

## The Effect Of Tele Education On Increasing The Self-Efficacy Of Pregnant Women In Sumatera Barat Province

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**ABSTRACT.** Self-confidence is built by knowledge obtained through an accessible educational process, one of which is through tele-education. The treatment given was in the form of education using the whatsapps (WA) application in group forums for classical education and private lines for personal counseling sessions. The research population is all pregnant women in Indonesia. The sample was selected using a convenience sampling technique. A total of 53 subjects were obtained through online media based on inclusion criteria, including: 28-39 weeks of gestation, declared their ability to participate in the tele-education program using the WhatsApps application, and had an active WhatsApps account. The self-efficacy of pregnant women was measured using the Childbirth Self-Efficacy Inventory (CBSEI) questionnaire presented before and after the intervention. Data were analyzed using Paired T-Test. Most of the respondents were aged 31-35 years, housewives, had high school and university education, and were pregnant for the first time. Analysis test to get sig. (2-tailed) of  $0.004 < 0.05$ , and the value of  $t_{count}$  is greater than  $t_{table}$  ( $3.067 > 2.098$ ). Tele education affects the self-efficacy of pregnant women in facing childbirth.

**Keywords:** Self-Efficacy, Delivery, Tele Education, Pregnant Women, Antenatal Care

### INTRODUCTION

Childbirth is one of the major experiences in a woman's life (Ali, Azam, Ali, Tabbusum, & Moin, 2022). This means that a negative birth experience is associated with negative feelings and also poor preparation for childbirth (Nystedt & Hildingsson, 2022). In this phase, assistance that is prepared in a structured manner and based on the needs of pregnant women is very much needed (Finlayson et al., 2023). The orientation of mentoring is aimed at achieving a sense of security, comfort and satisfaction with her experience of pregnancy and childbirth so that women are confident in themselves (Howarth, 2022).

Self-efficacy is a person's ability to adapt to the special situations they face (Flammer, 2023). The level of self-efficacy of pregnant women is related to the quality of labor and lactation (Schwartz et al., 2023). Self-efficacy is significantly related to fear of facing childbirth (Lowe, 2000; Schwartz et al., 2023). The cause of fear among pregnant women is largely due to their ignorance about what to prepare (Striebich, Mattern, & Ayerle, 2022), so education about the birth process is very important. Childbirth preparation education from the time of pregnancy contributes greatly to the ability to care for the pregnancy properly (Hollins Martin & Robb, 2023).

After the COVID-19 pandemic, people have become accustomed to online-based health services as a result of restrictions on direct interactions, one of which is virtual

antenatal services. Faizmillati (2022) found that the level of compliance of pregnant women with antenatal care counseling with health workers increased through telehealth. The level of satisfaction of pregnant women with telehealth-based services tends to be higher because pregnant women feel more comfortable, are free to express their complaints and needs because they feel they receive more personal attention (Purbaningsih & Hariyanti, 2020) and get the right information according to their needs (Dheanetta Afansa Firdaus<sup>1</sup>, Astika Gita Ningrum<sup>1</sup>, 2022).

The accumulation of positive experiences of pregnant women accessing telehealth services in the form of opportunities for better health attitudes and behavior (Petalina & Eggy Widya Larasati, 2021). Even though telemedicine-based services have many advantages as evidenced by the level of satisfaction and compliance of pregnant women in contact with health workers, service providers must pay attention to good educational and technical content. Palifiana Arthyka, Khadijah, & Zakiyah (2019) implemented a telehealth program for 40 pregnant women with the main focus of providing education about physical, mental, spiritual and cultural preparation of mothers for childbirth through classical WhatsApp lectures. Measuring the results of the intervention using a questionnaire.

## **RESEARCH METHODS**

This research is a quasi-experimental approach with a pre and post only test design. The treatment provided is in the form of education about preparation delivery using the WhatsApp (WA) application in group forums for classical education and private channels for personal counseling sessions. The research was carried out in June-September 2023. The role of the researcher is as a program designer as well as an educator and counselor. Classical educational material via the WA group includes: dealing with pregnancy complaints or discomfort, detecting danger signs of pregnancy, a complete description of all stages of labor, breathing control techniques during labor, recommended productive activities during pregnancy and the first stage of labor, as well as providing psychological and spiritual support. Personal interaction sessions between providers and respondents discuss each respondent's specific complaints, as well as support needs appropriate to their respective situations. The research population was all pregnant women in Indonesia. The sample was selected using convenience sampling technique. A total of 53 subjects were obtained through online media based on inclusion criteria, including: gestational age 28-39 weeks, stating their ability to take part in tele-education programs using the WhatsApp application, and having an active WhatsApp account.

Data collection was carried out in two stages, namely before and after implementing the intervention. The questionnaire was presented to respondents using the Google Form application. Explanations regarding question items and how to answer them are explained via WhatsApp chat communication. The Childbirth Self-Efficacy Inventory (CBSEI) questionnaire was used to assess the level of self-efficacy of pregnant women. This questionnaire consists of two sub-scales, namely: outcome expectancy and efficacy expectancy. Each sub-scale consists of 16 items with a score range of 16-160. A higher score indicates a high level of expectancy and efficacy scores. The CBSEI questionnaire has a good level of consistency,  $\alpha=0.82$  (Ip, Chung, & Tang, 2023). Data were analyzed using Paired T-Test.

## RESULTS AND DISCUSSIONS

From univariate analysis it is known that the majority of respondents were aged 31-35 years, housewives, had a high school or bachelor's degree, and were pregnant for the first time. The areas of origin of respondents varied from 10 provinces, with the largest number coming from Sumatera Barat. Bivariate analysis using the t test obtained a sig value. (2-tailed) is  $0.004 < 0.05$ , and the tcount value is greater than ttable ( $3.067 > 2.098$ ), which means that tele-education has an effect on pregnant women's self-efficacy in facing childbirth.

**Table 1. The effect of telemedicine on self-efficacy for facing childbirth**

Mean	Std. dev	Lower	Upper	t	df	Sig.(2-tailed)
2.792	6.461	1.011	4.573	3.067	52	0.004

*Source: primer analysis (2021)*

This research aims to determine the effect of tele-education on pregnant women's self-efficacy in facing childbirth. The findings of this study indicate that the educational content and techniques in the intervention are able to increase the self-efficacy of pregnant women. The interaction between respondents and researchers via classical and personal tele-education for four weeks significantly increased their confidence in facing childbirth.

These results are relevant to Whittington, Ramseyer, & Taylor (2020) who found that patients were satisfied with telemedicine services that were packaged personally for each patient. This service model benefits patients in terms of time, because there is no need to spend time getting to the provider's location and there is no need to wait in line because the patient and provider make a custom plan for each patient. Providers located in areas far from the city center still have the opportunity to expand their service reach.

Doaltabadi (2021) conducted research by combining face-to-face and tele health services for primigravida. As a result, respondents had a much more positive birth experience

compared to patients who received face-to-face services only. This shows that telecommunication using the WhatsApp application is able to provide a good experience for patients because there is a positive perception about the provider's acceptance of patients as they are. Personal guidance according to the patient's needs can help reduce the anxiety of pregnant women (Byrne, Hauck, Fisher, Bayes, & Schutze, 2023), because in the process the patient finds someone who is familiar and directs them exclusively about what they should think and do.

## **CONCLUSION**

Tele education helps pregnant women increase their self-efficacy in facing childbirth.

## **SUGGESTION**

It is recommended for future researchers to examine expectations and tele-education needs of pregnant women using a qualitative approach, the results of which are very useful for providers designing approaches, methods, content and techniques that best meet the expectations of pregnant women..

## **REFERENCES**

- Ali, N. S., Azam, I. S., Ali, B. S., Tabbusum, G., & Moin, S. S. (2022). Frequency and associated factors for anxiety and depression in pregnant women: A hospital-based cross-sectional study. *The Scientific World Journal*, 2022. <https://doi.org/10.1100/2022/653098>
- Arisonaidah, Y., Amir, Y., Harnani, Y., Hang, S., & Pekanbaru, T. (2022). Efektifitas kelas ibu hamil melalui aplikasi WhatsApp terhadap pengetahuan tentang bahaya kehamilan. *Journal of Midwifery Sempena Negeri*, 2(2), 66–73. Retrieved from <http://ejournal.sempenanegeri.ac.id/index.php/jk/>
- Byrne, J., Hauck, Y., Fisher, C., Bayes, S., & Schutze, R. (2023). Effectiveness of a mindfulness-based childbirth education pilot study on maternal self-efficacy and fear of childbirth. *Journal of Midwifery & Women's Health*, 59(2), 192–197. <https://doi.org/10.1111/jmwh.12075>
- Cahyati, E. W., Sariatmi, A., & Fatmasari, E. Y. (2021). Perbedaan tingkat kepuasan ibu hamil pendampingan langsung dan telemedicine selama pandemi Covid-19. *Jurnal Kebijakan Kesehatan Indonesia: JKKI*, 10(4), 191–196. Retrieved from <https://journal.ugm.ac.id/jkki/article/view/67645>
- Dheanetta Afansa Firdaus, A., & Astika Gita Ningrum, A. (2022). Dampak model baru pelayanan kehamilan dengan kondisi psikologis ibu hamil selama pandemi Covid-19: Literature review. *Syntax Literate: Jurnal Ilmiah Indonesia*, 7(1), 154–1261.

- Doaltabadi, et al. (2021). The effect of face-to-face and virtual prenatal care training of spouses on the pregnancy experience and fear of childbirth of primiparous women: A controlled quasi-experimental study. *Journal of Telemedicine and Telecare*. <https://doi.org/10.1177/1357633X211024101>
- Faizmillati. (2022). Perbedaan kepatuhan kunjungan ANC virtual dan non-virtual pada wanita hamil pada masa pandemi COVID-19. *Jurnal Kebidanan*, 11(1), 25–33. <https://doi.org/10.35890/jkdh.v11i1.205>
- Finlayson, K., Downe, S., Hinder, S., Carr, H., Spiby, H., & Whorwell, P. (2023). Unexpected consequences: Women's experiences of a self-hypnosis intervention to help with pain relief during labour. *BMC Pregnancy and Childbirth*, 15(1), 1–9. <https://doi.org/10.1186/s12884-015-0659-0>
- Flammer, A. (2023). Self-efficacy. *International Encyclopedia of the Social & Behavioral Sciences: Second Edition*, 4(1994), 504–508. <https://doi.org/10.1016/B978-0-08-097086-8.25033-2>
- Hollins Martin, C. J., & Robb, Y. (2023). Women's views about the importance of education in preparation for childbirth. *Nurse Education in Practice*, 13(6), 512–518. <https://doi.org/10.1016/j.nepr.2023.02.013>
- Howarth, A. (2022). Skills-based childbirth and coaching preparation: Self-efficacy and other psychological birth outcomes for first births (University of Otago, Dunedin). Retrieved from <https://ourarchive.otago.ac.nz/handle/10523/7845>
- Ip, W.-Y., Chung, T. K., & Tang, C. S. (2023). The Chinese childbirth self-efficacy inventory: The development of a short form. *Journal of Clinical Nursing*, 0(0), 070915215333001. <https://doi.org/10.1111/j.1365-2702.2006.01919.x>
- Iva Satya Ratnasari, I. R., & Indah Rahmaningtyas, F. I. K. (2022). Penerapan penggunaan telehealth terhadap kepuasan ibu hamil pada masa pandemi Covid-19: A systematic review. *Jurnal Kesehatan Terpadu (Integrated Health Journal)*, 13(2), 33–35.
- Nystedt, A., & Hildingsson, I. (2022). Women's and men's negative experience of childbirth—A cross-sectional survey. *Women and Birth*, 31(2), 103–109. <https://doi.org/10.1016/j.wombi.2017.07.002>
- Palifiana Arthyka, D., Khadijah, S., & Zakiyah, Z. (2019). Edukasi telehealth pada ibu hamil sebagai upaya peningkatan pengetahuan tentang persiapan persalinan. *Journal of Chemical Information and Modeling*, 53(9), 1689–1699.
- Petralina, B., & Eggy Widya Larasati, E. L. (2021). Telehealth sebagai determinan pengetahuan, sikap dan perilaku klien pada masa pandemi Covid-19. *Jurnal Kesehatan Metro Sai Wawai Journal*, 14(1), 69–76.
- Purbaningsih, E., & Hariyanti, T. S. (2020). Pemanfaatan sistem telehealth berbasis web pada ibu hamil: Kajian literatur. *Jurnal Ilmiah Ilmu Keperawatan Indonesia*, 10(04), 163–171. <https://doi.org/10.33221/jiiki.v10i04.683>

- Schwartz, L., Toohill, J., Creedy, D. K., Baird, K., Gamble, J., & Fenwick, J. (2023a). Factors associated with childbirth self-efficacy in Australian childbearing women. *BMC Pregnancy and Childbirth*, 15(1), 1–9. <https://doi.org/10.1186/s12884-015-0465-8>
- Schwartz, L., Toohill, J., Creedy, D. K., Baird, K., Gamble, J., & Fenwick, J. (2023b). Factors associated with childbirth self-efficacy in Australian childbearing women. *BMC Pregnancy and Childbirth*, 15(1), 29. <https://doi.org/10.1186/s12884-015-0465-8>
- Striebich, S., Mattern, E., & Ayerle, G. M. (2022). Support for pregnant women identified with fear of childbirth (FOC)/tokophobia – A systematic review of approaches and interventions. *Midwifery*, 61(February), 97–115. <https://doi.org/10.1016/j.midw.2022.02.013>
- Whittington, J. R., Ramseyer, A. M., & Taylor, C. B. (2020). Telemedicine in low-risk obstetrics. *Obstetrics and Gynecology Clinics of North America*, 47(2), 241–247. <https://doi.org/10.1016/j.ogc.2020.02.006>