

## Conference Paper

# Factors Influencing Pregnant Women's Participation in Prenatal Classes in Magetan Regency, Indonesia

Rofiatul Uzza<sup>1</sup>, Sapto Adi<sup>2</sup>, and Suci Puspita Ratih<sup>1</sup><sup>1</sup>Department of Public Health, Faculty of Sports Science, Universitas Negeri Malang, Malang, Indonesia<sup>2</sup>Department of Sports Science, Faculty of Sports Science, Universitas Negeri Malang, Malang, Indonesia**ORCID:**Sapto Adi: <https://orcid.org/0000-0001-6801-524X>Suci Puspita Ratih: <https://orcid.org/0000-0003-4380-6154>**Abstract**

Prenatal classes in Indonesia are government's effort to improve the knowledge and skills of pregnant women. Several factors influence the participation of pregnant women in these classes. This research aimed to identify the factors that correlate with pregnant women's participation in prenatal classes in several rural villages of Magetan Regency, Indonesia. This observational analytical research was performed quantitatively using a cross-sectional design. Seventy-eight pregnant women meeting the research criteria were included in this study. Data were collected through a questionnaire that has been tested through validity and reliability tests. A binary logistic regression was employed to conduct a statistical analysis. Results showed that supports from family (OR 32.40,  $p$ -value < 0.01, 95% CI 4.55–230.64) and from health workers (OR 22.53,  $p$ -value < 0.001, 95% CI 3.96–128.19) were significantly associated with the respondent's participation in prenatal classes after controlling the potential confounding factors such as knowledge, attitudes and information availability.

**Keywords:** maternal health, health promotion program, pregnancy, infant health

Corresponding Author:

Suci Puspita Ratih

puspita.ratih.flk@um.ac.id

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## 1. Introduction

One of Indonesia's main priorities for health development lies in mothers' and children's health, where the main targets are pregnant women, women who give birth, and perinatal babies [1]. Globally, the Maternal Mortality Rate (MMR) in 2017 was declared high, reaching 295,000 deaths during and after pregnancy and childbirth due to a lack of proper prevention and treatment [2]. Whereas in Indonesia in 2015, through SUNPAS data, it shows that the maternal mortality rate is the second-highest in ASEAN countries [3]. East Java data from 2016 to 2017 for the average MMR tends to increase, from 91

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to 91.92 per 100,000 live births [4]. Based on the Health Office's research data in 2017 from all districts/cities located in East Java Province, Magetan Regency is included in the region with an MMR of 97.57 per 100,000 live births above the average of East Java Province [4]. Furthermore, in 2018, MMR in Magetan Regency increased to 158 per 100,000 live births [5]. The increase in MMR in Magetan Regency was due to the insufficient knowledge of pregnant women and their families regarding pregnant women's health, the maternal and child health handbook not being used optimally, and the lack of understanding of officers regarding ANC [5].

The government's efforts to improve maternal health care in a class program are based on the MCH handbook. Implementing the class program for pregnant women helps support the improvement and change in pregnant women and their families' behaviour towards the health of pregnant women [6]. All public health centres have held pregnant women classes in Magetan Regency, one of the public health centres in Tebon [7]. In the Tebon Health Centre's working area, there is still an increase in maternal and infant mortality, from 2 incidents to 5 incidents in 2017 towards 2018. Besides, based on a preliminary study on September 24, 2019, only 49% of the total pregnant women in 2018 participated and classes of pregnant women whose attendance does not reach 100% for each meeting. In previous research by Emiyanti (2017), mothers' participation in the class program for pregnant women was influenced by knowledge, attitudes, and support from the husbands or family [8]. Thus, the purpose of this research is to find out what factors are related to the participation of pregnant women in the class of pregnant women in the working area of the public health centre in Tebon, Magetan Regency.

## 2. Material and Method

The analytic observational research design was carried out quantitatively through a cross-sectional approach. The research location is in the Public Health Centre in Tebon, Magetan Regency, with an area of 8 villages. The time to collect research data was from December 2019 to January 2020. The study used a population of all pregnant women recorded in the Tebon Public Health Centre in 2019, amounting to 306 pregnant women. While the research sample calculation used the Slovin formula and the results obtained were 78 samples, the sampling was simple random (simple random sampling) by taking into account the study's inclusion and exclusion criteria.

The research data were collected using a questionnaire instrument tested for validity and reliability to 20 pregnant women outside the study sample. The questionnaire made contains the respondent's identity, a description of the dependent variable (participation

of pregnant women), and a description of the independent variables (knowledge, attitudes, information availability, affordability, family support, and support for health workers). The research data results were analysed through computer software in univariate, bivariate with the chi-square test, and multivariate with multiple logistic regression tests.

### 3. Results

#### 3.1. Characteristics of the respondents

The respondents' characteristics in this study include age, employment status, and the latest education. Of the total 78 respondents, there were 55 respondents (70.5%) with the age category not at risk (20-35 years), while there were 23 respondents (29.5%) with the risk age category (<20 years, > 35 years). The job variable shows that as many as 45 respondents (59.0%) have a non-working status, while 32 respondents (41.0%) have working status, namely, shop employees, traders, farmers, civil servants, and entrepreneurs. There were 15 respondents (19.2%) who did not complete compulsory 12 years of education, while in the higher education category, there were 63 pregnant women (80.8%) who completed 12 years of compulsory education.

#### 3.2. Participation in prenatal classes and its factors

A total of 78 respondents, 32 pregnant women (41.0%), did not participate in the Tebon Health Centre pregnant women class program. In contrast, 46 other pregnant women (59.0%) participated in the Public Health Centre Tebon prenatal class program. The participation of respondents in pregnant women is influenced by several factors, including knowledge, attitudes, availability of information, affordability, family support, and support from health workers. The relationship between these factors and participation in the prenatal class can be seen in Table 1.

Respondents with an adequate level of knowledge about the benefits of a class for pregnant women tend to participate in a class for pregnant women (73.5%) than respondents with an insufficient knowledge level (34.5%). In line with knowledge, respondents with good attitudes towards the class of pregnant women were more likely to participate in pregnant women (78.1%) than those with poor attitudes (45.6%). Participation in prenatal classes tends to be more among respondents who report the availability of useful information (66.1%) than those who are not good (40.9%). Also, based on affordability, participation in pregnant women is higher in the group of respondents

TABLE 1: Participation in prenatal classes based on the independent variables researched.

Variable	Participation				Amount (N = 78)	
	Yes		No		N	%
	N	%	N	%		
<b>Basic Knowledge</b>						
Good	36	73.5	13	26.5	49	100
Not good	10	34.5	19	65.5	29	100
<b>Attitude</b>						
Good	25	78.1	7	21.8	32	100
Not good	21	45.6	25	54.3	46	100
<b>Publicly Available Information</b>						
Good	37	66.1	19	33.9	56	100
Not good	9	40.9	13	59.1	22	100
<b>Affordability</b>						
Affordable	29	64.4	16	35.6	45	100
Not affordable	17	51.5	16	48.5	33	100
<b>Family Support</b>						
Supportive	38	79.2	10	20.3	48	100
Not supportive	8	26.7	22	73.3	30	100
<b>Healthcare Support</b>						
Supportive	38	90.5	4	9.5	42	100
Not supportive	8	22.2	28	77.8	36	100

Source: Author's own work.

who claim that the class of pregnant women is easy to reach (64.4%) than those who claim to be challenging to reach (51.5%). Participation in pregnant women was also more in the group of respondents with good family support and health personnel (79.2% and 90.5%, respectively).

### 3.3. Multivariate analysis

Multiple logistic regression tests in multivariate analysis were carried out through several stages, namely bivariate selection, to determine which variables were candidates for multivariate modelling. Then check the confounding variable (which results in a change in the OR of other variables > 10%) and the interaction variable (variable with a p-value < 0.05) until the final multivariate modelling is obtained as follows:

In the table above, the Omnibus Test value is 0.00, meaning that the resulting model is suitable for use. The Nagelkerke r-square value is 0.741, which shows that the variables of knowledge, attitudes, availability of information, family support, and support for health professionals can explain participation in the class of pregnant women

TABLE 2: Final multivariate modelling.

Variable	OR	Standard Error	(95% CI)	
Basic Knowledge	4.20	0.94	0.660	26.759
Attitude	1.36	0.95	0.213	8.669
Publicly Available Information	1.50	0.96	0.231	9.773
Family Support	32.40*	1.00	4.548	230.637
Healthcare Support	22.53	0.89	3.960	128.194

\*P-value < 0.001; Omnibus Test: 0.000; Nagelkerke R Square: 0.741

Source: Author's own work.

by 74.1 percent. Meanwhile, the remaining 25.9 percent is explained by unexamined variables. Multivariate analysis also showed that family support (OR 32.40, p-value <0.01, 95% CI 4.55-230.64) and health personnel support (OR 22.53, p-value <0.001, 95% CI 3.96-128.19) were predictors because they were significantly related to participation in the class of pregnant women. Meanwhile, knowledge, attitude, and availability of information are confounding factors.

## 4. Discussion

The multivariate analysis results showed that family support was significantly related to the participation of pregnant women. Following H.L. Blum, this is stated that the surrounding environment has the most significant share of health [9]. This study was done by Astuti et al. (2016), where the results of the chi-square test obtained a p-value of 0.033 <0.05, this proves that family support has a significant relationship with participation in the class of pregnant women [10]. Yusmaharani's research (2018) states a significant relationship between husband's support and the use of the class of pregnant women, where the husband is a part of the family who must pay more attention and responsibility to pregnant women [11]. In addition, research by Sherly et al. (2018) states that family or husband support dramatically determines the level of participation of pregnant women in the implementation of classes for pregnant women [12].

The study results indicated a significant relationship between the support of health workers and the participation of pregnant women in the class program for pregnant women. Multiple logistic regression analysis showed that pregnant women with the support of the right health personnel were 22.531 times more likely to participate in the class of pregnant women. The results of research support this research by Yuliantika (2016), which states that support from health workers has a significant relationship to class participation of pregnant women, which is evidenced by a p-value of 0.023 <0.05

[13]. Health workers or midwives as pregnancy examinations of pregnant women are more likely to be followed by pregnant women. Furthermore, prenatal class programs can be disseminated to pregnant women and their husbands or families who accompany them during the examination. This is supported by research that states that the support of health workers who most play a role in the participation of pregnant women to attend classes for pregnant women is a midwife, where the support is given in emotional, rewarding, instrumental, and informative [14].

Moreover, several factors may have influenced participation in the prenatal classes, although they were not statistically significant. According to Notoatmodjo (2011), knowledge is an internal factor in the behaviour change process. This study's results are in line with research from Emiyanti et al., where the number of pregnant women with good knowledge has a willingness of 72.9% to join the class of pregnant women. This proves that the better the knowledge of pregnant women, the higher the willingness and understanding of the importance of participating in classes for pregnant women [8]. The same thing is found in research from Desmariyenti and Hartati (2019), which states that most pregnant women class participants are pregnant women with good knowledge [15]. Besides, attitudes about the class of pregnant women can also determine the participation of respondents. Social psychology, known as Newcomb, suggests that an attitude is a form of readiness or willingness to take action [9]. A similar study by Erayatna showed that the most dominant variable affecting maternal participation in attending classes for pregnant women was attitude [16]. Another study by Nurul et al. Stated that attitudes have a significant relationship with the use of the class of pregnant women, where mothers who are negative towards the prenatal classes are three times more likely not to use the class of pregnant women than mothers who are positive [17].

Likewise, the availability of information about the class for pregnant women can also be a determinant. Yuliantika's research (2016) shows harmony, where there is a relationship between the availability of information and participation in classes for pregnant women. The results of the relationship analysis obtained  $p\text{-value} = 0.001 < 0.05$  [13]. According to the theory put forward by Lawrence Green (1980), where information is one of the supporting factors for participation [9]. Participation can be defined as a form of participation, which is in line with the research. Another similar study by Wijanarko (2014) states that there is a significant relationship between the availability of information and pregnant women's participation, where 63% of pregnant women with the availability of good information follow the implementation of existing pregnant women classes [18].

The affordability aspect can also influence a mother's decision to join the classes for pregnant women in her area. Research by Risneni and Helmi (2017) states that the

distance factor has a relationship with compliance with pregnant women in the class of pregnant women [19]. In infield research, pregnant women stated that the distance between the house and the place where the classes were held for pregnant women was not too much of a barrier. Further, the road conditions that are not very good can still be traversed by transportation. Hence, there is no link between affordability and participation in the class of pregnant women.

## 5. Conclusion

Most of the respondents in this study followed the class of pregnant women, namely 59.0%. Participation in the class of pregnant women in the working area of the Public Health Centre in Tebon, Magetan Regency, is significantly influenced by the variables of family support and support for health workers. This shows that the role of family/husband and healthcare greatly determines the level of participation of pregnant women in implementing the class of pregnant women. The variables of knowledge, attitudes, and information availability become confounding variables that may affect pregnant women's participation in the prenatal classes, even though they are not statistically related. Future research can develop a study combined with a qualitative approach to examine more profoundly and explore other factors that may affect pregnant women's participation in more depth.

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## Conflict of Interest

The authors declare that there is no conflict of interest.

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