Pharmacogn J. 2023; 15(6): 1029-1035
A Multifaceted Journal in the field of Natural Products and Pharmacognosy
www.phcogj.com

Original Article

Analysis of the Influence of Internal and External Factors on Empowered Pregnant Women Through the Behavior of Pregnant Women in Early Detection of Pregnancy Complications

Bintang Petralina[1,3,*], Ridwan Amiruddin[2], Wahiduddin[2], Irwandy[2], Anwar Mallongi[2], Ummu Salmah[2], Suriah[2], Evi Martha[4]

Bintang Petralina[1,3,*], Ridwan Amiruddin[2], Wahiduddin[2], Irwandy[2], Anwar Mallongi[2], Ummu Salmah[2], Suriah[2], Evi Martha[4]

[1]Doctor of Public Health Program, Faculty of Public Health, Hasanuddin University, INDONESIA.

[2]Faculty of Public Health, Hasanuddin University, INDONESIA.

[3]Faculty of Nursing and Midwifery, Binawan University, INDONESIA.

[4]Faculty of Public Health, Indonesia University, INDONESIA.

Correspondence

Bintang Petralina

Doctor of Public Health Program, Faculty of Public Health, Hasanuddin University, INDONESIA; Faculty of Nursing and Midwifery, Binawan University, INDONESIA.

E-mail: bintangpetralina@gmail.com

History

- Submission Date: 12-08-2023;
- Review completed: 19-09-2023;
- Accepted Date: 09-10-2023.

DOI : 10.5530/pj.2023.15.189

Article Available online

http://www.phcogj.com/v15/i6

ABSTRACT

Objective: Maternal health is still one of the health problems globally, including in Indonesia. Empowering women that allows someone in making decisions about themselves to detect pregnancy complications. This study aims to analyze the influence of internal and external factors on empowered pregnant women through the behavior of pregnant women in conducting early detection of pregnancy complications [KOMPAK] in Bogor Regency. **Method:** Village in study is an analytical survey with a cross sectional study approach, which takes data related to internal factors (age, education, and parity) and external factors (husband support, family support, community support, and health worker support), behavior (knowledge, attitudes and motivation), and empowered pregnant women. It was analyzed using the spearman correlation test and path analysis with a confidence level of 95%. The data was analyzed using the SPSS program version 26.0. **Results:** internal factors that influence empowered pregnant women in Conducting Early Detection of Pregnancy Complications [KOMPAK] in Bogor Regency are education (r: 0.194; p<0.001) and parity (r: -0.108; p: 0.044) which means that the higher the education and the less parity, the better empowered pregnant women will be with weak correlation strength. External factors affect Empowered Pregnant Women in Early Detection of Pregnancy Complications [KOMPAK] in Bogor Regency where external factors (husband support, family support, culture and community support, and health worker and government support) will cause empowered pregnant women to be better with moderate correlation strength (r: 0.537-0.645; p< 0.001). **Conclusion:** Internal factors (education and parity) and external factors (husband support, family support, culture and community support, and health worker and government support) affect (empowered pregnant women in early detection of pregnancy complications. External factors also influence pregnant women through maternal behavior (knowledge, attitudes, and motivations).

Key words: Internal factors, External factors, Behavior, Empowered pregnant women.

INTRODUCTION

Maternal health is still one of the health problems globally, including in Indonesia. The main indicator of the degree of health is maternal mortality which must be taken seriously and become a priority in public health.[1,2] Maternal Mortality Rate (MMR) is maternal death that occurs during pregnancy, childbirth, and postpartum caused by pregnancy, childbirth, and postpartum or its management but not due to other causes such as accidents or incidental in every 100,000 live births (KH).[3]

According to WHO (*World Health Organization*) the mortality rate of toddlers in 2013 was still high reaching 6.3 million people. The highest under-five mortality occurs in developing countries as much as 92% or 29,000 toddlers / day. Under-five deaths are mostly caused by infectious diseases such as pneumonia (15%), diarrhea (9%), and malaria (7%).[4] According to WHO in 2017, about 15% of deaths of children under 5 years old due to pneumonia were 808 694 children.[4] Based on the WHO report (2019), that the incidence of pneumonia in 2017 that the death of children under five years due to pneumonia was caused by many risk factors including underweight children as many as 425,927 deaths, indoor air pollution as many as 229,857 deaths, stunting as many as 119,037 deaths, vitamin A deficiency as many as 52,862 deaths, smoking as many as 61,348 deaths).[1]

Maternal deaths are estimated to occur around 810 women die every day from preventable causes during pregnancy and childbirth. 94% of maternal deaths occur in developing countries. MMR in the world is 303,000 people.[1] MMR in ASEAN is 235 per 100,000 live births.[5] Maternal mortality in Indonesia is quite high, which is more than seven thousand cases in 2021 or the maternal mortality rate reaches 228 per 100 thousand live births.[3] The gap in maternal mortality in several countries is the basis for agreement for sustainable development *Sustainable Development Goals (SDGs)* involving 193 countries.[6]

The SDGs target by 2030 to reduce maternal mortality to below 70 per 100,000 live births. Based on the SDGs monitoring report for the Southeast Asia region, MMR is still at 176 per 100,000 live births. This figure is still far from the 2030 SDGs target.[6] Based on data from the Indonesian Demographic and Health Survey (IDHS), MMR for the period 1991-2007 decreased from 390 to 228 per 100,000 KH, and MMR in the 2012 IDHS increased, namely 359 per 100,000 KH. According to the

Cite this article: Petralina B, Amiruddin R, Wahiduddin, Irwandy, Mallongi A, Salmah U, et al. Analysis of the Influence of Internal and External Factors on Empowered Pregnant Women Through the Behavior of Pregnant Women in Early Detection of Pregnancy Complications. Pharmacogn J. 2023;15(6): 1029-1035.

results of the Inter-Census Population Survey (SUPAS) in 2015, MMR in Indonesia is 305/100,000 KH. Based on these data, an average of 2 women die every hour due to complications of pregnancy, childbirth and puerperium. Provinces contributing 50% of maternal deaths are Java Arat, East Java, Central Java, Banten, Sumatra and Aceh.[7] The number of maternal deaths by province shows that West Java is the second highest maternal mortality rate after East Java in 2021, including East Java at 237 per 100,000 KH and West Java at 148 per 100,000 KH. The increase in the number of maternal deaths increased in West Java from 2019 – 2021, from 85 per 100,000 KH in 2019 to 148 per 100,000 KH in 2021.[8]

Pregnancy complications and/or high-risk events during pregnancy World Health Organization (WHO) estimates tend to occur by 15 – 20% worldwide.[9,10] Maternal deaths in Indonesia in 2021 were reported at 7,389 people, of which 40.36% were caused by Covid 19, 17.86% bleeding, 4.58% hypertension, 4.53% heart, 2.80% infection, the rest were caused by other things.[8] These causes of maternal death are mostly complications that develop during pregnancy and are largely preventable or treatable.

The indirect cause of maternal death is better known with cases 3 late and 4 too. Case 3 is late, including: slow to recognize the danger signs of labor and make decisions, slow to be referred to a health facility, slow to be handled by health workers in health care facilities. Case 4 too, including the elderly pregnant (over the age of 35 years), the young pregnant (under the age of 20 years), too many (the number of children more than 4) and too close the distance between births (less than 2 years).[11] Other causes such as gender inequality, socio-cultural problems that marginalize women in decision-making for themselves, low female education, socioeconomic where poverty results in inability to meet needs, geographical areas that affect access to health services and resulting in lack of health information, problems with permission to seek treatment, absence of companions during treatment, inadequate services and others.[12-16]

Efforts to reduce MMR are carried out globally and nationally. Globally, WHO is working with partners to address end-to-end causes of maternal mortality.[9,16,17] The system in health facilities is recommended to make various efforts in reducing maternal mortality through early detection in ANC services,[18-20] such as early detection of pre-eclampsia[21] alcohol addiction[22] triple elimination namely HIV, syphilis and hepatitis B.

Empowering women that allows someone in making decisions about themselves to detect pregnancy complications. Research by Cristal L *et al*, found socio-demographic variables influential on women's empowerment models in conducting examinations,[23] while the results of other studies revealed poor knowledge of one of the factors of women's lack of empowerment.[24,25] Employment factors, and women's level of knowledge are related to women's empowerment. Determinant actors can influence the incidence of maternal death. Although these determinants do not directly affect maternal mortality, socio-cultural, economic, religious and other factors also need to be considered and unified in the implementation of interventions for handling maternal mortality, one of which is through empowerment.[26] Research conducted by Shimamoto & Gipson (2019)[27] using structural pathways and equations found the importance of policy and program interventions to promote education through women's empowerment and measured women's empowerment as a multidimensional construct, and is useful in identifying specific constructions or areas for subsequent interventions and policy efforts.

Based on West Java Province Health Profile Data, it shows that the highest maternal mortality occurs in Bogor Regency, which is 63 per 100,000 live.[28] In the last three years, there has been a significant increase in maternal deaths since 2019 – 2021, namely 72 cases in 2019, 74 cases in 2020 and 87 cases in 2021. This condition encourages researchers to conduct a more in-depth study to photograph thoroughly the perceptions of pregnant women and people around in caring for the health of pregnant women.

This study aims to analyze the influence of internal and external factors on empowered pregnant women through the behavior of pregnant women in early detection of pregnancy complications in Bogor Regency.

METHOD

The design of this study is an analytical survey research with a cross sectional study approach, taking data related to internal factors (age, education, and parity) and external factors (husband support, family support, community support, and health worker support), behavior (knowledge, attitudes and motivations), and empowered pregnant women.

The location in the study is in Kabupaten Bogor, namely the working area of the Babakan Madang Health Center and the working area of the Cijeruk Health Center. The reason for choosing the location is that Kabupaten Bogor is the largest city in WestJava, a contributor to AKI. Babakan Madang Health Center and Cijeruk Health Center were chosen as research locations on the balance that both locations show a high number of young marriages which is one of the risk factors for pregnancy complications.

The samples in this study were pregnant women domiciled in the working area of the Babakan Madang Health Center and the working area of the Cijeruk Health Center whose gestational age was trimester II and III. As for pregnant women who experience disabilities, cannot read and write are included in the exclusion criteria. The number of samples in this study used the Lemeshow sample formula of 350 samples consisting of 175 samples in each Puskesmas.

Research instruments

Internal factors are measured by taking data relating to age, education, and parity. External factors were measured using questionnaires that included husband support (5 items), family support (5 items), community support (10 items), and health worker support (5 items) using the Likert scale consisting of 25 items of Sales.[29] Maternal behavior was measured using questionnaires which included knowledge (10 items)[30] attitudes (15 items) Mahardhita and Kurniawati (2021),[31] and motivation (14 items)[32] using the Likert scale consisting of 39 question items. Ibu hamil empowered was measured using a Likert scale questionnaire consisting of 39 question items Kameda, Yukie; Shimada (2017).[33]

Data analysis

Bivariate analysis used to test hypotheses by determining the relationship of independent variables with dependent variables is carried out using Application programs (SPSS) by performing spearman correlation tests and path analysis. The data was analyzed using SPSS version 26 software.

Ethical aspects

Ethical clearance was approved from Komisi Etik Pe n elitian Faculty of Public Health, Hasanuddin University. In conducting research, an informed concent is given to be signed to respondents before (1215/UN4.6.4.5.31/PP36/2019).

RESULTS

Internal factors of respondents in Bogor Regency obtained the highest age of respondents 21-34 years (53.7%), the most elementary school education (43.4%), the most parity ≥4 (45.7%), and more than half of the internal factors less (55.1%). External factors respondents in Bogor

Regency obtained most of the husband's support was good (81.4%), family support was mostly good (81.7%), culture and community support were mostly good (81.7%), health and government support were mostly good (82.0%), and in total external factors were mostly good (81.1%) (Table 1).

The behavior of respondents in Bogor Regency was obtained by more than half of respondents with good knowledge (76.6%), more than half of respondents had good attitudes (65.1%), most respondents were well motivated (81.7%), in total most respondents had good behavior (81.7%), and most respondents were pregnant women with good power (79.7%) (Table 2).

Internal factors that influence the behavior of pregnant women in early detection of pregnancy complications in Bogor Regency are parity (r: -0.158; p: 0.003) which means that the less parity, the better the

Table 1: Internal and external factors.

Internal and External Factors	Location				Sum	
	Babakan Madang Health Center		Cijeruk Health Center			
	n (175)	% (100)	n (175)	% (100)	n (350)	% (100)
Internal Factors						
Age						
≤ 20 Years	46	26.3	52	29.7	98	28.0
21-34 Years	95	54.3	93	53.1	188	53.7
≥ 35 Years	34	19.4	30	17.1	64	18.3
Education						
SD	74	42,3	78	44.6	152	43.4
JUNIOR	49	28.0	60	34.3	109	31.1
SMA	45	25.7	34	19.4	79	22.6
College	7	4.0	3	1.7	10	2.9
Parity						
1(primipara)	36	20.6	46	26.3	82	23.4
2-3(multipara)	58	33.1	50	28.6	108	30.9
≥ 4(Grandemutipara)	81	46.3	79	45.1	160	45.7
Total Internal Factors						
Good	85	48.6	72	41.1	157	44.9
Less	90	51.4	103	58.9	193	55.1
External factors						
Husband Support						
Good	134	76.6	151	86.3	285	81.4
Less	41	23.4	24	13.7	65	18.6
Family support						
Good	134	76.6	152	86.9	286	81.7
Less	41	23.4	23	13.1	64	18.3
Community Support						
Good	135	77.1	151	86.3	286	81.7
Less	40	22.9	24	13.7	64	18.3
Health Workforce Support						
Good	134	76.6	153	87.4	287	82.0
Less	41	23.4	22	12.6	63	18.0
External factors						
Good	132	75.4	152	86.9	284	81.1
Less	43	24.6	23	13.1	66	18.9

Table 2: Behavior and empowered pregnant women.

Variable	Location				Sum	
	Babakan Madang Health Center		Cijeruk Health Center			
	n (175)	% (100)	n (175)	% (100)	n (350)	% (100)
Behaviour						
Knowledge						
Good	131	74.9	137	78.3	268	76.6
Less	44	25.1	38	21.7	82	23.4
Attitude						
Positive	108	61.7	120	68.6	228	65.1
Negative	67	38.3	55	31.4	122	34.9
Motivation						
Tall	135	77.1	151	86.3	286	81.7
Low	40	22.9	24	13.7	64	18.3
Behaviour						
Good	141	80.6	145	82.9	286	81.7
Less	34	19.4	30	17.1	64	18.3
Empowered Pregnant Women						
Good	133	76.0	146	83.4	279	79.7
Less	42	24.0	29	16.6	71	20.3

behavior with weak correlation strength. While other internal factors show no influence on the behavior of pregnant women. External factors (husband support, family support, community support, and health worker support) affect the behavior of pregnant women in early detection of pregnancy complications in Bogor Regency where external factors (husband support, family support, community support, and health worker support) will cause the behavior of pregnant women to be better with moderate correlation strength (r: 0.489-0.617; p< 0.001) (Table 3).

Internal actors that influence empowered pregnant women in Detecting Early Detection of Pregnancy Complications in Bogor Regency are education (r: 0.194; p<0.001) and parity (r: -0.108; p: 0.044) which means that the higher the education and the less parity, the better the empowered pregnant women will be with weak correlation strength External factors (Husband support, Family support, culture and community support, and support from health workers and government) affect empowered pregnant women in early detection of pregnancy complications in Bogor Regency where external factors (husband support, family support, culture and community support, and health and government support) will cause empowered pregnant women to be better with moderate correlation strength (r: 0.537-0.645; p< 0.001) (Table 4).

The Influence of Internal Factors and External Factors on the Behavior of Pregnant Women in Early Detection of Model 1 Pregnancy Complications is as follows: (Table 5)

Y= 50.44 + (0.004) X1 + (0.585) X2

Where:

Y: Behavior of pregnant women

X1: Internal Factors

X2: External Factors

The influence of internal factors and external factors on empowered pregnant women in early detection of model 2 pregnancy complications is as follows (Table 6):

Z= 20.871 + (0.078) X1 + (0.418) X2 + (0.527) Y

Where:

Z: Empowered Pregnant Women

Y: Behavior of pregnant women

X1: Internal Factors

X2: External Factors

The total influence of internal factors on empowered pregnant women is as much as direct influence plus indirect influence, namely: (0.003) + (0.001) = 0.004. This indicates that increased internal factors can increase pregnant women empowered through the combination of

Table 3: The influence of internal factors and external factors on behavior.

Variable	Behavior of Pregnant Women	
	r	p*
Internal Factors	-0.101	0.060
Age	-0.066	0.220
Education	0.093	0.082
Parity	-0.158	**0.003**
External factors	0.609	**<0.001**
Husband support	0.489	**<0.001**
Family support	0.595	**<0.001**
Community support	0.617	**<0.001**
Health worker support	0.589	**<0.001**

*Spearman Correlation

Table 4: The influence of internal factors, external factors, and behavior on empowered pregnant women.

Variable	Empowered Pregnant Women	
	r	p*
Internal Factors	-0.078	0.147
Age	-0.040	0.459
Education	0.194	**<0.001**
Parity	-0.108	**0.044**
External factors	0.649	**<0.001**
Husband support	0.537	**<0.001**
Family support	0.635	**<0.001**
Community support	0.645	**<0.001**
Health worker support	0.610	**<0.001**
Behaviour	0.687	**<0.001**
Knowledge	0.203	**<0.001**
Attitude	0.579	**<0.001**
Motivation	0.641	**<0.001**

*Spearman Correlation

Table 5: The influence of internal factors and external factors on the behavior of pregnant women in early detection of pregnancy complications.

Model 1	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	50.44	3.467		14.548	0.000
Internal Factors	0.004	0.057	0.003	0.067	0.947
External factors	0.585	0.031	0.715	18.881	0.000

Table 6: The influence of internal factors (x1), external factors (x2), and behavior of pregnant women (y) on empowered pregnant women (z) in early detection of pregnancy complications.

Model 2	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	20.871	5.184		4.026	0.000
Internal Factors	0.078	0.068	0.041	1.156	0.249
External factors	0.418	0.052	0.405	8.034	0.000
Behavior of Pregnant Women	0.527	0.063	0.418	8.330	0.000

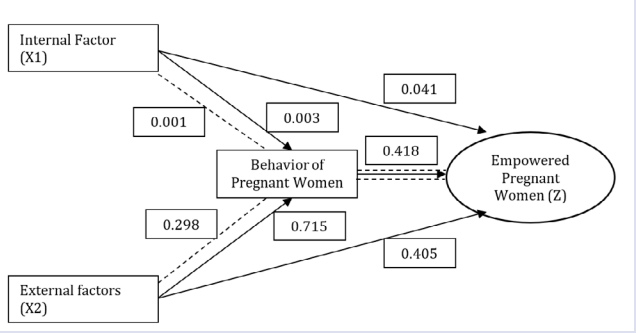

Figure 1: Path analysis

direct and indirect influences of 0.004. The total influence of external factors on empowered pregnant women is as much as direct influence plus indirect influence, namely: (0.715) + (0.298) = 1.013. This indicates that increased external factors can increase pregnant women empowered by combining direct and indirect influences by 0.530. The total influence of pregnant women's behavior on empowered pregnant women amounted to 0.418. This indicates that increased behavior of

pregnant women can increase pregnant women empowered by 0.418. (Figure 1).

DISCUSSION

The results of this study found that the internal factor that influences the behavior of pregnant women in conducting early detection of pregnancy complications in Bogor Regency is parity (r: -0.158; p: 0.003) which means that the less parity, the better the behavior with weak correlation strength. While internal factors that show no influence on the behavior of pregnant women. External factors (husband support, family support, community support, and health worker support) affect the behavior of pregnant women in early detection of pregnancy complications in Bogor Regency where good external factors (husband support, family support, community support, and health worker support) will cause the behavior of pregnant women to be better with moderate correlation strength (r: 0.489-0.617; p< 0.001).

Internal factors that influence the behavior of pregnant women in early detection of pregnancy complications are parity. The results of this study are in line with the research of[34] which states that parity is a factor related to antenatal care. Parity of both privigravida and multigravida tends to cause drastic changes both physically and psychologically.[35] Parity determines the fate and well-being of the mother and fetus, both during pregnancy and at the time of delivery. Low parity has a strong motivation to do early detection of pregnancy because it is to know the condition of the fetus and the health of the mother and fetus, while mothers with high parity lack motivation to do early detection of pregnancy because they already have experience and conduct examinations when there are complaints.[36]

Internal factors that do not affect the behavior of pregnant women in early detection of pregnancy complications are age and education. The results of this study are the same as the research of Orboi *et al* (2019)[37] which states that age does not affect pregnancy visits. Preparepregnant women to participate in early detection of pregnancy with changes that occur due to the process of growth and development (increasing age) and interaction with background experiences. A certain age range is good for carrying out parenting roles and taking pregnancy checks, if too young or too old may not necessarily be able to carry out these roles optimally. The results of research related to education are also the same as the research of Wulandari *et al* (2020)[38] which states that there is no relationship between education and COVID-19 prevention behavior. Pregnant women who have low education who do early detection of pregnancy are caused by motivation, which comes from intrinsic motivation and extrinsic motivation. Intrinsic motivation in pregnant women who do early detection of pregnant women is that the mother wants to keep the fetus she is carrying until childbirth in a healthy condition of the mother and baby, while for extrinsic motivation in pregnant women is one of the husband's supports.[39] So it can be said that pregnant women both who have education and who do not have education can do early detection of pregnancy.

External factors that influence the behavior of pregnant women in early detection of pregnancy complications are husband support, family support, community, health workers and the government. This study is the same as the research of Ismawati *et al*., (2022)[40] which states that there is a relationship between family support for pregnant women's compliance in making ANC visits at UPT Puskesmas Ulaweng. The health status of pregnant women can be known by examining their pregnancy at the nearest health facility before delivery. The relationship of family support with early detection of pregnancy or motivation is something that causes changes in a person's actions or behavior. In this case, the support of the husband, family and community is very influential on the success of the examination. Support refers to the drive and effort to satisfy a need or a goal. Support becomes a reason for a person to act in order to meet the needs of his life.[41] The results of this study are the same as Mamalanggo's research (2019)[42] which states that there is a relationship between health worker support and antenatal care visits. The support of health workers such as obstetricians, midwives or nurses greatly influences pregnant women to return to the examination to determine fetal growth, ensure the presence or absence of health problems or pregnancy complications that may interfere with the quality of pregnancy and to carry out early detection of pregnancy.[42] The support of health workers is no less important because health workers are everyone who devotes themselves to the health sector and has knowledge about health and the authority to improve health wages.[43]

The results of this study found that internal factors that influence empowered pregnant women in Early Detection of Pregnancy Complications in Bogor Regency are education (r: 0.194; p<0.001) and parity (r: -0.108; p: 0.044) which means that the higher the education and the less parity, the better the empowered pregnant women will be with weak correlation strength External factors (Husband support, family, community, health workers and government) influence on Empowered Pregnant Women in Early Detection of Pregnancy Complications in Bogor Regency where good external factors will cause empowered pregnant women to be better with moderate correlation strength (r: 0.537-0.645; p< 0.001).

Internal factors that influence empowered pregnant women in early detection of pregnancy complications in Bogor Regency are education and parity. This research is the same as the research of Asaolu *et al*., (2018)[44] which shows that education is one of the factors that can determine women's empowerment in Central, South and West Africa. Education can bring about changes in cognitive abilities, which are important for women's capacity to question, reflect, act on their living conditions and to gain access to knowledge, information and new ideas that will help and can affect the level of empowerment indirectly.[45] This study is the same as the research of[46] which shows that there is an influence between parity on the ability of pregnant women to carry out early detection of preeclampsia risk. Parity indicates the number of children born to a woman. Parity is an important factor in determining the fate of the mother and fetus during pregnancy. Pregnancy falls into the "4 too many" category including too many pregnancies and too many children. This does not only affect the welfare of the family. In addition, pregnant women who have more than 1 child tend to have more experience about pregnancy and childbirth so that information about pregnancy is better and clearer compared to women who have never given birth.[47] The results of research related to education are in line with the research of Suwarnisih & Novitayanti (2022)[48] which states that there is a relationship between education and the application of early detection of high-risk pregnancies. The education level of respondents will affect a person's mindset and behavior. So that in an effort to detect early risky pregnancies, cooperation with the community is needed. Because the program is not only applied to pregnant women, cooperation and the provision of supportive environmental infrastructure for health are needed.[49]

Internal factors that do not affect empowered pregnant women in early detection of pregnancy complications are age. The results of this study are the same as Sugiarti's; Soedirham & Mochny (2012)[50] who stated that there is no influence of age on the ability to detect early risk of pregnancy. Internal factors of maternal age do not have much influence on the mother's habits in checking her pregnancy, meaning that both at-risk and non-risky mothers have the same opportunity to check their pregnancy.

External factors that influence empowered pregnant women in early detection of pregnancy complications in Bogor Regency are husband support, family support, community, health workers and the

government. This research is the same as Bello *et al.*'s (2019)[51] research which states that empowered women have husbands who support and accompany in making ANC visits with their wives. Involving men in MCH in some cases shows that it can encourage women's empowerment and have full participation in decision-making.[52] Based on research by Galle *et al*,[9] pregnant women stated that 24.70% of husbands became decision makers for ANC examination and 2.3% of pregnant women stated that parents or in-laws were the final decision makers in MCH care issues. Husbands, neighbors, and in-laws are key actors or the main determining reasons in the referral of pregnant women.[53] Such support will be an obstacle to conducting health checks for pregnant women who cannot leave without permission from their husbands or elderly families. Culture involves the participation of parents or in-laws in making decisions during pregnancy. Cultural influences or customs such as pregnancy myths or taboos that must be carried out by pregnant women and beliefs about the causes of difficult childbirth.[54] The support of health workers greatly influences pregnant women in early detection of complications of pregnant women. This is supported by the theory of Afulani *et al*., (2017)[55] which states that a bad perception of care in health facilities will influence pregnant women not to do examinations at health facilities.

CONCLUSION

Internal factors (education and parity) and external factors (husband support, family support, community support, health worker support and government) affect empowered pregnant women in early detection of pregnancy complications. External factors also affect empowered pregnant women through maternal behavior (knowledge, attitudes, and motivation).

CONFLICTS OF INTEREST

The authors declare no conflicts of interest.

REFERENCES

1. WHO. "Maternal Mortality Evidance Brief," Maternal Mortality. 2019a;1:1-4.
2. WHO. Pneumonia. 2019b.
3. Kusnandar V. The maternal mortality rate reached 7 thousand in 2021, the largest due to Covid 19. Databooks.Katadata.Co.Id. 2022.
4. WHO. Pneumonia. 2014b.
5. The Asean Secretariat. ASEAN Key Figures 2020. In Asean; 2019;2019.
6. Morton S, Pencheon D, Squires N. Sustainable Development Goals (Sdgs), And Their Implementation. Br Med Bull. 2017;124(1):81-90.
7. Ministry of Health of the Republic of Indonesia. National Report Rkd2018_Final.Pdf. 2018.
8. Ministry of Health of the Republic of Indonesia. Health Profile of Indonesia. In Pusdatin.Kemenkes.Go.Id. 2021.
9. Galle A, De Melo M, Griffin S, Osman N, Roelens K, Degomme O. A Cross-Sectional Study of The Role of Men And The Knowledge Of Danger Signs During Pregnancy In Southern Mozambique. BMC Pregnancy and Childbirth. 2020;20(1):572.
10. WHO. Global Nutrition Targets 2025: Low Birth Weight Policy Brief. Geneva: World Health Organization. 2014a;287(2):270.
11. Septiani R, Martini M, Andini LF. Effectiveness of oxytocin massage and clary sage aromatherapy against the onset of lactation. Sai Betik Sci J Nurs. 2019;14(2):211.
12. Bomela NJ. Maternal Mortality by Socio-Demographic Characteristics and Cause of Death in South Africa: 2007–2015. BMC Public Health. 2020;20(1):157.
13. Holdt Somer SJ, Sinkey RG, Bryant AS. Epidemiology Of Racial/Ethnic Disparities In Severe Maternal Morbidity And Mortality. Semin Perinatol. 2017;41(5):258-65.
14. Ministry of Women's Empowerment and Child Protection (KPPPA). Study of Women's Organization Participation in Reducing Maternal Mortality in West Java. 2016.
15. Wallace ME, Friar N, Herwehe J, Theall KP. Violence as a Direct Cause of And Indirect Contributor to Maternal Death. J Women's Health. 2020;29(8):1032-8.
16. WHO. World Health Statistics 2021 Monitoring Health For The Sdgs. 2021.
17. Say L, Chou D, Gemmill A, Tunçalp Ö, Moller AB, Daniels J, *et al.* Global Causes Of Maternal Death: A Who Systematic Analysis. Lancet Glob Health. 2014;2(6):E323-33.
18. Ashar H, Latifah L, Kusrini I, Tjandrarini DH. Relationship Between Ante Natal Care And Pregnancy Classes With Selection Of Place And Birth Attendant In Indonesia. Indon J Med Health. 2019;10(3):271-80.
19. Goncalves AS, Ferreira IM, Pestana-Santos M, Prata AP, Mccourt C. Antenatal Care Policies For Low-Risk Pregnant Women In High-Income Countries With A Universal Health System: A Scoping Review Protocol. JBI Evid Synth. 2020;18(7):1537-45.
20. Terefe AN, Gelaw AB. Determinants Of Antenatal Care Visit Utilization Of Child-Bearing Mothers In Kaffa, Sheka, And Bench Maji Zones Of Snnpr, Southwestern Ethiopia. Health Serv Res Manage Epidemiol. 2019;6:233339281986662.
21. Waller A, Bryant J, Cameron E, Galal M, Symonds I, Sanson-Fisher R. Screening For Recommended Antenatal Risk Factors: How Long Does It Take? Women and Birth. 2018;31(6):489-95.
22. Chiodo LM, Cosmian C, Pereira K, Kent N, Sokol RJ, Hannigan JH. Prenatal Alcohol Screening During Pregnancy By Midwives And Nurses. Alcoholism: Clin Exp Res. 2019;43(8):1747-58.
23. Patil CL, Klima CS, Leshabari SC, Steffen AD, Pauls H, Mcgown M, *et al.* Randomized Controlled Pilot of a Group Antenatal Care Model And The Sociodemographic Factors Associated With Pregnancy-Related Empowerment In Sub-Saharan Africa. BMC Pregnancy and Childbirth. 2020;17(S2):336.
24. Bello FO, Musoke P, Kwena Z, Owino GO, Bukusi EA, Darbes L, *et al.* The Role Of Women's Empowerment And Male Engagement In Pregnancy Healthcare Seeking Behaviors In Western Kenya. Women Health. 2019a;59(8):892-906.
25. Sipsma H, Ofori-Atta A, Canavan M, Udry C, Bradley E. Empowerment and Use Of Antenatal Care Among Women In Ghana: A Cross-Sectional Study. BMC Pregnancy Childbirth. 2014;14(1):364.
26. Sebayang SK, Efendi F, Astutik E. Women's Empowerment And The Use Of Antenatal Care Services: Analysis Of Demographic Health Surveys In Five Southeast Asian Countries. Women Health. 2019;59(10):1155-71.
27. Shimamoto K, Gipson JD. Investigating Pathways Linking Women's Status And Empowerment To Skilled Attendance At Birth In Tanzania: A Structural Equation Modeling Approach. Plos One. 2019;14(2):E0212038.
28. West Java Health Office. West Java Health Profile 2020. West Java Provincial Health Office. 2020;103-11.
29. Sales S, Galloway Burke M, Cannonier C. African American Women Leadership Across Contexts: Examining The Internal Traits And External Factors On Women Leaders' Perceptions Of Empowerment. J Manage History. 2002;26(3):353-76.
30. Indrayati A, Izzatul NH. Empowering pregnant women through self-care as an effort to reduce the risk of maternal death in Tretep District, Temanggung Regency. Proceedings of the 2017 UMS National Seminar on Sustainable Regional Resource Manage. 2017;728-39.

31. Mahardhita TP, Kurniawati E. Improving Knowledge And Attitude Of Pregnant Women In Provisioning Health Education Based On Audiovisual Media On Early Detection Of Pregnancy Risk. 2021.
32. Suwargiani AA, Aripin D, Arief EM, Fitriana E, Djustiana N, Usri K, *et al*. Psychometric Analysis and Reliability of The Dental Treatment Motivation Scale For Indonesian Pregnant Women. Brazilian Oral Res. 2022;36.
33. Kameda, Yukie, Shimada K. Development Of An Empowermwnt Scale For Pregnant Women. Journal Of The Tsuruma Health Science Society Kanazawa University. 2017;32(7):1-199.
34. Nainggolan SS, Harista J. Factors Associated with Antenatal Care in Pregnant Women: Literature Review. J Aisyiyah Medika. 2021;6(2).
35. Kundaryanti R, Karningsih K, Astri H, Syafrudin S. The Relationship Between Knowledge And Attitude Towards The Preventive Behaviors For The Covid-19 Transmission In Pregnant Mothers At "Rini K" Independent Midwifery Practice (Pmb), Jagakarsa, South Jakarta. Strada Sci J Health. 2021;10(2):1480-6.
36. Kurniawaty K. Factors related to antenatal care (ANC) visits at the midwife of Independent Practice Hj.Maimunah Kertapati Palembang. Gaster. 2018;16(1):36.
37. Orboi Y, Msen Y, Ruru Y, Mallongi A. The Factors Influencing Four Visited Antenatal Care In Primary Health Centre In Sanggeng Manokari District, West Papua Province. Int J Sci Health Res. 2019;4(1):202-10.
38. Wulandari A, Rahman F, Pujianti N, Sari AR, Laily N, Anggraini L, *et al*. The relationship of individual characteristics with knowledge about the prevention of Coronavirus Disease 2019 in communities in South Kalimantan. Indones J Public Health. 2020;15(1):42.
39. Handayani F. Factors related to antenatal care (ANC) visits in Muara Mahat Village Working Area of Puskesmas Tapung I Doppler. 2017;1(2):27-40.
40. Ismawati, Indryani, Amir S. The relationship of family support to the compliance of pregnant women in making ANC visits in the Ulaweng Health Center upt area. J Sound Health. 2022;8(2):29-36.
41. Notoatmodjo S. Health Behavioral Sciences. Rineka Cipta. 2014.
42. Mamalanggo A. The relationship between knowledge, mother's attitude and support from health workers with antenatal care (ANC) visits at Ranotana Weru Health Center Manado City. Kesmas: Sam Ratulangi Uni J Public Health. 2019;8(7):221-7.
43. Ministry of Health of the Republic of Indonesia. Indonesia Health Profile. 2014. Http://Www.Depkes.Go.Id/Resources/Download/Pusdatin/Profil-Kesehatan-Indonesia/Profil-Kesehatan-Indonesia-2014.Pdf
44. Asaolu IO, Alaofè H, Gunn JKL, Adu AK, Monroy AJ, Ehiri JE, *et al*. Measuring Women's Empowerment In Sub-Saharan Africa: Exploratory And Confirmatory Factor Analyses Of The Demographic And Health Surveys. Front Psychol. 2018;9.
45. Kabeer N. Gender Equality And Women's Empowerment: A Critical Analysis Of The Third Millennium Development Goal 1. Gender Dev. 2015;13(1):13-24.
46. Mardiyanti I, Nursalam N, Devy SR, Ernawaty E. The Independence Of Pregnant Women In Early Detection Of High Risk Of Pregnancy In Terms Of Parity, Knowledge And Information Exposure. J Public Health Africa. 2014;14(1):364.
47. Mubarak M, Wahi I. Health Promotion An Intermediary of the Teaching and Learning Process in Education. Graha Sci. 2017.
48. Suwarnisih S, Novitayanti E. The relationship between education level and the implementation of early detection of risky pregnancies by posyandu cadres in Jaten Village, Karanganyar. Matern Sci J. 2022;6(1).
49. Masruroh N, Safitri YI. Empowering pregnant women in early detection of high-risk pregnancies at PMB Bashori Surabaya. Commun Dev J. 2019;4(1).
50. Sugiarti, Soedirham O, Mochny IS. Efforts to empower pregnant women for early detection of high risk of first trimester pregnancy. Indones J Public Health. 2019;9(1):27-36.
51. Bello FO, Musoke P, Kwena Z, Owino GO, Bukusi EA, Darbes L, *et al*. The Role Of Women's Empowerment And Male Engagement In Pregnancy Healthcare Seeking Behaviors In Western Kenya. Women Health. 2019b;59(8):892-906.
52. Molzan Turan J, Nalbant H, Bulut A, Sahip Y. Including Expectant Fathers In Antenatal Education Programmes In Istanbul, Turkey. Reproductive Health Matters. 2014;9(18):114-25.
53. Firoz T, Vidler M, Makanga PT, Boene H, Chiaú R, Sevene E, *et al*. Community Perspectives On The Determinants Of Maternal Health In Rural Southern Mozambique: A Qualitative Study. Reproductive Health. 2016;13(S2):112.
54. Farida L, Kurniawati D, Juliningrum PP. The relationship between husband support and childbirth readiness for adolescent pregnant women in Sukowono, Jember. Health Library. 2019;7(2):127.
55. Afulani PA, Altman M, Musana J, Sudhinaraset M. Conceptualizing Pathways Linking Women's Empowerment And Prematurity In Developing Countries. BMC Pregnancy Childbirth. 2017;17(S2):338.
56. WHO. Optimal feeding of low birth- weight infants in low- and middle-income countries; 2011.

Cite this article: Petralina B, Amiruddin R, Wahiduddin, Irwandy, Mallongi A, Salmah U, et al. Analysis of the Influence of Internal and External Factors on Empowered Pregnant Women Through the Behavior of Pregnant Women in Early Detection of Pregnancy Complications. Pharmacogn J. 2023;15(6): 1029-1035.