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[BNJ] Submission Acknowledgement

1 pesan

Dr. Joko Gunawan <editorbnj@gmail.com> 21 Oktober 2022 pukul 12.48
Kepada: Haerawati Idris <haera@fkm.unsri.ac.id>

Haerawati Idris:

Thank you for submitting the manuscript, "FACTORS ASSOCIATED WITH ANTENATAL CARE COMPLETION IN INDONESIA " to Belitung Nursing Journal. With the online journal management system that we are using, you will be able to track its progress through the editorial process by logging in to the journal web site:

Manuscript URL: https://www.belitungraya.org/BRP/index.php/bnj/authorDashboard/submission/2380
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The review process is usually completed within 4 weeks, but can take longer, depending on reviewer availability (e.g. during holiday periods or if an alternative reviewer needs to be approached). This time frame includes selecting and inviting reviewers, awaiting their response to the request, consideration of the reviews by the assigned Editor and, finally, the Editor-in-Chief's decision and communication with the author. Please be patient during this process and it would be much appreciated if you would not email the Editorial Office to enquire about the status of your manuscript until a period of at least 4 weeks has lapsed.

If you have any questions, please contact me. Thank you for considering this journal as a venue for your work.

Regards,

Belitung Raya Editorial Office

Department of Publication, Belitung Raya Foundation, Indonesia

Belitung Nursing Journal - Belitung Raya Editorial Office

Haerawati Idris <haera@fkm.unsri.ac.id>

[BNJ] Editor Decision

1 pesan

Joko Gunawan, S.Kep. Ners., PhD <editorbnj@gmail.com> 23 November 2022 pukul 09.55
Kepada: Haerawati Idris <haera@fkm.unsri.ac.id>, indah sari <insar.indahsari@gmail.com>

Dear Dr. Haerawati Idris, indah sari:

We have reached a decision regarding your submission to Belitung Nursing Journal, "FACTORS ASSOCIATED WITH ANTENATAL CARE COMPLETION IN INDONESIA ".

Our decision is: Resubmit [Major revision]

Due for resubmission: 5 January 2023

The reviewer(s) have recommended revisions to your manuscript. Therefore, we invite you to respond to the reviewer(s)' comments and revise your manuscript. Please see the comments at the bottom of this letter.

Please also highlight the changes to your manuscript within the document by using the track changes mode in MS Word or by using bold or colored text. Once the revised manuscript has been prepared, do NOT resubmit as a new submission.

Once again, thank you for submitting your manuscript to Belitung Nursing Journal and I look forward to receiving your revision.

Sincerely,

Joko Gunawan

Reviewer A:

The reviewed files are attached below.

Recommendation: Revisions Required

Reviewer B:

1. Please see my comments in the file I attached

2. Major revisions required

3. Requires a lot of grammar correction

Recommendation: Revisions Required

Reviewer C:

This is important study, here are my comments:

- As this is a nursing journal, nursing novelty and nursing significance should be presented in the background of the study.
- Lack of Indonesian context in the background. We don’t know where the pregnant women should go for their antenatal check-up. Clinics, hospital, primary center? And, Indonesian healthcare system should be presented in a bit.

- Implications of this study for nursing and midwifery practice should be clearly described in abstract (short implication) and in the end of the discussion under subheading “implication of this study for nursing and midwifery practice”. Implications should reflect the impacts of the study nationally and globally.
- Lack of details in the methods. I understand this is a secondary data analysis. The authors need to describe where to access the data, explain clearly operational and conceptual definition of dependent variable and all independent variables. The authors can check back the data how the original authors defined the variables. Just to make it clear.
- The authors should clearly explain how the original authors conducted the Basic Health Research in 2018. Explain it clearly under subheading “study design”. When, where, how the study was conducted, explain the process in detail. Personally, I don’t know what Basic Health Research in 2018.
- Many mistakes in the reference format.
- Academic writing needs to be improved.

Recommendation: Revisions Required

Belitung Nursing Journal - Belitung Raya Editorial Office

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B-Reviewer-B.docx
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Factors Associated with the Completion of Antenatal Care in Indonesia: A Cross-Sectional Data Analysis Based on the 2018 Indonesian Basic Health Survey

Abstract

Introduction: Maternal rates are still relatively high worldwide, including in Indonesia. The Sustainable Development Goals (SDGs) project to lower it to 70 in every 100,000 live births by 2030.Antenatal care is health service treatment that pregnant get from a health worker during pregnancy. This study intended to analyze factors associated with completion of antenatal care in Indonesia.

Methods: This was a quantitative study utilizing a cross-sectional research design. It used Basic Health Research in 2018 as the secondary data source, collecting 65,929 sampled women at the age of 15-49 years selected according to inclusion and exclusion criteria. Data were analyzed using multiple logistic regression statistics.

Results: Predominantly the respondents completed antenatal care (75.2%). The bivariate analysis showed that educational background ($p < 0.001$), occupation ($p<0.05$), health insurance ownership ($p < 0.001$), place of ANC services ($p < 0.001$), travel time to health facilities ($p < 0.001$), residence ($p <0.001$), history of pregnancy ($p <0.001$), parities ($p < 0.001$), desired pregnancy ($p < 0.001$), and pregnancy complications ($p < 0.001$) were significantly associated with antenatal care completion. Education level was the most dominant out of all the factors linked with antenatal care completion in Indonesia ($p < 0.001$; OR = 2.023; 95% CI: 1.839-2.225) despite being controlled by other factors.

Conclusion: Education level, health insurance ownership, place of ANC services in health facilities, travel time to health facilities, urban, desired pregnancy, and pregnancy complications had a significant relationship with antenatal completion. A high education level associated with the level of mothers knowledge and behavior toward proper antenatal care. The ~~Indonesian~~ government including health professional like nurse, and health worker should conduct socialization to increase the community's knowledge and awareness of using regular antenatal care services in health facilities.

Keywords: antenatal care, cross-sectional studies, female, Indonesia, pregnancy

INTRODUCTION

A nation's public health is measured from some aspects including mothers' mortality rate. The 2030 Sustainable Development Goals are targeted to lower this rate to 70 in every 100,000 live births. In 2017, it was predicted by the World Health Organization that 211 in every 100,000 live births would be the maternal mortality rate (WHO, 2020). As documented in the Indonesian Statistic report in 2015, Indonesia's maternal mortality rate hit 305 in every 100,000 live births. It shows that the maternal mortality rate is four times higher than that targeted in the Sustainable Development Goals (Indonesian Ministry of Health, 2020). Based on WHO reports, the causes of morbidity and death in pregnant women include HIV infection and malaria (WHO, 2016). The three highest causes of maternal death in Indonesia, including bleeding were 1,280 cases, hypertension were 1,066 cases and infections were 207 cases (Indonesian Ministry of Health, 2020).

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In order to rapidly reduce maternal mortality, the Indonesian Ministry of Health has exerted policies. They are strengthening cross-sectoral collaboration in reducing maternal rates, increasing professional coordination, optimizing the use of National health insurance (JKN) and activating standby villages. Antenatal care to guarantee that all mothers are able to access adequate maternal health services. It is stated in the Regulation of the Indonesian Ministry of Health No. 97 of 2014 on maternal health services, including antenatal care services. Antenatal care refers to a pregnancy examination for improving pregnant women's physical and mental health optimally, preparing childbirth, postpartum period, and exclusive breastfeeding, as well as restoring reproductive health (Indonesian Ministry of Health, 2018).

Utilizing antenatal care services may reduce maternal mortality. In 2002, the World Health Organization introduced an antenatal care program, initially called Focussed Antenatal Care (FANC) (WHO, 2016). The previous model becomes the benchmark for antenatal care with at least four visits within the first trimester. It was designed to meet high quality, intensive, and various needs of pregnant women (Nurlaili, 2019). ANC improves pregnant women's health by lowering the risk of adverse pregnancy outcomes, perinatal and infant mortality, and morbidity (Brown, 2008). It also encourages skilled birth attendance for delivery and postnatal care, as women who attend ANC are more likely than non-attenders to use these services (ML, 2012). A variety of indicators have been used in studies to assess ANC use. This includes at least one visit, at least four visits, ANC visit trimester timing, services received during ANC visits, and care provider type visited, but the number of contacts is still commonly used (Ataguba, 2018).

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Indonesia is a middle-income country that is quickly developing, with a population of 262 million from 300 different ethnic groups and 730 unique languages spoken throughout its 17,774 islands. In health system, Indonesia has experienced an increase in health facility including primary and referral health facilities (Mahendradhata, 2017). Pregenant women can access antenatal health service in primary health care, hospital or clinics. Pregnant women should visit health services during each trimester, with a minimum of one visit during the first trimester (0-12 weeks of gestation), one visit during the second trimester (12-24 weeks of gestation), and two visits during the third trimester (24 weeks of gestation up to delivery). These standards are recommended in order to guarantee pregnant women and fetuses' health and safety through early detection of risk factors, as well as prevention and early management of complications as a result of pregnancy (Indonesian Ministry of Health, 2019).

The Indonesian antenatal care standard includes 11 procedures that must be completed by nurse-midwives. These procedures are as follows: 1) weight measurement, 2) upper arm circumference measurement, 3) blood pressure measurement, 4) fundal height measurement, 5) fetal heart rate measurement, 6) fetal presentation determination, 7) tetanus toxoid immunization, 8) iron tablet, 9) laboratory test, 10) proper referral, and 11) health education. To correctly implement these procedures, each Public Health Centre is required to develop a technical procedure or technical guideline that describes in detail how the nurse-midwives should promptly implement these procedures (Kementerian Kesehatan,2015). Nurse-midwives have competencies in communication and clinical skills to manage pregnant women through antenatal care (Widyawati et.al, 2015)

A systematic review conducted by Simkhada discovered that maternal education, husband's education, marital status, availability, cost, household income, women's employment, media exposure, and having a history of obstetric complications are factors influencing antenatal care utilization in developing countries. Cultural beliefs and ideas about pregnancy influenced antenatal care use as well. The effect of parity on adequate attendance was statistically significant. While women of higher parity use antenatal care less frequently, there is an interaction with women's age and religion (Simkhada, 2008).

Previous Rresearch shows a handful of factors can affect the utilization of complete antenatal care services. Based on research conducted by Tiruaynet and Muchie in Ethiopia, a relationship was found between ethinicity, area of residence, education level, as well as household economic status with antenatal care use (ANC) (Tiruaynet & Muchie, 2019). Research conducted in Rwanda further showed women at older age, single women or

divorcee, insufficient social support were linked to inadequate ANC service utilization (Rurangirwa et al., 2017). Many studies have explored influential factors in regards to antenatal care coverage. However, little research focuses the factors that are linked to antenatal care completion. Thereby, this study identified factors that possibly associated with antenatal care completion in Indonesia. The study intended to analyze factors linked to antenatal care completion in Indonesia.

MATERIAL AND METHODS

This study conducted a cross-sectional analysis on secondary data sourced from the Basic Health Research (RISKESDAS), which was administered by the Indonesian Ministry of Health in March 2018. The data was collected using a multi-stage systematic random sampling method. During the first stage, census block groups were identified and designated as primary sampling units (PSUs). A probability proportional to enrolment size design was used during the second stage to discern census blocks from every PSU. Systematic random sampling was done during the third stage, with each census block producing 10 census buildings. The fourth stage involved a random selection from the census buildings for one household each. The study is based on data collected every 3 years beginning in 2007 by the National Institute of Health Research and Development (NIHRD), Indonesian Ministry of Health (Kemenkes, R.I., 2018). Our sample consisted of pregnant women between the ages of 15-49 years. For this study, 96,929 pregnant were included as sample.

Antenatal care completion was this study's dependent variable. It is divided into two categories, namely complete and incomplete. If a woman completes antenatal care a minimum of one time during the first trimester, one time during the second trimester, and two times during the third trimester, she has complete ANC. Other than that, it is categorized as incomplete.

Twelve independent variables include education level, occupation status, health insurance ownership, the place of ANC services, travel time to health facilities, area of residence, history of pregnancy, parities, history of abortion, multiple pregnancies, desired pregnancy, and pregnancy complication. Education level is divided into three categories,

namely college, secondary education, and primary education. Occupation status is categorized as working and not working. Health insurance ownership is divided two categories namely yes and no. The place of ANC services has two categories were health facilities and home. Travel time to health facilities is divided into ≤ 15 minutes and > 15 minutes. The area of residence is categorized as urban dan rural. The history of pregnancy is grouped as once and more than once. Categories of parities include two times and more than two times. The history of abortion is categorized as ever and never. Multiple pregnancies are divided into yes and no. Desired pregnancy is divided into yes and no. Pregnancy complications are divided into two categories namely -yes and no.

This study involved univariate and bivariate data analyses. The variables were first statistically described. Then, antenatal care completion were adjusted using the multiple logistic regression models. SPSS 23.0 for Windows was used to complete the analyses. This study passed the Ethics Review Center of the Faculty of Public Health of Sriwijaya University, issuing the Letter of Ethical Qualification No. 042/UN9.FKM/TU.KKE/2021.

RESULTS

Table 1 shows 75.2% of the respondents completing antenatal care. Most respondents were classified as completing their education at the secondary level (60.3%). The respondents had worked (40.8%) and health insurance (39.2%). The majority of the respondents came to health facilities (99.1%). The respondents took ≤ 15 minutes to health facilities (44.1%). The majority of the respondents lived in urban areas (54.3%). The respondents had a history of pregnancy once (31.8%). The majority of the respondents had parities of ≤ two times (73.6%). The respondents had a history of abortion (14.4%) and multiple pregnancies (0.8%). The majority of the respondents had desired pregnancy (91.6%). The respondents had pregnancy complications (24.8%).

Table 1. Respondents' Characteristics (N = 65,929)

Variables	n	%
Antenatal care completion		
Complete	49,584	75.2
Incomplete	16,345	24.8
Education level		

High	8,131	12.3
Secondary education	39,746	60.3
Primary education	18,052	27.4
Occupation status		
Employed	26,896	40.8
Unemployed	39,033	59.2
Health insurance ownership		
Yes	25,832	39.2
No	40,097	60.8
Place of ANC services		
Health facilities	65,366	99.1
Home	563	0.9
Travel time to health facilities		
≤ 15 minutes	29,100	44.1
> 15 minutes	36,829	55.9
Area of residence		
Urban	35,772	54.3
Rural	30,157	45.7
History of pregnancy		
Once	20,982	31.8
> 1 time	44,947	68.2
Parities		
≤ 2 times	48,521	73.6
> 2 times	17,408	26.4
History of abortion		
Ever	9,480	14.4
Never	56,449	85.6
Multiple pregnancies		
Yes	519	0.8
No	65,410	99.2
Desired pregnancy		
Yes	60,371	91.6
No	5,558	8.4

Pregnancy		
Yes	16,347	24.8
No	49,582	75.2

The chi-square test used for the bivariate analysis produced the results shown in Table 2. Occupation, education, health insurance ownership, place of ANC services, travel time to health facilities, area of residence, history of pregnancy, parities, desired pregnancy, and pregnancy complications had a significant relationship with antenatal care completion ($p > 0.05$). In contrast, a history of abortion and multiple pregnancy variable did not relate to antenatal care completion ($p < 0.05$).

Table 2. Bivariate analysis of complete antenatal care coverage

Variables	**Complete antenatal care coverage**				***p***	**OR (95% CI)**
	Complete		**Incomplete**			
	n	**%**	**n**	**%**		
Education level						
High	6,871	84.5	1,260	15.5	<0.001	2.650 (2.418-2.904)
Secondary education	30,563	76.9	9,183	23.1	<0.001	1.617 (1.517-1.712)
Primary education	12,150	67.3	5,903	32.7		
Occupation status						
Employed	21,219	78.9	5,678	21.1	0.006	1.075 (1.021-1.132)
Unemployed	30,261	77.5	8,772	22.5		
Health insurance ownership						
Yes	19,928	77.1	5,904	22.9	<0.001	1.188 (1.128-1.252)
No	29,657	74	10,440	26		
Place of ANC services						
Health facilities	49,276	75.4	16,090	24.6	<0.001	2.526 (2.042-

						3.125)
Home	309	54.8	254	45.2		
Travel time to health facilities						
≤ 15 minutes	23,192	79.7	5,908	20.3	<0.001	1.552 (1.468-1.642)
> 15 minutes	26,392	71.7	10,437	28.3		
Area of residence						
Urban	28,410	79.4	7,362	20.6	<0.001	1.637 (1.551-1.728)
Rural	21,174	70.2	8,983	29.8		
History of pregnancy						
Once	16,351	77.9	4,631	22.1	<0.001	1.245 (1.173-1.320)
> 1 time	33,233	73.9	11,714	26.1		
Parities						
≤ 2 times	37,845	78	10,676	22	<0.001	1.712 (1.624-1.804)
> 2 times	11,739	67.4	5,669	32.6		
History of abortion						
Ever	7,194	75.9	2,286	24.1	0.253	1.043 (0.970-1.122)
Never	42,390	75.1	15,059	24.9		
Multiple pregnancies						
Yes	393	75.6	126	24.4	0.870	1.023 (0.779-1.344)
No	49,192	75.2	16,218	24.8		
Desired pregnancy						
Yes	46,051	76.3	14,320	23.7	<0.001	1.844 (1.697-2.002)
No	3,533	63.6	2,025	36.4		
Complication of pregnancy						
Yes	12,621	77.2	3,726	22.8	<0.001	1.156 (1.086-1.231)

No	36,963	74.6	12,619	25.4

Table 3 illustrates that education level, health insurance ownership, place of ANC services in health facilities, travel time to health facilities, urban, desired pregnancy, and pregnancy complications had a significant relationship with antenatal completion. The most influential variable, associated with antenatal completion was college with adjusted odds ratio (OR) value of 2.023 (95% confidence interval (CI): 1.839-2.225). The likelihood of respondents with higher education levels to complete antenatal care was 2.023 times higher than respondents with a primary education level (95% CI: 1.839-2.225) when influenced by additional variables.

Table 3. Final model of multivariate logistic regression analysis

Variables	p	OR Adjusted
Education level		
High	<0.001	2.023 (1.839-2.225)
Secondary education	<0.001	1.356 (1.279-1.439)
Primary education	*Ref*	
Health insurance ownership		
Yes	<0.001	1.114 (1.056-1.172)
No	*Ref*	
Place of ANC services		
Health facilities	<0.001	1.926 (1.553-2.389)
Home	*Ref*	
Travel time to health facilities		
≤ 15 minutes	<0.001	1.241 (1.164-1.324)
> 15 minutes	*Ref*	
Area of residence		
Urban	<0.001	1.399 (1.315-1.488)
Rural	*Ref*	
Parities		
≤ 2 times	<0.001	1.500 (1.419-1.586)
> 2 times	*Ref*	
Desired pregnancy		

Yes	<0.001	1.703 (1.559-1.860)
No	*Ref*	
Pregnancy complications		
Yes	<0.001	1.143 (1.073-1.218)
No	*Ref*	

DISCUSSION

This current study analyzed factors associated with antenatal care completion in Indonesia. It found that 75.2% of the respondents had complete antenatal care. Education, occupation status, health insurance ownership, place of ANC services, travel time to health facilities, area of residence, history of pregnancy, parities, desired pregnancy, and pregnancy complications had a significant relationship with antenatal care completion.

Education level had a relationship with antenatal care completion. The respondents graduated from college had a 2.65 higher chance of performing complete antenatal care than those with primary education. Similarly, research shows that education level has a statistical relationship with maternal compliance in antenatal care visits. Mothers who have college education are 3.383 times more obedient to performing antenatal care visits than mothers who have primary education (Wulandatika, 2017). Education level determines the extent of one's knowledge. Mothers and families' ignorance on proper antenatal care's importance will endanger the safety and health of mothers and their babies. To increase knowledge, mothers should actively have consultations with health workers, attend pregnancy classes, and learn about pregnancy on other media. Health workers must also actively conduct counseling and outreach to residential homes in their working areas to increase public awareness, especially among expecting mothers, regarding antenatal care utilization in health facilities. Similarly, research conducted by Junga, Pondaag, and Kundre shows a correlation between education and antenatal care examination regularity (Junga et al., 2017). Based on research by Humokor, Rumayar, and Wowor, a relationship has been found between education and antenatal care service usage (OR = 7.286), which means that mothers with higher education were 7.286 times more obedient than mothers with lower education (Humokor et al., 2019).

This study also showed that occupation status had a relationship with antenatal care completion. Working mothers had a 1.075 higher chance of performing complete antenatal care than non-working mothers. The results of this study are in line with research conducted

by Dengo & Mohamad (2019) showing that there is a significant relationship between maternal work and antenatal care visits. It migh be caused Working mothers usually have higher educational status so they have more knowledge about the importance of regular antenatal care. Working mothers will spend their time doing antenatal care at health facilities and at home. In contrast to this study, research by Ariestanti, Widayati and Sulistyowati shows that work status had no relationship with mother's behavior during pregnancy. (Ariestanti et al., 2020). Research conducted by Putri and Hastutik also shows that the mothers' occupation was not connected with her behavior toward visits for antenatal care (Putri & Hastutik, 2020).

Health insurance likely minimizes unnecessary financial expenses expected. Health insurance ownership and antenatal care completion. Mothers who had health insurance had a 1.188 higher chance of performing complete antenatal care compared to mothers who did not have health insurance. Research in Mongolia reported health insurance ownership was connected with health service use (Yadam et al., 2013). Similarly, Kurniawan and Intisari have found a link between ownership of health insurance and health service utilization (Kurniawan & Intisari, 2012). A person who has health insurance makes more use of the service because he/she does not have to pay for the aforementioned services. Ownership of health insurance can improve access to health services.

This study figured out that place of ANC services related to antenatal care completion. Mothers who went to health facilities were 2.526 times more inclined to utilize complete antenatal care than mothers receiving ANC at home. Research affirms the result by finding a relationship between service availability and visits for antenatal care. The existence of health facilities and health workers serves an essential part in increasing visits for antenatal care. Inadequate health facilities as well as health workers likely associated with the low frequency of pregnancy check-up visits. As for the other possibility, due to the lack of impetus, mothers should be motivated to carry out antenatal care services (Supliyani, 2017). Another study conducted by Fitriani, Kamil, and Agustina also showed a relationship between access to health facilities and antenatal care visits. High-risk pregnant women with easy access to health facilities had nine times the likelihood to make complete antenatal care visits than pregnant women without easy health facility access.

The closer the distance to health facilities, the faster the travel time. Travel time to health facilities was related to antenatal care completion. Mothers who had a travel time of ≤

15 minutes to health facilities had a 1.552 higher chance of completing antenatal care services than mothers who had travel time of > 15 minutes to health facilities. Research further shows travel time to service facilities is significantly related to antenatal care visits. Mothers who spent > 25 minutes on travel to health facilities had 1.789 times chances to perform pregnancy checks of < 4 times (Supliyani, 2017). Pregnant women who can reach health care facilities faster tend to utilize more frequent antenatal care services than pregnant women who took a long time to reach health facilities. Health facility which near form home will help pregnant to access health care. Similarly, research conducted by Gamelia, Sistiarani, and Masfiah has shown a relationship between travel time to health services and behavior towards pregnancy care (Gamelia et al., 2013).

This study pointed out the area of residence likely correlated with health service access. Mothers residing in urban districts had 1.637 more chances for complete antenatal care than mothers living in rural areas. Fatali dan Budyanra also affirm this finding by stating that the area of residence influences the status of pregnancy visits. Expectant mothers residing in urban districts had 2.065 times more chances to do pregnancy checks compared to those in rural areas. Place of residence will associate the ease of utilization of health services, if it is easy to reach it will increase the utilization of antenatal services. Housing with adequate infrastructure will facilitate access to health services in an area. Adequate public facilities such as road conditions and transportation in urban areas contribute to access to health services (Fatali & Budyanra, 2019). Therefore, the government should develop health facilities in rural and urban areas evenly.

This study also reported that ~~A~~ a significant relationship was also found between a history of the pregnancy and antenatal care completion. Mothers with at least one history of pregnancy had a 1.245 higher chance of completing antenatal care than mothers bearing more than one pregnancy. In line with ~~this~~ research by Saptarini & Suparmi found a connection between history of pregnancy and visits for antenatal care. Mothers that have had three or more pregnancies were not as likely to complete visits for antenatal care and do pregnancy check-up as they perceived themselves having adequate knowledge and experience. Meanwhile, mothers with two pregnancies need information and help regarding their pregnancy as perceiving inexperienced (Saptarini & Suparmi, 2016). Research conducted by Kusuma shows that 70% of the mothers had multigravida pregnancies. Multigravida mothers had some experience with pregnancy visits to public health centers, hospitals, clinics, and others in previous pregnancies (Kusuma, 2018).

Parity is the number of children who were born live to mothers. Parit~~ies~~y related to antenatal care completion. Mothers who had parities of ≤ two times had a 1.712 higher chance of performing complete antenatal care than mothers who had parities > 2 times. In line with ~~this current result~~previous study~~,~~; Junga, Pondaag, and Kundre have found that maternal parity has a relationship with antenatal care examination regularity (Junga et al., 2017). Mothers with higher parity feel more experienced in pregnancy and childbirth, and thus they do not have to worry as much as they did during the previous pregnancy. Pregnant women with fewer children tend to be better at checking their pregnancy than mothers with more children (Choirunnisa & Syahputri, 2018). Another study conducted by Sari (2015) states that there is a relationship between parity and adherence to standard antenatal care visits. The lower the parity, the more routine ANC visits will be. This is because some pregnancies with high parity are unplanned pregnancies. Then the research conducted by Dengo & Mohammad (2019) also showed that there was a significant relationship between pregnancy parity and antenatal care visits (K-1).

Desired pregnancy is a planned pregnancy that occurs at the right time. This study found that desired pregnancy related to antenatal care completion. Thus, mothers who had desired pregnancy had a likelihood to complete antenatal care 1.844 times greater than mothers who had unwanted pregnancies. Research conducted by Dumilah supports this finding that desired pregnancy deals with pregnancy examination. Wanted pregnancies are regularly checked 5.1 times compared to unwanted pregnancies (Dumilah, 2019). Research conducted by Dini, Riono, and Sulistiyowati states that mothers who bore unwanted pregnancies had 1.79 times chances of not having standard prenatal care compared to those who desired pregnancies. To prevent late detection and treatment of pregnancy complications, mothers with unwanted pregnancies should seek information about pregnancy health earlier (Dini et al., 2016).

~~Statistically,~~Our finding ~~it~~ shows that pregnancy complications had a significant relationship with antenatal care completion. Mothers with pregnancy complications likely have complete antenatal care compared to those without pregnancy complications. Another study also shows pregnancy complications had a significant relationship with antenatal care use. Pregnant women who experience complications during pregnancy seem to have better awareness of their health, increasing their desire to take advantage of antenatal care services (Jusniany et al., 2016). However, a few mothers who experienced mild complaints could handle them without having a pregnancy test. The level of knowledge associated with how

mothers deal with their complaints and improve their maternal awareness by participating in antenatal care regularly during pregnancy. Disease complaints likely relate to the utilization of antenatal care services (Indrastuti & Mardiana, 2019).

Implication of the study for nursing practice

A team of family medicine and community health physicians and nurses provides health services. Nurse midwives provide antenatal care in a health facility (Pricilla, 2017). Health professional like nurse, midwife, and physician should conduct socialization to increase the community's knowledge and awareness of using regular antenatal care services in health facilities

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LIMITATION

Considering this study employed a cross-sectional survey approach, it was not equipped to effectively trace the causality between factors. Based on the analysis of the secondary data, there are still variables excluded from this study, including geographical factor, economic, as well as social cultural factor due to data limitations

CONCLUSION

Some variables significantly related to antenatal care completion include education level, health insurance ownership, place of ANC services in health facilities, travel time to health facilities, urban, desired pregnancy, and pregnancy complications. Education status essentially contributes to mother's knowledge and behavior towards antenatal care services in health facilities. The Indonesian government should boost socialization to increase community's knowledge and awareness of using antenatal care services regularly in health facilities. Health worker should increase health education for pregnant women to access antenatal care.

Authors' Contributions

Conceptualizing research design and collecting raw data for an analysis: Indah Sari. Conceptualizing article writing then preparing the original draft: Haerawati Idris

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[BNJ] Editor Decision: Accept

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Kepada: Haerawati Idris <haera@fkm.unsri.ac.id>, indah sari <insar.indahsari@gmail.com>

Dear Dr. Haerawati Idris, Indah Sari:

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