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## Belief Culture and Family Support are the Dominant Factors Affecting Antenatal Care Compliance in Sub-Urban, Indonesia

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### Abstract

The study aims to describe the most dominant factors affecting Antenatal Care (ANC) compliance. That was a cross-sectional study. The populations are pregnant women in the 2<sup>nd</sup> and 3<sup>rd</sup> trimester from four sub-districts in Dumai City. A sample of 215 subjects participated in this study. Data were collected by questionnaire. Data were analyzed using chi-square and multiple logistic regression. Bivariate analysis showed that there are six factors significantly associated with ANC compliance ( $p$ -value  $< 0.05$ ), i.e., attitudes, knowledge, belief culture, husband, family, and friends support. Multivariate analysis showed that the factors affected to ANC compliance were belief culture (Exp  $\beta$ : 2,455), family support (Exp  $\beta$ : 2,295), husband support (Exp  $\beta$ : 2,140), attitude (Exp  $\beta$ : 2,020) and friend support (Exp  $\beta$ : 1,962). Conclusion, Five factors affecting Antenatal care compliance in sub-urban, i.e., attitude, belief culture, husband support, family, and friends support. The most dominant factors are belief culture and family support. We recommend that professional health workers develop health promotion designs and create a healthy support system taking into consideration our findings.

**Keywords:** Attitude, Belief Culture, Family Support, Pregnant women, Shamans.

### 1. Introduction

Indonesia is a developing country; the Maternal Mortality Rate in Indonesia is still relatively high at 305/100,000 per live birth [1]. One effort to reduce the case is to focus on Antenatal Care (ANC) visits and maternal education [2]. The routine of Antenatal care visits can detect early abnormalities and risks that arise during pregnancy [3,4].

The Indonesian government states that 95 percent of antenatal care visits are the program standard. There was a decrease in Antenatal care visits from during the 2012-2016 period, from around 90.1% to 85.3% [1]. One of the lowest ANC visits was Riau province (76.1%). We conducted this research in the Dumai city, which has a minimum coverage in Riau province (71.5%). The city is categorized as a sub-urban area because it borders directly with the capital city of Riau Province. Still found in these areas have deficient Antenatal care coverage, i.e., Sungai Sembilan sub-district (1<sup>st</sup> ANC visit coverage was 54.1%, and 4<sup>th</sup> ANC visit was 42.2%) [5].

The desire of pregnant women to conduct antenatal care visits is individual behavior that is influenced by three domains: knowledge, attitudes, and practices, and one of the efforts to change behavior are to establish communication and health promotion [6]. The causes of low antenatal care services include; quality of services, facilities, health workers, economic and social culture [7-10].

The rate of Antenatal care visits is still low in rural and sub-urban areas[11]. This sub-urban area even receives little attention from the government because the current Indonesian government program is developing rural areas. Another factor contributing to the low coverage of antenatal care visits in sub-urban areas is family support and belief culture. Both of these factors provide the ANC visit, especially in primipara[10,12]. There are still many shamans in the sub-urban area. People there often pregnant checks or visits to get traditional medicine. Belief culture is hereditary from their family. For this reason, this study will analyze the determinants and dominant factors that influence antenatal care compliance in sub-urban areas.

## 2. Material and Method

This study was quantitative with a cross-sectional design. This research was conducted for three months (January-March 2019) in Dumai City, Riau Province. The population in this study were pregnant women in the 2<sup>nd</sup> and 3<sup>rd</sup> trimesters from four sub-district. A total of 215 participated in this study. The sampling method was used as a proportional random sampling. We have chosen sub-urban areas because of that area the low coverage of antenatal care visits. There are four sub-urban areas, i.e., West Dumai, Bukit Kapur, Sungai Sembilan, and South Dumai.

The independent variable consists of 10 variables, i.e., Intrapersonal factors (attitudes, knowledge, belief culture), interpersonal factors (husband, family, friends, and community leader support), health institution (competence and facilities), mass media, and government policy. The dependent variable is antenatal care compliance. Data were collected using the structured questionnaire with a total of 68 questions. Each question was scored according to the answer. Positive answers were given a score of 1, while negative ones were 0. We also selected four midwives as enumerators. Bivariate data analysis using the chi-square test (95% Confidence Interval CI), *p-value* <0.05. Multivariate analysis with multiple logistic regression. The data input process was done double-checking to minimize error data.

## 3. Result

A total of 215 respondents in this study, the majority of the ages ranged from 17- 35 years 85 (86%), prominent characteristics were low education 130(60.5%), majority of respondent unemployed 199 (92.6%), dominant pregnant was multigravida 162 (75.3%).

Based on the chi-square test in the bivariate analysis showed that there are six independent variables associated with antenatal care compliance (*p-value*<0.05), i.e., attitudes, knowledge, belief culture, husband support, family support, and friend support (Table 1)

**Table 1: Antenatal Care Compliance Factors in Dumai City, Indonesia 2019**

Independent Variable	Antenatal Care Compliance			p-value	OR (CI 95%)
	uncompliance	compliance	n=215		
Attitude	Negatif	41	137	0,016*	2,113 (1,188-3,757)
	Positif	37	78		
Knowledge	Low	39	132	0,015*	2,114 (1,195-3,740)
	High	39	83		
Belief culture	Negatif	35	128	0,002*	2,597 (1,465-4,603)
	Positif	43	87		
Husband support	No	47	149	0,044*	1,922 (1,061-3,842)
	Yes	31	66		
Family support	No	39	134	0,008*	2,262 (1,275-4,014)
	Yes	39	81		
Friends support	No	43	141	0,022*	2,045 (1,145-3,645)
	Yes	35	74		
Community leader	No	40	125	0,163	-
	Yes	38	90		
Health Institution	No	63	161	0,181	-
	Yes	15	54		
Mass Media	No	41	113	1,000	-
	Yes	37	102		
Government policy	No	38	105	1,000	-
	Yes	40	110		

Note: \*significant set was p-value < 0,05, OR: Odds Ratio, CI95% (Confident Interval of 95%).

The next step was the selection of multivariate candidates. A feasible variable has a significant level ( $p\text{-value} < 0.25$ ) with the Enter method in simple logistic regression. There are nine variables included in the multivariate selection ( $p\text{-value} < 0.25$ ), i.e., attitude, belief culture, husband support, family and friend support, community leader, facilities, and mass media. Government policy not included in the selection of candidates  $p\text{-value} 0.979 (> 0.25)$ . Furthermore, all the independent variables involved in multivariate selection become the variables analyzed in multiple logistic regression.

**Table 2. Summary of Multivariate Analysis**

Variable	B	S.E	Wald	df	Sig	Exp (β)	CI 95% for Exp (B)	
							Lower	Upper
Belief culture*	.898	.309	8.450	1	.004	2.455	1.340	4.498
Family support*	.831	.315	6.972	1	.008	2.295	1.239	4.253
Husband support	.761	.329	5.341	1	.021	2.140	1.123	4.081
Attitude	.703	.314	5.021	1	.025	2.020	1.092	3.736
Friends support	.674	.318	4.485	1	.034	1.962	1.051	3.660

Note : \*Dominant factor, S.E (Standart Error), df (degree of freedom), Sig (significant), CI95% (Confident Interval of 95%).

Table 2. shows that in the last multivariate modeling, five independent variables affected antenatal care compliance ( $p\text{-value} < 0.05$ ). The most dominant factors are belief culture Exp β: 2,455 (1,340-4,498) and family support Exp β: 2,295 (1,239-4,253).

#### 4. Discussion

Antenatal care visits aim to facilitate the management of complications to reduce maternal mortality. The screening process for complaints such as hypertension, anemia, screening for prevention, and treatment of infectious diseases, health education needed by pregnant women [13,14]. The low number of antenatal care visits which results in increased morbidity and mortality rates [15,16].

The results of this study explained that belief culture and family support factors are the most dominant factors influencing ANC compliance. Pregnancy women still check and visiting a shaman. They still believe in shamans since their ancestors. They feel comfortable

and very close to the shamans. Another problem is they even believe that the myth of food consumed during pregnancy is still an ancestral tradition. Sources of information about nutrition in pregnancy cannot overcome the false beliefs derived from these traditions [17].

Experiences that are always conveyed by parents to pregnant women about beliefs or myths during pregnancy determine the behavior of pregnant women. These beliefs and myths produce fears and worries from which a woman bases her pregnancy representation. There are 82% of one hundred women interviewed who have been influenced by these myths and beliefs [18].

Beliefs culture about traditional herbal medicines, myths about prohibiting food consumption, and unreasonable daily activities are also often carried out during pregnancy [19-20]. The prevalence of the use of herbal medicines is increasing worldwide, especially among pregnant women. The most common reasons for use include treatment of digestive disorders and cold and flu symptoms. The majority of women use this product during the first trimester. Therefore, health professionals must update their knowledge of potential effects and risks [22].

The attitude of an individual is behaving or carrying out an activity that is also influenced by local cultural beliefs. So that individuals are willing to make changes in their attitudes [21]. In Dumai City, non-routine antenatal care visits in early pregnancy are still carried out by their family. The involvement of her husband and other family members during pregnancy should also be encouraged and more informed by professional health workers [22-25].

Providing support from a husband or friend can reduce depression in pregnancy [26]. Family support among pregnant women and families by teaching families about pregnancy and preparation for delivery needs can be through video screenings. The program is named Family Oriented Antenatal Group Educational Program. Community health workers, traditional birth attendants can also use the media in rural areas [27]. With similar demographic characteristics in the study, and the same program can use in sub-urban areas.

This study has some limitations, using the cross-sectional study. Thus the findings of this study might change at different times. The number of research was small size subjects, so the results cannot be generalized for the large area. This research should be combined with a qualitative design with in-depth interviews to obtain more information. For further study, it is necessary to develop psychological and myths in pregnant women.

## 5. Conclusion

In this study, five factors affected to antenatal care compliance in sub-urban, i.e: attitude, belief culture, husband support, family support, and friend support. The most dominant factors are belief culture and family support. We suggest that professional health workers increase health promotion for pregnant women and those around them. Need to be involved in the tradition of the birth attendant in mapping pregnant women. Health workers create healthy support systems to improve the quality of pregnant health. For further research, it is necessary to consider researching more complete determinants of antenatal care compliance, such as from the ecological approach or environmental aspects.

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