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# "Breastfeeding SOS" Model to Increase Mother's Relaxation as A Preparedness for the Covid-19 Pandemic

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***Abstract***

*Background: WHO has declared Covid-19 a global pandemic. To minimize the spread of the virus, the Indonesian government has implemented a call to maintain distance and avoid crowds. Disasters and the COVID-19 pandemic can cause postpartum mothers to experience anxiety. This causes breast milk production to decrease, thereby risking reducing the duration of breastfeeding, both exclusive and breastfeeding, by up to two years. Therefore, easily accessible and effective treatment using Android-based applications is essential. Providing oxytocin stimulation and SEFT (breastfeeding SOS) is expected to reduce postpartum mothers' anxiety, increasing relaxation and breast milk production. This research aims to develop the "SOS breastfeeding" model of Oxytocin Stimulation therapy and SEFT, an Android-based application for breastfeeding mothers who experience anxiety, to increase maternal relaxation as preparedness for the COVID-19 pandemic. Methods: The research method used is the method of research and development (R&D). The research stage was a preliminary study by conducting a needs analysis/need assessment. Using a draft model, the second stage of model development was developed through FGD by a team of experts, and then a limited initial test was carried out. After that, product revisions were carried out. In this research, effectiveness testing and product finalization were carried out. Results: The age of respondents is generally 20-35 years, as much as 62%, the parity of respondents is generally primipara, as much as 47%, the highest education of respondents is high school, as much as 40%, the highest occupation of respondents is housewife 39%. the majority of respondents perceived the use of the application as quite helpful (65%). The breast milk fluency score before therapy was 58.63, and the breast milk fluency score after therapy was 88.7. The statistical test results show a p-value of 0.0001, which means there is a difference in the average breast milk flow score before and after therapy in breastfeeding mothers. Conclusion: The Android-based SOS breastfeeding application is an application that helps mothers reduce anxiety and increase breast milk production because mothers can carry out oxytocin and SEFT stimulation actions independently by viewing the Android-based SOS breastfeeding application.*

***Keywords:*** *Android Application, SEFT, Breastfeeding SOS, Oxytocin Stimulation.*

## Introduction

Disaster conditions and the COVID-19 pandemic mean people must keep their distance. This situation can cause postpartum mothers to become anxious (Perz et al., 2022; Porcelli, 2020). Therefore, developing a program to reduce anxiety in breastfeeding mothers can increase the relaxation of postpartum mothers, thereby increasing breast milk production. It is hoped that the development of an Android-based application program can overcome the problem of anxiety in breastfeeding mothers by minimizing the need for face-to-face meetings (Perz et al., 2022; Setiawan et al., 2021).

Anxiety is fear with no clear object or reason (Hilliard et al., 2020; Sun et al., 2019). The level of anxiety can be divided into mild, moderate, severe, and panic anxiety (Hamm, 2020; Tokgoz et al.,

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2022). Women are at risk of experiencing anxiety compared to men. The postpartum period is associated with many psychosocial stressors, new roles, and responsibilities as a mother (Hazelgrove et al., 2021; Saur & dos Santos, 2021). Disaster conditions, both natural and man-made disasters, as well as the Covid-19 pandemic are situations that increase anxiety for breastfeeding mothers (Ceulemans et al., 2021; Karmiyati & Sari, 2018; Saddik et al., 2020). Nursing mothers who experience anxiety will shorten the duration of breastfeeding and make the mother stop breastfeeding exclusively (Hoff et al., 2019; Jalal et al., 2017; Mikšić et al., 2020).

Breastfeeding problems are influenced by reduced stimulation of the hormone oxytocin, a physical and psychological impact on the mother during the breastfeeding process. Therefore, the preparation of postpartum mothers is an important factor that can influence the success of breastfeeding, stress, excessive worry, and unhappiness play a role in successful breastfeeding. Oxytocin stimulation is one of the preferred interventions to stimulate the release of oxytocin thereby stimulating breast milk production (Lestari et al., 2019). The oxytocin stimulation that will be developed in this research is massage starting from the back, feet, hands, face, and breasts (Chen et al., 2020; Kartilah & Februanti, 2023; Takahashi, 2021).

The spiritual Emotional Freedom Technique (SEFT) is a new method with relaxation techniques that combine body system techniques and spiritual therapy using pressure on certain points of the body to neutralize physical and emotional problems. One of the effects of administering SEFT is to reduce patient anxiety (Dincer & Inangil, 2021). SEFT overcomes anxiety problems based on the main root of the problem through a setup process that will be carried out and can influence the human subconscious by self-suggestion, and there are technical elements of movement desensitization repatterning (EMDR) via nine gamut procedure (eye movements) to handle anxious emotions and stimulate the balance of the left brain and the right brain (Church et al., 2020; Fadli et al., 2020). The purpose of this study was to develop the "SOS breastfeeding" model of Oxytocin Stimulation therapy and SEFT, an Android-based application for breastfeeding mothers who experience anxiety, to increase maternal relaxation as preparedness for the COVID-19 pandemic.

## Methods

This research uses the research & development (RnD) method. Steps of the Research & Development (R & D) method (Carvajal et al., 2022):

1. Preliminary study by conducting needs analysis/need assessment. A needs analysis was carried out to capture the desires of respondents that were needed to support the formation of the draft model. A preliminary study was conducted in 2021. Research members conducted a preliminary study in the form of testing the effectiveness of oxytocin stimulation massage and EFT for anxiety and the smoothness of breast milk in breastfeeding mothers. Respondents will be evaluated if the intervention is carried out independently using the application.
2. Model development. The draft model that has been prepared is further developed Focus Group Discussion (FGD). Respondents entered via the Android-based "SOS breastfeeding" application. Respondents measured their anxiety according to how they felt. After that, respondents were again measured for their anxiety and the smoothness of breast milk production. The researcher revised the validation. The next stage is the validation model which has been revised and carried out limited trials and by-products. Implementation of limited trials by running a model and by-products. Limited testing was carried out on 10 postpartum mothers. Application development goes through 2 development stages, namely

the application development and testing stages. Application testing consists of alpha testing and beta testing. Beta testing uses a questionnaire, consisting of the variable's usability, ease of use, and ease of learning.

3. The product resulting from limited trials was tested for effectiveness on 100 respondents and produced the final product.

This research has carried out an ethical feasibility test from KEPK Poltekkes Kemenkes Tasikmalaya No.KP/KEPK/0140/2022.

## Results

The research results can be seen in figures 1, 2, 3, and tables 1, 2, 3

**Figure 1:** Display in Play Store.

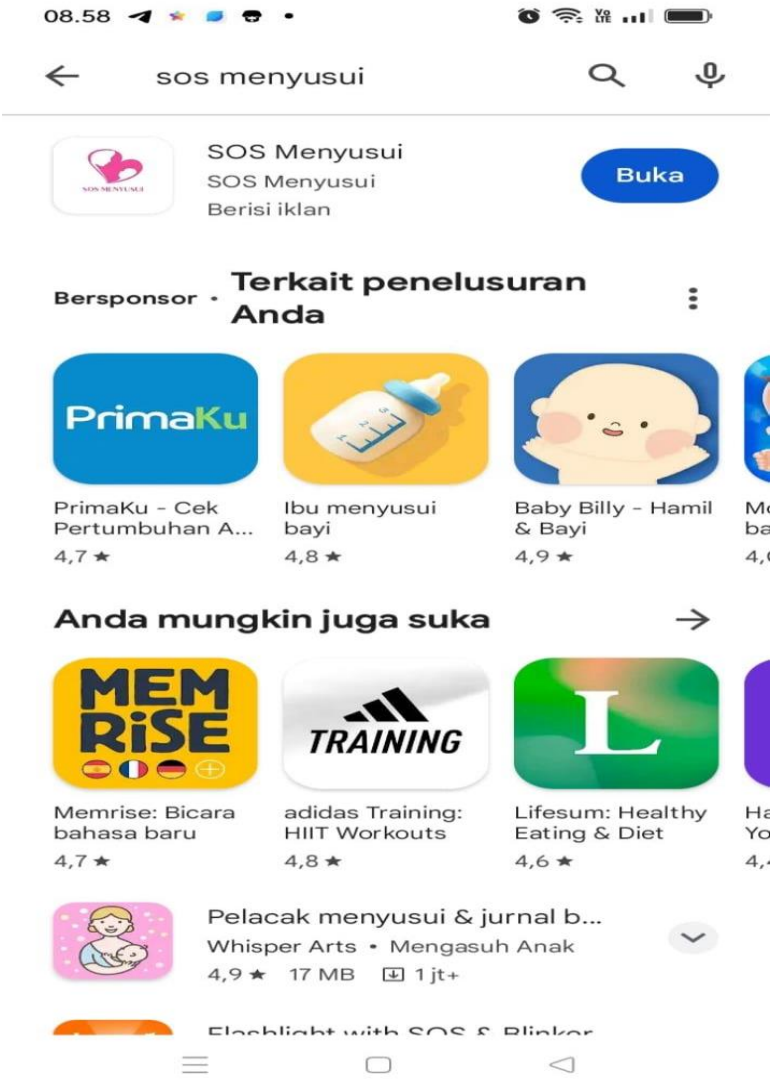

**Figure 2:** Breastfeeding SOS" Display

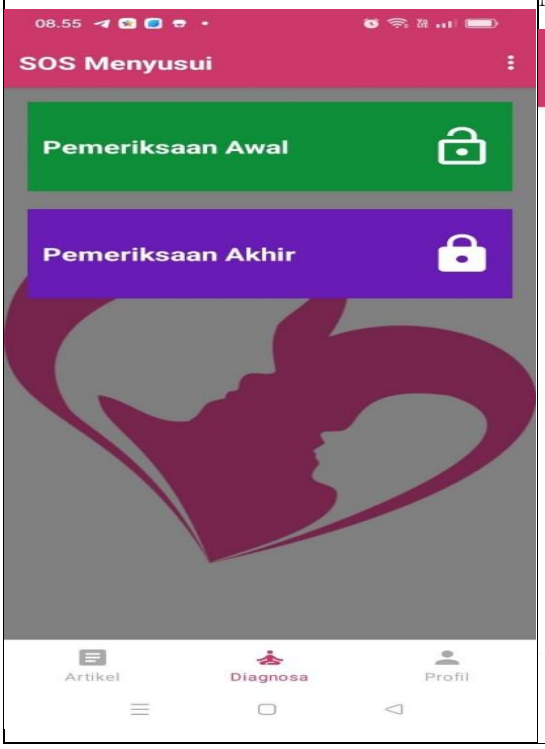


**Figure 3:** Display of Measurement Indicators for Mother, Baby, and Anxiety Test.

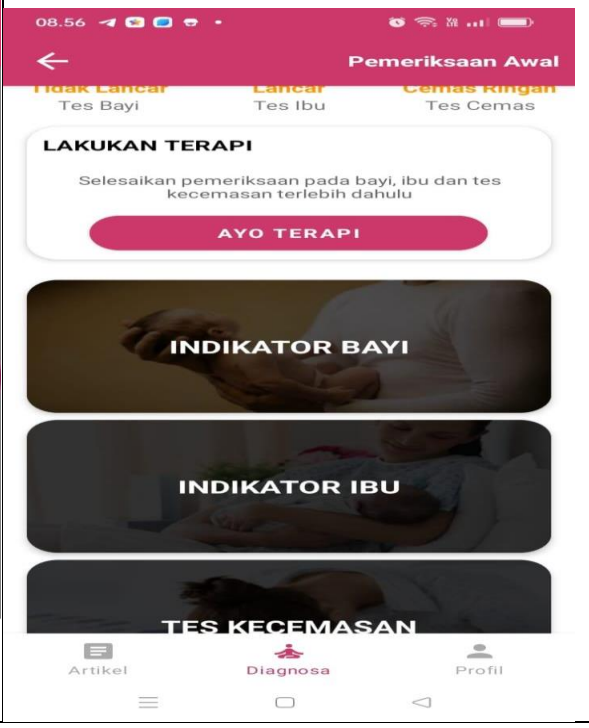


**Table 1:** Frequency Distribution of Respondents Based on Age, Parity, Highest Level of Education, Occupation.

| Characteristics | Amount | % |
|---|---|---|
| Age | | |
| <20 years | 13 | 13 |
| 20-35 years | 62 | 62 |
| >35 years | 25 | 25 |
| Parity | | |
| 1 | 47 | 47 |
| 2 | 31 | 31 |
| 3 | 19 | 19 |
| >3 | 3 | 3 |
| Education | | |
| Elementary school | 16 | 16 |
| Junior High School | 34 | 34 |
| Senior High School | 40 | 40 |
| College | 10 | 10 |
| Work | | |
| Housewife | 39 | 39 |
| Work at home | 25 | 25 |
| Work outside the home | 36 | 36 |

In Table 1, it can be seen that the ages of respondents are generally 20-35 years old (62%). Based on parity, the largest number of respondents were those who had 1 child (primipara) at 47%. Based on education, the largest number of respondents were in the high school education category (40%). The occupation of most respondents is a housewife as much as 39%.

**Table 2:** Distribution of Respondents in Perceiving the Usefulness of The Application.

| Category | Amount | % |
|---|---|---|
| Very helpful | 29 | 29 |
| Quite helpful | 65 | 65 |
| Not helpful | 6 | 6 |
| Amount | 100 | 100 |

In Table 2, it can be seen that the majority of respondents perceive the use of the application as quite helpful (65%).

**Table 3:** The Difference in Average Breastfeeding Fluency Score Between Before Therapy and After it Was Achieved in Breastfeeding Mothers.

| Variable | Average Breast Milk Fluency Score | SD | Mean difference | *p - value* |
|---|---|---|---|---|
| Breast Milk Fluency Score Before Therapy | 58,63 | 24,68 | 30,07 | 0,0001 |
| Breast Milk Fluency Score after therapy | 88,7 | 14,8 | | |

In Table 3, it can be seen that the breast milk fluency score before therapy was 58.63 and the breast milk fluency score after therapy was 88.7. The statistical test results show *a p-value* of 0.0001, which means there is a difference in the average breast milk flow score before and after therapy in breastfeeding mothers.

## Discussion

Breast milk is a source of nutrients needed for the growth and development of babies (Boix-Amorós et al., 2019; Demirci et al., 2019; Karcz & Królak-Olejnik, 2021). Breast milk contains immunological components that act as anti-infectives and play an important role in forming the baby's immunity(Boix-Amorós et al., 2019; Yi & Kim, 2021). WHO recommends exclusive breastfeeding for babies aged 0-6 months, meaning that babies only get breast milk without any other food/drink except medicine and vitamins (A. M. R. Hasan et al., 2020; WHO, 2001).There are many advantages to providing breast milk for mother and baby (McCloskey & Karandikar, 2019). However, not all postpartum mothers can breastfeed exclusively. The reason mothers do not breastfeed exclusively is because mothers experience anxiety, so breast milk production does not run smoothly (Coo et al., 2020). There are several ways to overcome the problem of irregular milk production experienced by postpartum mothers, including using oxytocin stimulation and Spiritual Emotional Freedom Therapy (SEFT). Oxytocin stimulation has been proven to be effective in helping breast milk production so that breast milk becomes smooth(Kartilah & Februanti, 2023; Lestari, Rahmawati, Windarti, et al., 2019). Apart from that, giving SEFT helps mothers reduce anxiety in postpartum mothers so that breast milk production runs smoothly (Bach et al., 2019; Lisarni et al., 2022).

According to WHO, women's reproductive age ranges from 15-49 years (WHO, 2020). Meanwhile, reproductive age according to the CDC is in the age range 15-44 years (Ellington et al., 2020; Zambrano et al., 2020). Even though the reproductive age range is 15-44 years, the safest reproductive age for women to have children and breastfeed is in the range of 20-35 years. Primiparas are mothers who give birth to their first child. Currently, there are many ways to access information independently. However, for primiparous mothers who can only access a little information, information about how to breastfeed is lacking. Therefore, it is necessary to build an appropriate health education model for primiparas to increase this knowledge (Tang et al., 2023). Most respondents' education was high school. High school education is a category of secondary education. Education is a process of developing all human abilities and behavior through knowledge so in education it is necessary to consider age (the client's development process) and the relationship with the learning process. The level of education is also a factor that influences a person's

perception or acceptance of ideas and technology (Chavoshi & Hamidi, 2019). The higher a person's education, the easier it is to accept ideas and technology. Mothers who have secondary education and above know the advantages of exclusive breastfeeding and the disadvantages of giving formula milk (M. Hasan et al., 2021). Most of the respondent's occupation is housewife (IRT). A housewife does not mean a mother who does not have a job. Housewives have household work that can be done at any time, meaning mothers can arrange time to do their work, including breastfeeding. Therefore, housewives have a lot of time to do any activities including breastfeeding their babies (Ayele, 2020; Islam & Kabir, 2021).

Current technological advances allow everyone to maximize the function of a smartphone by downloading applications that facilitate access to various information (Kurniasih et al., 2022; Mayasari & Jayanti, 2020). The SOS breastfeeding application was designed to increase maternal breast milk production and reduce postpartum anxiety by stimulating oxytocin and SEFT independently, making things easier for people.

Respondents generally stated that the SOS breastfeeding application was quite helpful in using the application. For respondents who use the SOS breastfeeding application, this application is considered quite helpful in breastfeeding. Mothers feel that their anxiety is reduced after doing SEFT by following the methods presented in the SOS breastfeeding application. Apart from that, breast milk production becomes smooth. Respondents generally said the Android-based breastfeeding SOS application was an interesting additional source of support (Handoyono & Rabiman, 2020; Klingemann & Wieczorek, 2022) This media is a motivation for respondents to carry out oxytocin and SEFT stimulation activities independently, without having to be assisted by health workers.

## Conclusion

The Android-based SOS breastfeeding application is an application that helps mothers reduce anxiety and increase breast milk production because mothers can carry out oxytocin and SEFT stimulation actions independently by viewing the Android-based SOS breastfeeding application

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### Conflict of Interest Statement

None declared.

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