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The Effect of Home Visits on Depression and Anxiety in Pregnant Patients During COVID-19

Elisabeth MF Lalita[1a*], Dian Pratiwi[1b], Amelia Donsu[1c], Nancy Olii[2d]

[1] Department of Midwifery, Health Polytechnic, Ministry of Health, Manado, North Sulawesi, Indonesia
[2] Department of Midwifery, Health Polytechnic, Ministry of Health, Gorontalo, Gorontalo, Indonesia

[a] Email address: emflalita@gmail.com
[b] Email address: pratiwi.dian1826@gmail.com
[c] Email address: ameliyaks.donsu@gmail.com
[d] Email address: oliinancy7@gmail.com

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Abstract

Depression and anxiety during pregnancy can increase the risk of miscarriage, premature birth, low birth weight, low Apgar scores, and fetal death The past COVID-19 pandemic caused significant anxiety and infection fear, causing significant harm to pregnant women's lives. Public access to health services has changed during the COVID-19 pandemic. This study aimed to determine the effectiveness of pregnancy care home visits on depression and anxiety of pregnant women. Efforts should therefore be made to increase visits by pregnant women while maintaining health protocols during the pandemic. The research method is a Quasi-experimental design with one group pretest-posttest design. Sampling was carried out by purposive sampling with the inclusion criteria of pregnant women who did not re-examine at the Health Center for 1 month and pregnant women who were willing to be selected as respondents. obtained 28 pregnant women as respondents. The instruments used are the Edinburgh Postpartum Depression Scale (EPDS) questionnaire and the Hamilton Anxiety Rating Scale (HARS). The data analysis technique used the Paired Simple T-test. The results of the study showed that there was an increase in depression and anxiety during pregnancy during the COVID-19 pandemic, this data was obtained from interviews and pregnancy care with home visits. The depression rate at the initial data of 12.36 dropped to 3.50, and the anxiety rate of 22.46 dropped to 6.61 after being given prenatal care with home visits. In these difficult times, the need for prenatal health care can ensure the provision of protective and safe services and psychological screening of pregnant women at risk for depression to reduce long-term negative outcomes should be carried out.

Keywords: Depression, Anxiety, Home Visit Interventions.

Corresponding Author:

Elisabeth MF Lalita
Department of Midwifery, Health Polytechnic, Ministry of Health, Manado, North Sulawesi, Indonesia
Email: emflalita@gmail.com

1. INTRODUCTION

Depression and anxiety during pregnancy can increase the risk of miscarriage, premature birth, low birth weight, low Apgar scores, and fetal death (NICE, 2014)(Alder et al., 2007). The results of the study by Sahin and Kabakci, (2021) show that the coronavirus pandemic has great potential to create anxieties, difficulties, and fears that adversely affect pregnant women (Sahin & Kabakci, 2021) Other findings report that COVID-19 significantly impacts pregnant mental health (Fan et al., 2021).

The first case report coronavirus disease (COVID-19) from Wuhan described nine pregnant women diagnosed with COVID-19 in the third trimester of pregnancy (Nishiura et al., 2020)(Chen et al., 2020). The ongoing pandemic has caused extreme fear, resulting in an increased need for mental support (Public Health Ontario, 2020)(Ramanathan et al., 2020). Fear of infectious diseases negatively affects the psyche of pregnant women. Pregnancy can make some women more prone to anxiety and depression (Hayakawa et al., 2020).

Public access to health services in the era of the Covid-19 pandemic has changed due to *physical distancing* to prevent the spread of the virus by the community (Goyal et al., 2020)(Nurrizka, Nurdiantami, & Makkiyah, 2021). Efforts should therefore be made to increase visits by pregnant women while maintaining health protocols during the pandemic (Moekroni & Analia, 2016). This study aimed to determine the effectiveness of pregnancy care home visits on depression and anxiety of pregnant women.

2. RESEARCH METHOD

This type of research is *quasi-experimental* with design *a group pretest-posttest design.* Sampling was carried out by purposive sampling with the inclusion criteria of pregnant women who did not re-examine at the Health Center for 1 month and pregnant women who were willing to be selected as respondents and obtained 28 pregnant women as respondents. This research was conducted in Manado City, North Sulawesi Province, and carried out from February to August 2022. The instrument in this study used the *Edinburgh Postpartum Depression Scale* (EPDS) questionnaire. for depression measurement and using the *Hamilton Anxiety Rating Scale* (HARS) for measuring anxiety. The research technique was measured based on EPDS and HARS before and after home visits in providing pregnancy care with 9 points (weight and height, blood pressure, uterine fundus height, Fe tablets, interview/counselors, haemoglobin, urine protein examination, and breast care).

For data analysis for the normality of the data, parametric tests were carried out and checked by applying the Shapiro-Wilk test in the EPDS group and the HARS group, then using the *Paired Simple T-Test test.* The results of the analysis with a probability value of Sig (2-tailed) < 0.05. This research has been approved by the research ethics committee of the Manado Health Polytechnic Ministry of Health with number KEPK.01/07/106/2022.

3. RESULTS AND DISCUSSION

In this study, 28 pregnant women were willing to become respondents. In research during the pandemic, there were no respondents who were suspected, likely, or confirmed positive for Covid-19 infection and no one has reported Covid-19 infection in the household. The mean age of the respondents was 24.3 ± 5,005 with an age range of 18 to 36 years, and 75% of them were aged 20–34 years. Most pregnant women are high school graduates (67.9%), housewife workers (IRT) (60.7%), legally married status 89.3%, planning a pregnancy 64.3%, no pregnancy complications 75%, and the average level of knowledge The average respondent is 7.29 ± 1,117 with a range of 0 to 10, the impact of Covid-19 is social and economic on family income problems by 50%, and the effect of Covid-19 on psychology is that pregnant women

are afraid to leave the house 60.7%. During the pandemic, especially in endemic areas, pregnant women should be asked to stay at home, except for medical reasons.

The average score of depression level was 12.36 ±1,929 with a range of 8 to 15 on the EPDS scale before being given the intervention, then it decreased after being given the intervention with an average score of 3.50 ± 1,552 with a scale range of 1 to 7, and for the average score level Anxiety before intervention was 22.46 ±4.114 with a range of 14 to 29 on the HARS scale, then decreased to an average score of 6.61 ± 3,213 with a range of 2 to 12 on the scale (Table 1).

Table 1. Characteristics of Respondents

	Category n (%)	**Mean**	**Standard Deviation**
Maternal age		24.3	5.005
Gestational Age		30.21	3.436
Parity:			
Primi	12 (42.9%)		
Multigravida	15 (53.5%)		
Grandemulti	1 (3.6%)		
Education:			
Elementary-Junior	7 (25%)		
High School	19 (67.9%)		
Bachelor	2 (7.2%)		
Employment			
Household	17 (60.7%)		
Civil servant	11 (39.3%)		
Married Status:			
Yes	25 (89.3%)		
No	3 (10.7%)		
Planning Pregnancy:			
Yes	18 (64.3%)		
No	10 (35.7%)		
Pregnancy Complications:			
Complications of	7 (25%)		
Hypertension	4 (14.35%)		
Diabetes	1 (3.6%)		
Hyperemesis	2 (7.2%)		
Threatened Abortion	0		
No Complications:	21 (75%)		
Level respondent's knowledge about Covid (range 0-10)		7.2 9	1,117
Have a socio-economic effect during pregnancy			
family income,	4(50)		
loss of job	6 (21.4)		
of family members, they are Covid isolated	4 (14.3)		
none	4 (14.3)		
Does Covid have psychological effects such as being			

afraid to leave the house,	17 (60.7)	
afraid to do a pregnancy check	11 (39.3)	
none	0	
EPDS		
Pre Test	12.36	1.9 29
Post Test	3.50	1.552
HARS		
Pre Test	22.46	4.114
PostTest	6.61	3.213

Table 2. Test Results Paired Simple T-Test

Aspects	**t**	**df**	***p***	**mean**	**Std. Deviation**	**Lower limit**	**Upper limit**
Depression of pregnant women	37,836	27	0.001	8.857	1,239	8,377	9,337
The anxiety of pregnant women	56,557	27	0.001	15,857	1,484	15,282	16,432

Table 2 presents that the level of depression based on the EPDS was 12.36 to 3.50, as well as the anxiety level of pregnant women 22.46 decreased to 6.61 on the scale HARS after being given prenatal care. In-person home visits to pregnancy care can provide significant changes that can be addressed by the depression and anxiety that respondents experience. This can be proven by obtaining a *P* of 0.001. This study shows that pregnant women are vulnerable to changes in mental conditions during the COVID-19 pandemic and are entitled to special attention, namely by visiting their homes for prenatal care directly by complying with health protocols according to government rules that have been set. The results of research by Almas, et al. (2021) that three out of every ten pregnant women use antenatal care services, this is still a concern that it is necessary to prioritize maternal health services during COVID-19 and improve the quality of antenatal care services (Almas et al., 2021).

Problems with midwifery services can cause maternal and perinatal morbidity and mortality, especially among the most vulnerable (Roberton et al., 2020)(Kementerian Kesehatan Republik Indonesia, 2019) The pregnancy service program is a way to monitor and ensure the health of pregnant women is in normal condition and can detect complications if they occur Pregnancy care is important to ensure that the natural process of pregnancy is normal. Pregnancy can develop into problems or complications at any time, especially during the COVID-19 pandemic, which can increase the risk that is dangerous for women (Connor et al., 2020). Antenatal care is expected to detect risk factors and prevent and treat complications (Lalita, 2013).

Pregnancy can increase the tendency of anxiety and depression for most women, and changes in mental health status are often associated with fetal development, psychopathology, and maternal health. The COVID-19 pandemic can worsen pregnancy because the COVID-19 pandemic is a very stressful event that causes mental disorders such as depression and anxiety during pregnancy. The results of our study showed that the average pregnant woman experienced depression based on the EPDS assessment of 12.36 ± 1.929 and the level of anxiety based on the HARS was 22.46 ± 4.114 (Table 1). These findings indicate that all pregnant women sampled in this study experienced mild to moderate symptoms of depression and anxiety during the COVID-19 pandemic.

The results of this study are consistent with those of Perzow, et al. (2021). Match found increased symptoms of depression in several pregnant women during the pandemic (Perzow et al., 2021). Another study by Durankuş & Aksu (2020) found that 35.4% of pregnant women scored 13 or higher on the EPDS. These results are based on WHO reports that approximately 10% of pregnant women suffer from mental illness, particularly depression. Based on the results, it can be concluded that during the pandemic mental disorders occurred with a multiple of twice as large as the non-pandemic state (Durankuş & Aksu, 2020). Studies are needed to assess the effects of pandemic anxiety and depression on perinatal and postnatal outcomes, as well as long-term effects on fetal neurobehavior. Interventions should be prioritized to ensure optimal perinatal and infant mental status (Ayaz et al., 2020). Anxiety resulting from pregnant women hurts pregnancy, such as an increased risk of preeclampsia, depression, nausea, and vomiting, and can even lead to miscarriage, more anxiety maternal adverse effects on the newborn, such as low birth weight, growth restriction or low APGAR scores (Abazarnejad et al., 2019). In the study of Lebel et al., (2021) reported severe symptoms of depression and anxiety raise major concerns about the threat COVID-19 poses to the lives of mothers and babies, as well as unnecessary prenatal care, and relationship stress, It was associated with concerns about social isolation due to the COVID-19 pandemic (Lebel et al., 2021).

The global health crisis due to the Coronavirus (COVID-19) requires government and public action to contain the spread of the virus quickly and appropriately but ultimately has widespread economic and social consequences. The findings in this study are that 50% of respondents experienced a decrease in income due to the Covid-19 pandemic and there were even 21.4% of respondents experienced job losses (Table 1). This finding is like the results of research conducted by Mortazavi et al., (2021) that one of the predictors of concern for pregnant women is low family income. Other researchers have found that difficulties in household finances and unemployment can be risk factors for stress in pregnant women (Mortazavi et al., 2021)(Matsushima & Horiguchi, 2020).

Maternal occupation is one of the risk factors for pregnancy depression (Table 2). This is because most of the respondents play the role of caregiver in the family. Similarly, a study found that pregnant women working from home are at higher risk of developing depressive symptoms during the COVID-19 outbreak in China, therefore they need to balance their careers and family (An et al., 2021). Another risk factor is planning a pregnancy, in the study by Gomez, et al. (2018) reported that 37 out of 50 pregnant women did not plan to become pregnant. When a person is not trying to get pregnant, the client needs contraception from a healthcare provider to prevent unwanted or unwanted pregnancies (Gomez et al., 2018). Pregnancy is an important time for women to be at risk for stress and anxiety disorders. Therefore, with stress and anxiety in mind, all women plan to become pregnant and provide appropriate care to those at risk (Derya et al., 2021). Failure to reduce stress caused by individuals, families, and society can increase the incidence of postpartum depression. Therefore, during the COVID-19 pandemic, it is necessary to identify the sources of maternal stress early and eliminate them promptly.

During the pandemic there was a mental change in most of the respondents, they were afraid to do a pregnancy check-up, so antenatal services were needed to visit their homes directly, hear what their complaints were and provide counseling as a form of support that could overcome depression and anxiety experienced by pregnant women. Mortazavi, et al. (2021) reported that the percentage of women experiencing low welfare conditions is relatively high, this result needs to be considered by health service providers and policymakers (Mortazavi et al., 2021). During the COVID-19 pandemic, care and support for pregnant women, especially those who are disadvantaged, should be a top priority. Home visits are important to carry out pregnancy care so that it can ensure that the natural pregnancy process runs normally, but pregnancy can become a problem or complication at any time, especially during the COVID-

19 pandemic, which can increase the risk of harm for pregnant women. Antenatal care is expected to detect risk factors and prevent and treat complications. According to Maternal Neonatal Health, antenatal care or what is known as antenatal care is a routine procedure carried out by midwives which is one of the government programs to reduce maternal and perinatal morbidity and mortality.

The crisis we are facing today if managed properly can be an opportunity, and intervention is needed to overcome mental health. Interventions should be prioritized to ensure the optimal mental health of pregnant women and babies. Midwives can identify problems early and establish a comprehensive care plan for pregnant women in conditions such as extreme stress, emergency and conflict situations, and natural disasters. Therefore, it is necessary to screen or mentally identify pregnant women so that they can prevent the impact of postpartum parenting stress on the baby. Thus, the importance of home visits by healthcare workers during the COVID-19 pandemic helps them get through this particular period with less anxiety and less depression.

4. CONCLUSION

In this study, it was reported that with home visits, health workers providing pregnancy care directly at the patient's home can reduce depression and anxiety during pregnancy during the COVID-19 pandemic. In-person home visits to pregnancy care can provide significant changes that can be addressed by the depression and anxiety that respondents experience. This can be proven by obtaining p of 0.001. Essential health services, including prenatal care, are threatening and can increase maternal and perinatal mortality. In these difficult times, the need for antenatal care services can provide a guarantee of protective and safe services, and psychological screening of pregnant women who are at risk for depression to reduce long-term negative outcomes must be carried out. the need for further research on the long-term impacts of pandemic-related anxiety and depression on mothers and babies.

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