

# Involvement Medical Students In Postpartum Depression (PPD) Educational Program Among Community In Koper Village

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## Abstract

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*The significant role of family members and community including cadres in identifying and supporting the mother with PPD. However, there is a lack of knowledge and awareness of the disorder. The aim is to increase knowledge and awareness of the cadres, women, and their families, community toward PPD by involving medical students in Koper Village. The educational program of PPD was conducted on 29 Desember 2022 in Koper District, Banten Province with the involvement of five medical students and 44 participants. The program included presentation, discussion, pre and post testing questionnaires. Data was analyzed using the SPSS 26 program. Wilcoxon signed rank test as a non-parametric test for un-distributed normal data was used. A significance value of 0.000 asymp.sig was obtained. (2-tailed < 0.05). This can be concluded that there is a significant increasing knowledge and awareness of PPD among participants toward PPD before and after the program. The involvement of medical students in the program has had a crucial impact on increasing the knowledge and awareness of the cadres, women, their families, and community. The sufficient knowledge of the participants could help them in identifying and supporting the mother, as well as the participants may also help other community members to raise awareness about PPD.*

**Keywords:** PPD; educational program; medical student; cadres; community

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## Abstrak

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Peran penting anggota keluarga dan masyarakat, termasuk kader, dalam mengidentifikasi dan mendukung ibu dengan PPD sangatlah signifikan. Namun, masih terdapat kurangnya pengetahuan dan kesadaran mengenai gangguan ini. Tujuan dari program ini adalah untuk meningkatkan pengetahuan dan kesadaran kader, perempuan, keluarga, serta masyarakat terhadap PPD dengan melibatkan mahasiswa kedokteran di Desa Koper. Program edukasi mengenai PPD dilaksanakan pada 29 Desember 2022 di Kecamatan Koper, Provinsi Banten, dengan melibatkan lima mahasiswa kedokteran dan 44 peserta. Program ini mencakup presentasi, diskusi, serta kuesioner pre-test dan post-test. Data dianalisis menggunakan program SPSS 26. Uji Wilcoxon Signed Rank digunakan sebagai uji non-parametrik untuk data yang tidak berdistribusi normal. Nilai signifikansi yang diperoleh adalah 0,000 (asymp.sig), dengan (2-tailed < 0,05). Dengan demikian, dapat disimpulkan bahwa terdapat peningkatan yang signifikan dalam pengetahuan dan kesadaran peserta mengenai PPD sebelum dan sesudah program. Keterlibatan mahasiswa kedokteran dalam program ini berdampak besar dalam meningkatkan pengetahuan dan kesadaran kader, perempuan, keluarga, dan masyarakat.

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Pengetahuan yang cukup dari para peserta dapat membantu mereka dalam mengidentifikasi serta mendukung ibu dengan PPD, sekaligus membantu anggota masyarakat lainnya dalam meningkatkan kesadaran mengenai PPD.

**Kata-kata kunci:** PPD, program edukasi, mahasiswa kedokteran, kader, masyarakat

## Introduction

PPD is a common mental health problem affecting 10 to 20% of mothers globally (Wang et al., 2021). The number is estimated to be higher in low-income countries around 24,6% (Liu et al., 2021). The prevalence of postpartum depression in Indonesia is around 26.15% (Nurbaeti et al., 2018). During the transition stage to motherhood, they experienced significant physical, psychological, and social changes. These lead to vulnerability of women to the onset of PPD. PPD is defined as “a major depressive episode with peripartum onset and onset of mood symptoms that occurs during pregnancy or within 4 weeks following delivery” according to the Diagnostic and Statistical Manual of Mental Disorder (DSM-5) (American Psychiatric Association 2013). The symptoms reach a peak intensity between 2 and 6 months after giving birth (Ahmed et al., 2024).

The symptoms include low mood, low self-esteem, loss of interest, fatigue, tearfulness, guilty feelings, helplessness, anxiety and irritability. These conditions have negative consequences on the mother’s well-being, mother’s ability to provide optimal care for her infant, and her family members (Wan et

al., 2021). The long term impact could be a cognitive and motor development problems, while for mothers these included increasing risk of self-harm and morbidity (Orui et al., 2024).

The main risk factors of PPD related to several conditions including a history of PPD, mental illness during pregnancy, gestational diabetes, and a lack of family and community support. Other factors range from complications during pregnancy, to low socioeconomic status (Agrawal et al., 2022). Social support is crucial especially for primiparums within several weeks after giving birth (Karimah 2023).

The integration of mental health service is crucial in increasing service access and care provided to mothers with PPD. However, currently there is fragmentation of the service from the level of mental health services at puskesmas, self-help groups, NGOs concerned with mental health, public hospitals (RSU) to Mental health Hospitals (RSJ). The number of mental health services in primary health care in Tangerang District is also limited with only 9 out of 44 primary health care providing the service. A study by Nurbaeti in 2019 showed that 69 (33.5%) of the 206 postpartum mothers in Banten

Province experienced depression (Nurbaeti, 2019).

Based on these conditions above, a community service through educational programs play a crucial role in behavioral change of the community. The aim of community service is to increase the knowledge, understanding of the Koper Village community regarding postpartum depression disorders including their symptoms, prevention, and most importantly providing support for postpartum disorder mothers. This concern does support in achieving one of Sustainable Development Goals (SDGs), good health and well-being.

## Method

The program was carried out at the Koper Village Hall, Kresek District, Tangerang Regency, Banten Province by five medical students from YARSI University on December 29 2022. They had a significant role in planning and conducting the program. The stages of activity are as follows: 1) Survey; 2) Preparation; 3) Implementation; 4) Evaluation.

Survey and preparation was conducted by coordinating with local stakeholders to obtain program permission in the Koper Village, followed by an arranged meeting with the cadres to identify the problem and prepare the activity.

In the implementation stage, the activity was held on December 29, 2022 at the Koper Village Hall at 10.00 WIB. Pre and post testing questionnaire was conducted to assess 44 respondents' knowledge and awareness including postpartum mothers and their families, cadres followed by presenting the material using poster, power points and educational video, and the program was closed by post-test questionnaire.

## Result and Discussion

The evaluation stage is carried out to measure the attendance of participants, analyze the result of pre and post test questionnaires. This also included assessment of participants' engagement during discussion sessions.



**Figure 1. Cadres**



Figure 2. Poster



Figure 3. Respondents conducted the pre-test

### Statistical Analysis

SPSS version 26 for Windows was used to enter and evaluate data. Sapphire-Wilk method was used to determine data normality in this investigation.

The characteristic of respondent consist of gender, age, education, and occupation described as follows:

Table 1. Characteristics of Participant

Gender	Frequency (%)
Man	2(5)
Women	42(95)
Total	44(100)
Age (year)	Frequency(%)
17 – 25	13(30)
26 – 35	23(52)
36 – 45	6(14)
46 – 65	2(5)
Total	44(100)
Education level	Frequency (%)
Elementary	13(30)
Secondary	23(52)
Tertiary	8(18)
Total	44(100)
Occupation	Frequency(%)
housewife	40(91)
merchant	1(2)
labor	3(7)
Total	44(100)

Based on the pre-test results, an average value of 7 questions of 58.4%. After the team provided material regarding postpartum depression, participants obtained an average score of post-test of 94.4% (Table 2). These results indicate an increase in their knowledge about postpartum depression.

**Table 2. Pre and Post Testing Analysis**

	<b>N</b>	<b>Mean</b> (%)	<b>SD</b> (%)	<b>Min</b> (%)	<b>Max</b> (%)
<i>Pre-test</i>	44	58,44	15,7	28,57	85,71
<i>Post-test</i>	44	94,48	7,68	71,43	100

Furthermore, a statistical test was carried out to determine the significance of the test results. The statistical test was selected based on the results of the normality test to determine the selected parametric and nonparametric tests. Normality test of Sapphire-WilkT was conducted because the sample number (N) was less than 50, which is presented in Table 3.

**Table 3. Normality Test**

	<b>Statistic</b>	<b>df</b>	<b>Sig.</b>
<i>Pre-test</i>	0,905	44	0,002
<i>Post-test</i>	0,657	44	0,000

Based on the table above it can be seen the value of the results of the test Shapiro-Wilk shows a p of 0.002 for pre-test and 0,000 for post-test, with the p value  $p < 0.05$ . These results indicate that the data is not normally distributed. Therefore, the selected statistical test is a non-parametric test, namely the Wilcoxon test.

**Table 4. Comparison Value Of Pre And Post Test Testing**

	<b>Jumlah</b> ( <i>N</i> )	<b>Signifikansi</b> ( <i>p</i> )
<i>Negative Ranks</i>	0	
<i>Post-Test – Positive Ranks</i>	42	
<i>Pre-Test Ties</i>	2	0,00
<b>Total</b>	44	

Positive Ranks in the table above shows that there is an increase in scores between the pre-test and post-test. Negative ranks indicate a decrease in value and Ties show the same value. There are no respondents who have a value post-test lower than pre-test, 42 respondents have a value post-test result which is bigger in comparison to the pre-test result, and 2 respondents have the same value between pretest andpost-test. Test results of Wilcoxon show a significance value of 0.000. Sig value  $< 0.05$  indicates that there is a significant difference between the values pre-test and value post-test.

The results of this study show that the characteristics of respondents based on gender consist of 42 (95%) women and 2 (5%) men. The sex of participants in the educational program was dominated by women. Social support both from family and community has a crucial role in decreasing the potential of postpartum depression among mothers. Particularly the support from husband mothers experiencing multiparity, pregnancy loss.<sup>11</sup> Therefore increasing understanding and awareness of husbands is

also important in supporting the mothers. Providing health education for family and community are needed in efforts to prevent postpartum depression.

Data on the characteristics of respondents based on age shows that the majority of respondents are aged 26- 35 years, namely 23 people (52%) while the majority of respondents who had completed junior school were also 23 people. The characteristic of participants such as age, level of education has an influence in the comprehension of understanding the intervention.

Based on the results of the analysis it was found that the post-test score increased, where initially the respondents obtained an average score of 58.4% to 94.4% after the team provided material about postpartum depression. Table 4 shows that there is an increase in value post-test after being given intervention about postpartum depression which was declared significant using statistical tests Wilcoxon signed rank with a value of  $p = 0.000$  ( $p \leq 0.05$ ). From these results it can be stated that there was a significant increase in participants' knowledge about postpartum depression before and after being given intervention. This inline with previous study that indicated health education about recognizing and preventing postpartum depression has been proven to increase public knowledge.

## Conclusion

Health education about recognizing and preventing postpartum depression was considered effective in increasing the knowledge and awareness of the participants as indicated by the results of differences in values pre-test and post-test which is expected to increase knowledge and awareness of postpartum mothers and their families, cadres, and the community so that on the other hand it can also optimize the role of cadres in recognizing, treating and preventing symptoms of postpartum depression. It is hoped that outreach activities like this will be carried out periodically in coordination with the health care centre and related stakeholders.

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## Conflict Of Interests

The researcher has received institutional grant support through University YARSI. Other authors report no potential conflicts.

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