 24 years, with an age range of 22 to 28 years. Their education varied, with three of them having completed their Bachelor's degree (S1), while four others were still in the process of completing their Bachelor's degree. In terms of employment, two worked in the private sector, three were students, and two were civil servants. All postpartum mothers had access to information on postpartum health and nutrition, but their level of understanding of postpartum fitness varied. Some of them stated that they had previously attended prenatal classes where they also learned about being a new mother, but not all of them had received in-depth information about postpartum fitness. This shows that there is a great need to provide more comprehensive and easy-to-understand educational materials. The results of in-depth interviews with experts showed that there

was a consensus on the importance of education during the postpartum period. They believe that postpartum mothers really need to have good knowledge about postpartum care to help the process of optimal physical and mental recovery and support the well-being of themselves and their babies. Experts emphasized that a good understanding of healthy eating patterns and the importance of exclusive breastfeeding can help prospective parents prepare themselves to support their child's growth and development. In addition, they also highlighted the role of the media in the learning process.

## **2. Stage 2: Product Design**

Input for product design was done by distributing 7 questionnaires to postpartum mothers to choose the type of media to be developed.

**Tabel 2 : Daftar Masukan Desain Produk**

Media Type	Amount
Pocket Book	1
Application	3
Flip Sheet	2
Leaflet	0

Based on these results, this research developed an Android-based application..

## **3. Stage 3: Collecting materials**

Based on the results of the literature review, the materials used as references in the development of this Android-based application refer to the post-natal service guidelines for mothers (Kemenkes RI, 2019)and Newborns and the 2024 KIA book (Kemenkes, 2024.)

## **4. Stage 4: Creating a Product**

The application product created contains information about postpartum danger sign detection, assessment of Readiness to go home from health facilities/place of delivery; Postpartum fitness self-assessment; Self-assessment of knowledge about postpartum fitness; Assessment of attitudes about postpartum fitness; Assessment of recognition of depression symptoms; Mental health assessment; EPDS assessment, educational materials on nutritional fulfillment, physical adaptation of postpartum and breastfeeding mothers, the process of achieving the role of motherhood, adaptation to parenthood, health promotion for healthy living behavior, prevention of postpartum diseases and complications, family planning and success of exclusive breastfeeding. As well as lactation massage videos, postpartum yoga

## 1. Product Creation Phase 1

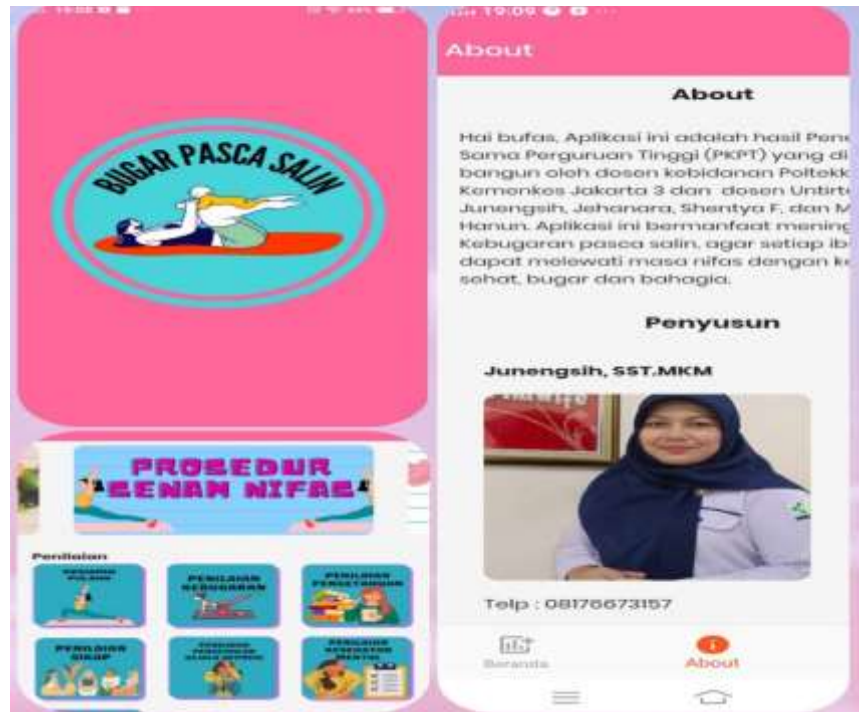
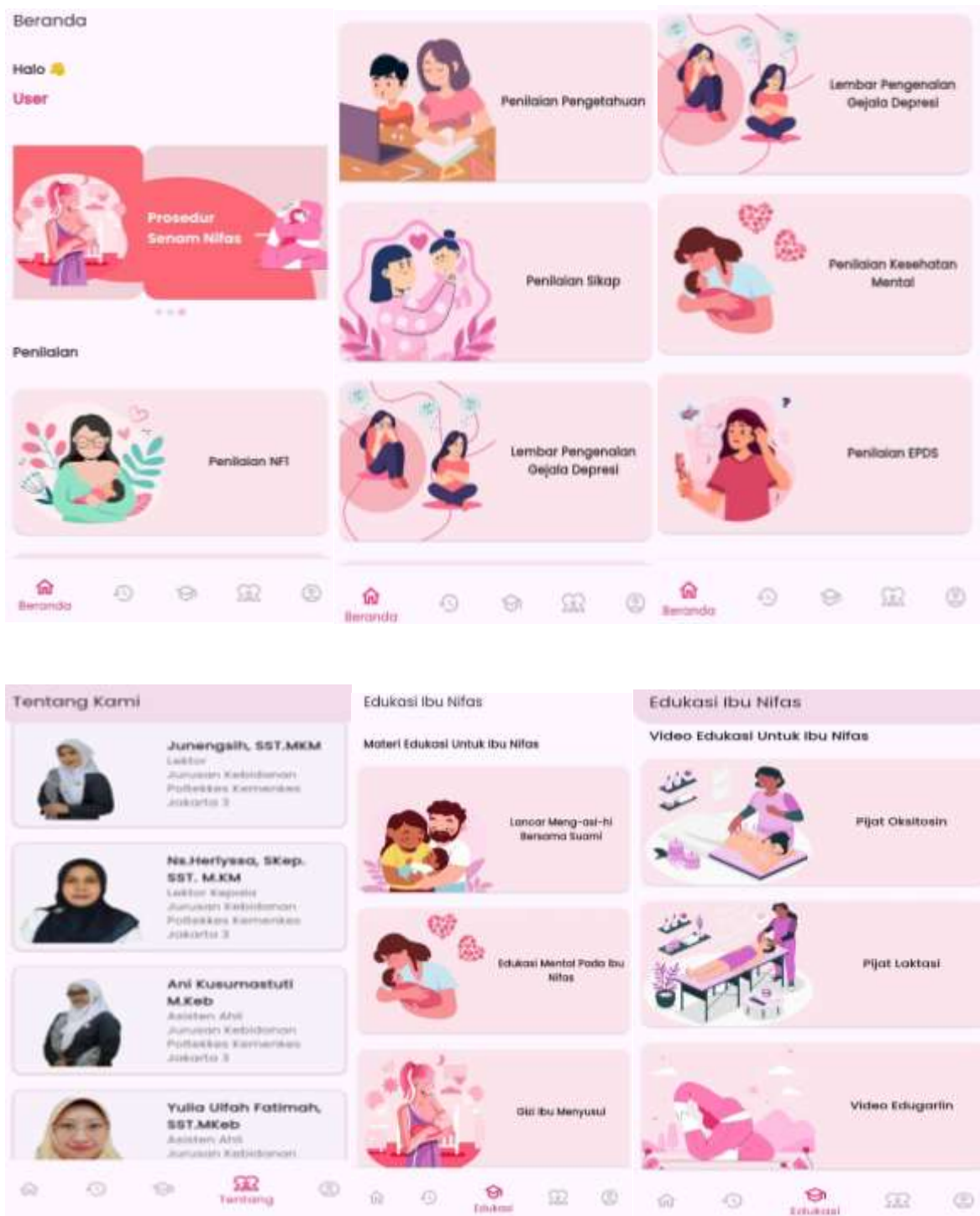


Figure 1. Initial Stages of Postpartum Fitness Application

In the initial stages of product development, the focus was only on assessing the risk of postpartum danger signs and assessing the mother's knowledge, attitude and independence in improving postpartum fitness.

## 2. Second stage product creation

There was a name change, which was initially named the post-natal fitness application, to the Edugarlin Application, which is easier to remember and is an abbreviation of Post-natal).



**Figure 2. Edugarlin Application Product Revision**

In the final stage, it is equipped with an edugarlin application cover, redesigned images, color improvements and revisions to the assessment scores based on input from material experts and media experts.

## 5. Stage 5: Carrying out Expert Tests

**Table 3: Results of Material Expert Tests**

Number	Test Phase	Score	Results
1	Application Test Phase 1	82, 1 %	Decent
2	Application Test Phase 2	84%	Decent
3	Application Test Phase 3	89,3%	Very Decent

Based on the material expert test table, the media development at each stage showed an increase in scores towards the very feasible criteria (89.3%).

**Table 4: Media Expert Test Results**

No	Test Phase	Score	Results
1	Application Test Phase 1	83 %	Decent
2	Application Test Phase 2	85 %	Decent
3	Application Test Phase 3	93,8 %	Very Decent

Based on the media expert test table, it is also explained that media development at each stage shows an increase in scores towards the very feasible criteria (93.8%).

## 6. Stage 6: Product Revision

Product revision in the research in line with the product manufacturing process was carried out 3 times based on the input from material experts and media experts. The results of the product revision can be seen in Figure 1 and Figure 2

## 7. Stage 7: Field Testing

The field test was conducted by providing the edugarlin application to 7 postpartum mothers to use after entering the postpartum period. It began with an explanation of the use of media and the form of reporting made by the client as evidence of the application of the edugarlin application. The following are the results of the postpartum respondent usage test regarding the appearance, content of the material and the benefits of the edugarlin application, which can be seen in the following table:

**Table 5: Results of Usage Test by postpartum mothers respondents**

<b>Number</b>	<b>Item</b>	<b>Score</b>	<b>Hasil</b>
1	View	85%	Decent
2	Content Assessment material	91,2%	Very Decent
3	Usefulness	99,5 %	Very Decent

Effective media can increase audience engagement and understanding, so choosing the right education format is very important. Postpartum care has a higher success rate if the mother and family have good basic knowledge. Health education is a factor in creating good and proper health, postpartum mothers can easily adapt to various changes that occur and are able to carry out their new roles. (Olajubu et al., 2020) Health education is delivered using methods that have been adjusted to the needs of the target. These methods include using print media or other health media that have an impact on changing the community's response to health. One of the innovations in education methods that can be developed today is by utilizing information technology and the internet. Innovation in utilizing information technology and the internet as a medium for postpartum education has a high potential for success today. A survey conducted by the Indonesian Internet Service Providers Association (APJII) found that internet users in Indonesia had reached 215.63 million people in 2023. (Farhati et al., 2023) Internet use is carried out through devices such as computers, laptops, and smartphones. Smartphones are the most popular devices among the public. As many as 192.5 million Indonesians use smartphones in 2022. Generally, people will surf the internet, access social media through software commonly called applications. Applications can be created and designed in such a way that they are in accordance with their purpose. The internet through the use of applications has very complete information, this development can be utilized to help improve the quality of public health. The less than optimal awareness in Indonesia regarding the importance of postpartum health is influenced by facilities, medical personnel, inadequate infrastructure, and uneven counseling (DeGroot et al., 2021) The gap can be overcome with the approach and use of information technology. Postpartum mothers need quality education and health services for the care of postpartum mothers and their newborn babies without disrupting the postpartum mother's lifestyle. In health education, providing information as an educational effort can be combined with various media. (Sampselle et al., 1999) The use of information technology is currently being intensively promoted to the point of changing almost all aspects of human life where IT plays a very important role in life. Thus, the existence of an android application that plays a role as a media for education on postpartum maternal care is highly expected to increase mothers'

knowledge about psychological changes, danger signs, needs, and postpartum maternal care. Health education can be delivered through social media which functions to increase health efforts and knowledge and make it easier for postpartum mothers to understand their postpartum period. This statement is in line with Notoadmojo that the knowledge, attitudes, and actions of community members related to health can be improved through media-based education.(Junengsih, Jehanara, Shentya Fitriana, 2023). However, the study's strengths lie in the EDUGARLIN application, which evaluates maternal fitness during the puerperium and provides valuable educational resources for respondents. Some limitations of this study include: not all postpartum women have adequate access to devices or internet connections, which may limit participation and reduce optimal utilization of the application. In addition, differences in technological mastery can be an obstacle, especially for mothers who are less familiar with apps or digital devices, which may affect their understanding of the content provided. Some mothers may face difficulties in following guidelines or instructions provided through the app without direct support. Apps are also less able to detect physical or emotional changes that require quick intervention. As the app relies on inputs from the user, the data obtained may not reflect the true condition if the user does not report their progress consistently or is not completely honest. The app also lacks personal interaction compared to face-to-face services, which may make mothers feel less emotionally or psychologically supported, a very important aspect of postpartum care. Each mother has different health needs during the postpartum period, so the app may struggle to tailor its content to individual needs, which could affect its effectiveness with each mother. Furthermore, the application includes education on mental health for postpartum mothers, enhancing their overall well-being.

## **CONCLUSION**

Utilization of the Edugarlin Application can be an effective method to improve postpartum mothers' knowledge about improving the quality of healthy postpartum. The results of interviews with experts showed that a deep understanding of nutrition and postpartum fitness is needed to improve the quality of healthy postpartum. Although participants have basic knowledge of nutrition, many of them do not fully understand the issues of mental or psychological health during the postpartum period and how to prevent them. Therefore, the use of educational media such as Android Applications that can convey information in an interesting and interactive way is expected to increase the involvement of postpartum mothers. This study contributes to efforts to improve the quality of healthy postpartum by providing relevant and comprehensive materials, especially



for new mothers, thus supporting the government's goal of reducing common problems that occur in the postpartum period

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