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Antenatal Care (ANC) in Pregnant Women with Preeclampsia in Agroindustrial Jember, Indonesia

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ABSTRACT

Objective: To determine the presence of antenatal care in pregnant women with preeclampsia in agroindustrial Jember, Indonesia.

Study Design: Cross-sectional study.

Place and Duration of Study: Banjarsengon, Panti, and Tempurejo Health Centers, Jember, Eats Java, Indonesia from Sep 2022 to Jan 2023.

Methodology: A total of 240 women, diagnosed with preeclampsia, comprised the sample for this study which was enrolled employing a purposive sampling technique. All participants were pregnant women at risk of preeclampsia, those currently experiencing preeclampsia, and postpartum women who had encountered preeclampsia. Data was collected through the usage of the Quality of Prenatal Care Questionnaire (QPCQ), which includes 6 subscales and 46 statement items.

Result: ANC service quality in the Banjarsengon, Panti, and Tempurejo Health Centers in Jember Regency, with regard to support and respect subscale, was found to be the highest average value (Mean±SD, CI; 4.18±0.31, 3.58 - 5.00) however, the approachability subscale exhibited the lowest average value (Mean±SD, CI; 2.36±0.48, 1.25 - 4.00).

Conclusion: Pregnant women with preeclampsia need assistance, monitoring, and referral by health workers. Health workers providing antenatal care services must prioritize support and respect so that pregnant women with preeclampsia regularly visit the antenatal care until delivery.

Keywords: Antenatal Care, Preeclampsia, Pregnancy

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INTRODUCTION

Jember Regency boasts vast agricultural expanses, with a majority of its population engaged in farming and given the inherent health risks associated with agricultural activities, nurses play a crucial role to ensure the well-being and productivity of farmers and their families.[1] Preeclampsia is characterized by elevated blood pressure, typically occurring after 20 weeks of pregnancy, with symptoms such as a blood pressure reading of ≥ 140/90 mmHg with a key indicator being the presence of proteinuria, with levels equal to or exceeding 300mg/24 hours in a urine test.[2] Preeclampsia poses significant risks to both maternal and perinatal health with complications such as seizures (eclampsia), stroke, multi-organ dysfunction, and even death.[3] with about 10% of all maternal deaths being caused by preeclampsia.[4] The 2012 Indonesian Health Demographic Survey (SDKI) stated that 13% of the cause of the maternal mortality was preeclampsia while in East Java, 34.88% of the causes of maternal mortality are preeclampsia. Data from the Jember Regency Health Office shows that in 2022, as many as 571 pregnant women experienced preeclampsia with most cases of preeclampsia in pregnant women being from the Sumberjambe Health Center area while Puskesmas Panti reporting 34 cases in 2021, while another study reported as many as 75 cases of preeclampsia.[5] One strategy to reduce maternal mortality is to emphasise a quality healthcare approach to pregnant women through Antenatal Care (ANC), a health assessment conducted during pregnancy with the aim of enhancing the well-being of expectant mothers, addressing both their physical and mental health.[6],done by health professionals trained in conducting pregnancy check-ups.[7] Health workers also act as communicators, motivators, facilitators, and counsellors, making monthly access to ANC services convenient, with availability at regular public health centers, as well as at auxiliary health centers, hospitals, and private clinics.[8]

METHODOLOGY

The cross-sectional study was conducted in the Banjarsengon, Panti, and Tempurejo Health Centers, from September 2022 to January 2023. The ethical clearance for this research was granted by the Ethics

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Committee of the Faculty of Nursing at Universitas Jember under the reference number 186/UN25.1.14/KEPK/2022.The sample size for the survey was calculated to be 150, using confidence level of 95%, confidence interval of 5%, and population size of 240. We used purposive sampling technique to collect data from the participants.

Inclusion Criteria: Pregnant women with preeclampsia risk, with preeclampsia, and postpartum pregnant women with preeclampsia.

Exclusion Criteria: Pregnant women not registered for ANC at Public Heath Center.

The researcher provided participants with a clear understanding of instructions for the research objectives before distributing questionnaires, and respondents were given ample time to complete them. To ensure data accuracy, the researcher thoroughly reviewed the completed questionnaires, confirming that all queries were adequately addressed. Data collection comprised the Quality of Prenatal Care Questionnaire (QPCQ), which consists of 46 items on Likert Scale of 1 to 5, with a Cronbach's alpha of 0.998, having six subscales: information sharing, anticipatory guidance, sufficient time, approachability, availability, and support and respect. Univariate analysis was done with the aim to describe or provide a general overview of each characteristic of the research variables. Data was analyzed using the Statistical Package for the Social Sciences (IBM SPSS Statistics for Windows version 26. Mean and standard deviation were calculated for quantitative variables while frequency and percentage were calculated for qualitative variables.

RESULTS

A total of one hundred and fifty (n=150) respondents were included. The majority were within the age range of 20 to 35 years. Most 89(59.3%) pregnancies were in the third trimester, specifically between 25 to 38 weeks. Most 91(60.7%) women identified as being from a prosperous family, moreover, most 55(36.7%) individuals had completed their high school education. The preferred ANC providers for pregnant women were midwives, chosen by 136 individuals (90.7%) and among these, 91 (60.7%) opted for public health centers. Multipara women accounted for the highest number, with 102 (68.0%) individuals seeking ANC. Notably, the majority 119(79.3%) of pregnant women, did not report any health complaints during their ANC visits. Further demographic characteristics of respondents are enlisted in detail in Table-I.

Table-I: Demographic Characteristics of Respondents (n=150)

Variable		n (%)
Age of Pregnant Women	< 20 years	9(6.0)
	20 years–35 years	124(82.7)
	> 35 years	17(11.3)
Gestational Age	First trimester (1-12 weeks)	7(4.7)
	Second trimester (13-24 weeks)	53(35.3)
	Third trimester (25-38 weeks)	89(59.3)
	Postpartum PE	1(0.7)
Family Economic Conditions	Underprivileged Families	1(0.7)
	Prosperous Family I	22(14.7)
	Prosperous Family II	91(60.7)
	Prosperous Family III	31(20.7)
	Prosperous Family III Plus	5(3.3)
Final Education	Not going to school	4(2.7)
	Primary school	43(28.7)
	Junior High School	40(26.7)
	High School	55(36.7)
	Undergraduate (D3/S1/S2/S3)	8(5.3)
ANC Providers	Midwife	136(90.7)
	Obstetrician	14(9.3)
Where to Obtain ANC Services	Health Workers Practice House	11(7.3)
	Clinic	18(12.0)
	Poly Hospital	10(6.7)
	Health Center	20(13.3)
	Public health center	91(60.7)
Paruty	Primipara	48 (32.0)
	Multipara	102 (68.0)
Maternal Health	Chronic health problem	11(7.3)
	Complication during pregnancy	3(2.0)
	Medical problem since delivery	17(11.3)
	No health problems	119(79.3)

Table-II: Distribution of Average Values per Indicator on ANC Service Quality Subscale (n=150)

Subscale	Mean±SD	CI
		Min – Max
Information Sharing	4.00±0.39	2.56–5.00
Anticipatory Guidance	3.76±0.52	2.55–5.00
Sufficient Time	3.77±0.27	2.80–4.60
Approachability	2.36±0.48	1.25–4.00
Availability	4.00±0.46	2.40–5.00
Support and Respect	4.18±0.31	3.58–5.00

As shown in Table-II, the outcomes of ANC service quality assessment within the operational zones of Banjarsengon, Panti, and Tempurejo Health Centers in Jember Regency, the support and respect subscale obtained the highest average score (4.18±0.31), while the approachability subscale recorded the lowest average score (2.36±0.48).

Table-III. Distribution of the Average Value of ANC Service Quality Statements (n=150)

Statement	Mean±SD	CI Min - Max
Information Sharing		
I was given adequate information about prenatal tests and procedures	4.03±0.68	2.00 -5.00
I was always given honest answers to my questions	4.20±0.61	1.00 – 5.00
Everyone involved in my prenatal care received the important information about me	4.13±0.59	2.00- 5.00
I was screened adequatly for potential problems with my pregnancy	4.14±0.544	2.00 – 5.00
The results of tests were explained to me in a way I could understand	4.14±0.62	2.00 – 5.00
My prenatal care provider(s) gave straighforward answers to my question	4.21±0.52	2.00 – 5.00
My prenatal care provider(s) gave me enough information to make decisions for myself	4.10±0.57	2.00 – 5.00
My prenatal care provider(s) kept my information confidential	2.94±1.11	1.00 – 5.00
I fully understood the reasons for blood work and other tests my prenatal care provider(s) ordered for me	4.17±0.660	2.00 – 5.00
Anticipatory Guidance		
My prenatal care provider(s) gave me options for my birth evperience	3.67±0.90	2.00 – 5.00
I was given enough information to meet my needs about breast-feeding	3.37±1.03	2.00 – 5.00
My prenatal care provider(s) prepared me for my birth experience	3.67±0.90	1.00 – 5.00
My prenatal care provider(s) spent time talking with me about my expectations for labor and delivery	3.73 ± 0.82	2.00 – 5.00
I was given enough information about the safety of moderate exercise during pregnancy	3.65±0.95	2.00 – 5.00
I received adequate information about my diet during pregnancy	4.17±0.67	2.00 – 5.00
My prenatal care provider(s) was interested in how my pregnancy was affecting my life	3.93±0.61	2.00 – 5.00
I was linked to programs in the commmunity that were helpful to me	3.37±1.12	1.00 – 5.00
I received adequate information about alcohol use during pregnancy	3.87±0.91	2.00 – 5.00
I was given adequate information about depression in pregnancy	3.87±0.96	2.00 – 5.00
My prenatal care provider(s) took time to ask about things that were important to me	4.09±0.58	2.00 – 5.00
Sufficient Time		
I had as much time with my prenatal care provider(s) as I needed	4.10±0.55	2.00 – 5.00
My prenatal care provider(s) was rushed	2.27±0.94	1.00 – 5.00
My prenatal care provider(s) always had time to answer my questions	4.14±0.41	2.00 – 5.00
My prenatal care provider(s) made time for me to talk	4.15±0.39	3.00- 5.00
My prenatal care provider(s) took time to listen	4.21±0.40	4.00 – 5.00
Approachability		
My prenatal care provider(s) was abrupt with me	2.69±0.87	1.00 – 5.00
I was rushed during my prenatal care visits	2.22±0.86	1.00-5.00
My prenatal care provider(s) made me feel like I was wasting their time	2.19±0.71	1.00–5.00
I was afraid to ask my prenatal care provider(s) questions	2.35±1.05	1.00–5.00
Availability		
I knew how to get in touch with my prenatal care provider(s)	4.04±0.55	2.00–5.00
Someone in my prenatal care provider(s)'s office always returned my calls	3.93±0.61	2.00–5.00
My prenatal care provider(s) was available when I had questions or concerns	4.15±0.43	3.00–5.00
I could always reach someone in the office/clinic if I needed something	3.91±0.65	2.00-5.00
I could reach my prenatal care provider(s) by phone when necessary	4.00±0.69	2.00–5.00
Support and Respect		
My prenatal care provider(s) respected me	4.22±0.52	1.00-5.00
My prenatal care provider(s) respected my knowledge and experience	4.22±0.44	3.00–5.00
My decisions wer respected by my prenatal care provider(s)	4.15±0.41	3.00–5.00
My prenatal care provider(s) was patient	4.41±0.50	3.00–5.00
I was supported by my prenatal care provider(s) in doing what I felt was right for me	4.05±0.52	2.00–5.00
My prenatal care provider(s) supported me	4.17±0.44	3.00–5.00
My prenatal care provider(s) paid close attention when I was speaking	4.20±0.41	3.00–5.00
My concerns were taken seriously	4.12±0.68	2.00–5.00
I was in control of the decisions being made about my prenatal care	4.01±0.624	2.00–5.00
My prenatal care provider(s) supported y decisions	4.13±0.40	3.00–5.00
I was at ease with my prenatal care provider(s)	4.30±0.47	3.00-5.00
My values and beliefs were respected by my prenatal care provider(s)	4.24 ± 0.48	3.00–5.00

As noted in Table-III, the highest average score on the support and respect subscale for the statement "I was patient in performing the service" was observed in question 38, with a score of 4.41±0.50, while the lowest average score on the same subscale, associated with the statement "Proximity to my antenatal care provider made me feel like it was wasting their time," was found in question 28, scoring 2.19±0.71.

DISCUSSION

For pregnant women with preeclampsia, nurses can work with village midwives in the MCH program to provide health education related to the introduction of preeclampsia and also increase compliance in conducting ANC which can be performed by midwives, doctors, or nurses trained to perform pregnancy checks, as a nurse's partnership in handling preeclampsia in the health centre is by collaborating between individuals, community groups, and the mass media to improve visits and the quality of ANC 10,11. ANC services can be said to be of high quality if they are to the expectations or needs of the service recipient as recognition of the quality of a service comes from ANC service users.[12] Based on our study, the highest average score of 4.18 on the support and respect subscale is supported by the statement, "my antenatal care provider is patient in performing services" so satisfaction with ANC services can be attributed to the services provided by health workers to pregnant women especially as pregnant women need empathy that suits their needs provided by health workers.[13] To create a good relationship between service providers and pregnant women, ANC service providers must pay attention to the quality of health services that can provide benefits and benefits.[14,15] This study showed that the proximity subscale to the statement "my antenatal care provider makes me feel like I was wasting their time" had the lowest average score of 2.19. Based on these results, pregnant women, when performing ANC services, do not feel that they are wasting time with health workers who provide ANC services. Health workers' ability and accuracy in responding to pregnant women's needs and complaints give rise to partnerships and relationships of mutual trust, respect, and openness.[16,17] Therefore, mothers will not feel that they are wasting the time of health workers when health workers provide intervention and implementation of services to patients.[18]

LIMITATION OF THE STUDY

Only descriptive data analysis was used in this cross-sectional study and a more in-depth analysis enrolling more centers would be need to determine the true quality of ANC.

CONCLUSION

ANC visits play a crucial role in identifying pregnant women at risk of or already dealing with preeclampsia, enabling prompt treatment and early referral to mitigate the suffering and mortality associated with this condition. In the delivery of ANC services, healthcare professionals should prioritize supporting and respecting pregnant women by fostering therapeutic communication. This approach aims to establish a trusting relationship between ANC service providers and expectant mothers.

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Authors' Contribution

Following authors have made substantial contributions to the manuscript as under:

IR & EAS: Data acquisition, data analysis, critical review, approval of the final version to be published.

DK: Study design, data interpretation, drafting the manuscript, critical review, approval of the final version to be published.

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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