

# Exploring Determinants Influencing the Utilisation of Antenatal Care in Indonesia: A Narrative Systematic Review

Nelsensius Klau Fauk<sup>1\*</sup>,  
Isaias Budi Cahaya<sup>2</sup>,  
Maria Silvia Merry<sup>3</sup>,  
Ayi Diah Damayani<sup>4</sup> and  
Debora Shinta Liana<sup>5</sup>

## Abstract

**Objective:** The study aimed to identify the influencing determinants of the utilisation of antenatal care services among pregnant women in Indonesia.

**Methods:** A systematic search of English and Indonesian literature was conducted using several databases including Pubmed, Popline, Scopus, Proquest, Web of Knowledge, Google Scholar, and Google, covering the period between 1994 and 2016. The search used different key terms either in combination and/or singly. Hand searches were conducted to identify grey literature, and references of the selected articles were scrutinised to obtain additional relevant literature. Due to the limited number of articles, a narrative review was conducted to identify the emerging themes from the literatures.

**Findings:** Results indicated that cultural determinants including traditional beliefs influenced pregnant women's decision to seek for antenatal care. Socioeconomic factors such as level of income and antenatal care cost, lack of knowledge of healthy pregnancy, and women's autonomy were also identified as the barriers to accessing antenatal care services among Indonesian pregnant women. Physical distance to and unavailability of health facilities and services were environmental factors that hampered pregnant women from attending antenatal care. Preference for Traditional Birth Attendant (TBA) services was the behavioural factor hindering pregnant women from accessing antenatal care.

**Conclusion:** The findings of this review indicate the needs for the improvement of knowledge of Indonesian pregnant women on the importance of antenatal care, and the availability of and accessibility to antenatal care facilities and services, and local transport to facilitate pregnant women to seek antenatal care services.

**Keywords:** Behavioural factor; Pregnant women; Antenatal care; Indonesia

**Received:** September 26, 2017; **Accepted:** October 10, 2017; **Published:** October 16, 2017

## Introduction

Maternal mortality has been a major public health concern in Indonesia. The Indonesian maternal mortality rate (MMR) in 2012 was 359 per 100,000 live births [1]. This number is almost threefold the United Nations' fifth Millennium Development Goals (MDGs) target number of 102 for the country by 2015 [2]. The Government of Indonesia has taken several efforts to reduce maternal mortality, including the provision of antenatal care services to identify complications and danger signs during pregnancy. Therefore, the Indonesian Maternal Health Programme recommends pregnant women to have at least four

antenatal care visits during pregnancy. However, only 66% of pregnant women in Indonesia have reached the recommended number of antenatal care visits, which are still below the national target of 90% antenatal care attendance [3]. Evidence on factors influencing the use of antenatal care in Indonesia is scarce at the current time. This literature review aimed to explore factors that influence the utilisation of antenatal care in Indonesia.

## Methods

This study employed a systematic literature search to locate

- 1 Institute of Resource Governance and Social Change, Nusa Tenggara Timur, Indonesia
- 2 Samuel J. Moeda Indonesian Navy Hospital, Nusa Tenggara Timur, Indonesia
- 3 Medicine Faculty, Duta Wacana Cristian University, Yogyakarta, Indonesia
- 4 Midwifery Department, Poltekkes Pangkal Pinang, Bangka Tengah, Indonesia
- 5 Medicine Faculty, Nusa Cendana University, Nusa Tenggara Timur, Indonesia

### \*Corresponding author:

Nelsensius Klau Fauk

✉ nelsen\_klau@yahoo.com

Institute of Resource Governance and Social Change, Jl. R. W. Monginsidi II, No. 2, Kupang, Nusa Tenggara Timur, Indonesia.

Tel: +6282113633647

**Citation:** Fauk, Cahaya IB, Merry MS, Damayani AD, Liana DS (2017) Exploring Determinants Influencing the Utilisation of Antenatal Care in Indonesia: A Narrative Systematic Review. J Health Commun Vol. 2 No. 4:69.

studies exploring factors influencing the utilisation of antenatal care in Indonesia. The searches were conducted across a range of public health databases including Pubmed, Popline, Scopus, Proquest, Web of Knowledge, and Google Scholars. Some grey literatures were obtained from specific institution websites such as the United Nations for Population Fund (UNFPA), the World Health Organisation (WHO), Ministry of Health-Republic of Indonesia, and Statistics Indonesia. All electronic searches used keywords covering the main search domains including “factors”, “utilization”, “utilisation”, “use”, “antenatal care”, “ante natal care”, and “Indonesia”. These keywords were combined to locate the relevant literatures by using “OR” to broaden the searches that capture all related words and using “AND” to narrow down the searches to literatures that contain all the search terms [4]. Moreover, truncation symbol (\*) was used to get more relevant literatures that contain all words with the same word stem, such as “factor\*” which can retrieve both “factor” and “factors”.

The selected articles were restricted to the ones looking at factors that influence the use of antenatal care in Indonesia. The selection of the articles obtained from the databases was based on a number of inclusion criteria, including English written articles and articles related to Indonesian setting. Articles published during the period of 1994 to 2016 (a twenty-two-year period) were included since a major change in public health policy occurred during this period due to the reformation in Indonesia in 1998 and the United Nations Millennium Declaration in 2000. No study design restriction was imposed. Thus, both qualitative and quantitative research designs were included.

## Results

A total number of 458 articles that matched with the keywords were retrieved from the selected databases (Wave 1). After reviewing the title of all retrieved articles, 43 articles were shortlisted for abstract review (Wave 2). Finally, 17 relevant articles which met the inclusion criteria were selected to be reviewed in-depth to explore influencing determinants of the utilisation of antenatal care in Indonesia (Wave 3). A total of six emerging themes were identified in this review, including traditional beliefs, maternal education, family income and costs of visiting antenatal care, place of residence, women’s autonomy, and preference for Traditional Birth Attendants (TBAs). These themes were then grouped into cultural, socioeconomic, environmental, and behavioral factors.

## Cultural Factors

### Traditional beliefs

Cultures or traditions have been reported to significantly influence millions of women and have negative implications on women’s health [5]. A study by Agus et al. [6] has showed that traditional beliefs about pregnancy have an influence on antenatal care use and have been a key factor associated with low number of antenatal care visits in rural West Java, Indonesia. This study reports that some women particularly in rural areas perceive pregnancy as a normal cycle which needs no special care during antenatal period. They also believe that following the traditions

and advices from their family members is necessary. This indicates that family members play important roles in encouraging or discouraging women to seek antenatal care during pregnancy. Women with strong traditional beliefs perceive that following suggestions from family would make them safer and healthier during pregnancy [6].

## Socioeconomic Factors

### Family income and costs of visiting antenatal care

Family income and costs associated with seeking antenatal care have been reported to influence the use of antenatal care. Pregnant women with higher family incomes are more likely to utilise antenatal care as they can afford expenses associated with the access to health care services [7]. The perceived cost of health services is predicted as one of the factors hindering Indonesian pregnant women from using antenatal care [8]. In regards to medical cost, the Government of Indonesia has launched the Health Insurance Scheme for the Population particularly poor communities in order to provide them with free access to health services [9]. However, financial difficulties associated with indirect costs of seeking antenatal care such as transportation costs are still significant barriers for pregnant women with lower family incomes to using antenatal care services [10]. This situation has been the main problem among women living in rural areas because the costs of transportation to health care services are very expensive [8,11].

### Maternal education/lack of knowledge of antenatal care

Education is believed to be an important factor that can increase women’s knowledge and awareness of a healthy pregnancy [7]. A number of studies have found that women’s level of education is positively associated with antenatal care visits. Educated pregnant women are more likely to use antenatal care than the uneducated ones [9,12,13]. Barber and Gertler [14] have suggested that the least educated women groups in outer Java and Bali regions are the least likely to seek antenatal care and underutilising of antenatal care services has increased significantly among mothers with low levels of education. Those mothers with low educational attainment are likely to take less than four antenatal care visits as recommended [9]. In contrast, women with higher education level are reported to have more antenatal care visits [15]. Lack of knowledge about healthy pregnancy and the importance of antenatal care during pregnancy have been reported as the hindering factors for low number of access to antenatal care services among Indonesian pregnant women [9].

### Women’s autonomy

Women’s autonomy seems to play a part in influencing the utilisation of antenatal care services. Pregnant women involved in decision-making within their households are more likely to use antenatal care compared to the ones who are not involved in the decision-making about their own health [9]. Thus, women’s participation in decision-making about their health within households which reflects women’s autonomy appears to be a key supporting factor for antenatal care uptake [13,16]. Beegle

et al. [12] have argued that the decision-making related to antenatal care is a negotiation process between husbands and wives influenced by the distribution of power among couples in households. They highlight that a woman's bargaining power is indicated by multiple facets of a couple's life, including both economic and social aspects. Their findings show that women who own some assets and come from higher social status than their husbands are more likely to access antenatal care services [12]. Similarly, women who are better educated than their husbands are able to assert their own preferences and make their own decision to use antenatal care services [12]. In contrast, a study by Finlayson and Down [10] suggests that the decision to utilise antenatal care especially in some communities with hierarchical cultures is primarily made by husbands, mothers-in-law, or senior family members rather than the women themselves. Another study by Agus and Horiuchi [7] has also reported that women who take advices from their family to use or not to use antenatal care are simply because they want to satisfy their family.

## Environmental Factors

### Place of residence

Several studies have reported that the place of residence has an influence on the use of antenatal care in Indonesia. Rural residence is associated with underutilisation of antenatal care services [9]. Women who live in rural areas and outside Java and Bali regions are more likely to underutilise antenatal care services and tend to have less antenatal visits compared to the ones living in urban areas of the Java and Bali regions [7,9,13,16].

### Physical distance to and availability of health services

Long distance to health service facilities and poor road conditions which lead to long travel time are reported to discourage Indonesian pregnant women to seek antenatal care [9]. Due to this situation, some women in rural areas tend to use antenatal care services from the Traditional Birth Attendants (TBAs) within their communities [8]. Limited availability of antenatal care services from midwives in rural areas is identified as a constraint to the utilisation of antenatal care, especially if the village midwives live outside the village or frequently travel out of the village [8,17].

## Behavioural Factor

### Preference for traditional birth attendants (TBAs)

In some traditional communities, many women prefer to use traditional birth attendant care for their pregnancy [6]. They perceive that seeking antenatal care from midwives can only be done if there is a problem during pregnancy [7]. The preference for the TBAs especially in rural areas is one of the factors leading to the low number of antenatal care visits in Indonesia [7]. Pregnant women seek care from TBAs especially at the fourth and seventh months of pregnancy in order to get massages for pregnancy using traditional herbal medicine [8]. Another reason for pregnant women seeking care from TBAs is because their family members also use the same services during their pregnancy. They trust the TBAs because they know the TBAs and

perceive that TBAs are more mature, patient and caring, while the village midwives are too young and inexperienced [7]. In addition, the preference for TBAs is due to the services provided by TBAs are inexpensive, interwoven in the community, and easy to access as the TBAs are part of the community [6].

## Discussion

Antenatal care is a key strategy to reducing maternal mortality. The Indonesian maternal health programme recommends that pregnant women should have at least four antenatal care visits during pregnancy, comprising one visit in the first trimester, one visit in the second trimester, and two visits in the third trimester [18]. The 2014 Indonesia Demographic and Health Survey (IDHS) data show that the percentage of non-attendance at antenatal care services varied across provinces, ranging from 31% in Papua to 0.5% in Jakarta [1]. There has also been percentage gap of antenatal care coverage between urban and rural areas, with 76.2% and 55.7% respectively [3]. The studies being reviewed have reported traditional beliefs, family income, maternal education, women's autonomy, place of residence, and preference for traditional birth attendants as the influencing factors for the use of antenatal care in Indonesia [6,8,9,12,13,16]. These factors can be clustered into four major themes, including cultural, socioeconomic, environmental, and behavioural factors. These factors are complex and inter-related. The mechanism of how these factors altogether affect the use of antenatal care can be described using a conceptual framework developed by the Commission on Social Determinants of Health (CSDH) - World Health Organisation [19]. This framework classifies the cultural and socioeconomic factors as 'structural determinants' and environmental and behavioural factors as 'intermediary determinants'.

The term of structural determinants is used to refer to the association between the socioeconomic-political contexts, structural mechanisms generating social stratification and the resulting socioeconomic status of individuals [19]. The structural determinants depict the causal hierarchy of social determinants involved in producing health inequities [19]. Traditional beliefs as well as cultural practices, as a part of contextual factors in structural determinants, have been reported as a factor that plays a significant role in influencing pregnant women especially in rural areas of Indonesia to seek antenatal care [6]. Pregnant women with strong traditional beliefs perceive pregnancy as a normal phenomenon that does not require special attention [6]. Such beliefs have led to underutilisation of antenatal care among women especially in rural areas of Indonesia [6]. This is in line with the findings of a study by Assfaw [20] in Ethiopia, reporting relationship between traditional beliefs and low antenatal care uptake.

Income has also been proposed as an indicator of socioeconomic position that most directly measures the material resources aspect [19]. The studies being reviewed have shown that family income is widely used as the indicator of socioeconomic position to describe the access of Indonesian pregnant women to antenatal care services. These studies report that the utilisation of antenatal care in Indonesia is influenced by economic factors

such as household income and the costs related to the distance to health care facilities such as transportation costs [7,10]. Pregnant women with higher family incomes are more likely to utilise antenatal care compared to the ones with lower household incomes [7,8,11]. This also indicates that those who have better standard of living can afford the costs associated with access to antenatal health care services, compared to those who have lower standard of living [9]. Poor transport facilities to health centres and expensive transportation costs are also reported as the main obstacles faced by poor mothers especially in rural areas of Indonesia [7,10]. This finding is consistent with the results of other studies elsewhere [20,21], indicating that unavailability of public transport, poor transport facilities in remote areas and expensive transport costs hinder low economic status pregnant women from accessing antenatal care services.

The studies being reviewed also suggest that attitude of Indonesian pregnant women toward antenatal care is influenced by their education level. More years of education of a pregnant woman is associated with a choice for adequate antenatal care. Pregnant women who have higher level of education are more likely to use antenatal care and be assisted by medical personnel such as doctors or midwives, compared to less educated pregnant women [9,12,13]. Pregnant women with higher education level are knowledgeable and aware of the advantages of antenatal care services and pregnancy related complications. Therefore, they are more likely to seek antenatal care during pregnancy [20]. The CSDH has pointed out that knowledge and skills obtained through education may influence a person's cognitive functioning, make them more receptive to health education messages, or better enable them to communicate with and access adequate health services [19]. Education is likely to improve women's health status and help women to build up confidence to make decisions about their own health [20-22].

Women's autonomy which is related to decision-making power within households is also reported in the studies reviewed as an important determinant influencing the access to antenatal care services among Indonesian pregnant women. Pregnant women who participate in household decision-making process about their own health are more likely to use antenatal care compared to the ones who do not [9]. Woman's bargaining power is also influenced by their socioeconomic and educational status [12]. Women who own some economic assets, have higher levels of education and come from higher social status than their husbands have more bargaining power, and are more likely to make their own decision to use antenatal care services [10,12]. Women with lower socioeconomic and educational status are less likely to decide about their own health and the decisions to seek antenatal care are made by husbands, mothers-in-law, or senior family members [10]. Hence, the antenatal care decision is associated with husbands and relatives willingness. In some traditional communities where patriarchal system is dominated, the husbands are the key persons in the decision-making process. As the consequence, women must ask permissions from husbands for seeking antenatal care services during pregnancy [7,10]. This practice reinforces women's social disadvantages as women bear the major burden of negative health effects from gender-based social hierarchies [19]. CSDH has highlighted

that gender divisions within community influence health through less visible biosocial processes, whereby women's lower social status and lack of control over resources expose them to health risks [19].

Environmental and behavioural factors are also revealed in the selected studies as the intermediary determinants influencing the access to antenatal care services among Indonesian pregnant women. Place of residence is an environmental factor that has a significant influence on the utilisation of antenatal care, and pregnant women who live in rural areas of Indonesia are less likely to access antenatal care services compared to urban women [7,9,13,16]. Long distance to the nearby health centres is a key factor associated with low uptake of antenatal care services among pregnant women in rural areas of Indonesia [9]. This is in line with the report from the World Health Organisation [19], indicating that physical environment, such as place of residence, provides resources for health and contains health risks. The environmental or material circumstances are directly significant for the health status of marginalised groups and also for people with lower socioeconomic status [19]. Supporting the findings of a study by Overbosch et al. [23], several studies reviewed report that shortages of village midwives who deliver antenatal care are also a main constraint to the utilisation of antenatal care in rural areas in Indonesia [8,17].

Another intermediary determinant influencing the utilisation of antenatal care in Indonesia is the preference for TBAs. Indonesian rural pregnant women's health seeking behaviours are mostly influenced by traditional beliefs [7]. Some pregnant women believe that following traditional practices such as seeking antenatal care from TBAs are necessary in order to make them safer and healthier during pregnancy [7]. Such preference precludes the utilisation of antenatal care especially by rural pregnant women in Indonesia. Women who prefer to access TBAs during their pregnancy are less likely to have complete antenatal care services as recommended [6]. The preference of pregnant women to use TBA services is due to the ease of access, trust in TBAs, and the TBAs are considered as part of community where they live [7]. This has been indicated in the CSDH framework that people closer to the bottom of the social scale less frequently engage in health-promoting behaviours. The unequal distribution of the intermediary factors constitutes the primary mechanism through which socioeconomic position creates health inequities [19].

## Conclusions

This review reports several determinants influencing the access to antenatal care services among Indonesian pregnant women. They include cultural (traditional beliefs), socioeconomic (income, education, and women's autonomy), environmental (place of residence and distance to health service points), and behavioural (preference for TBAs) factors. The findings of this review indicate the needs for the improvement of knowledge of Indonesian pregnant women on the importance of antenatal care, and the availability of and accessibility to antenatal care services, and local transport to facilitate pregnant women to seek antenatal care services.

## References

- 1 <https://dhsprogram.com/what-we-do/survey/survey-display-357.cfm>
- 2 [http://www.undp.org/content/undp/en/home/sdgooverview/mdg\\_goals.html](http://www.undp.org/content/undp/en/home/sdgooverview/mdg_goals.html)
- 3 <http://microdata.bps.go.id/mikrodata/index.php/catalog/262>
- 4 Magarey A, Veale B, Rogers W (2001) A guide to undertaking a literature review. *Aust Fam Physician* 30: 1013-1015.
- 5 New report shows cultural sensitivity critical to successful development strategies, women's equality (2017) United Nations Population Fund.
- 6 Agus Y, Horiuchi S, Porter S (2012) Rural Indonesia women's traditional beliefs about antenatal care. *BMC Res Notes* 5: 1-8.
- 7 Agus Y, Horiuchi S (2012) Factors influencing the use of antenatal care in rural west sumatra, Indonesia. *BMC Pregnancy Childbirth* 12: 1-8.
- 8 Titaley CR, Hunter CL, Heywood P, Dibley MJ (2010) Why don't some women attend antenatal and postnatal care services?: a qualitative study of community members' perspectives in Garut, Sukabumi and Ciamis districts of West java province, Indonesia. *BMC Pregnancy Childbirth* 10: 61.
- 9 Titaley CR, Dibley MJ, Roberts CL (2010) Factors associated with underutilization of antenatal care services in Indonesia: results of Indonesia demographic and health survey 2002/2003 and 2007. *BMC Public Health* 10: 485.
- 10 Finlayson K, Downe S (2013) Why do women not use antenatal services in low- and middle-income countries? a meta-synthesis of qualitative studies. *PLOS Med* 10: 1-12.
- 11 Nuraini E, Parker E (2005) Improving knowledge of antenatal care (ANC) among pregnant women: a field trial in central java, Indonesia. *Asia Pac J Public Health* 17: 3-8.
- 12 Beegle K, Frankenberg E, Thomas D (2001) Bargaining power within couples and use of prenatal and delivery care in Indonesia. *Stud Fam Plann* 32: 130-146.
- 13 <http://catalog.ihnsn.org/index.php/citations/4965>
- 14 Barber SL, Gertler PJ (2008) Strategies that promote high quality care in Indonesia. *Health Policy* 88: 339-347.
- 15 Ibrahim J, Yorifuji T, Tsuda T, Kashima S, Doi H (2012) Frequency of antenatal care visits and neonatal mortality in Indonesia. *J Trop Pediatr* 58: 184-188.
- 16 Panjaitan NA, Fahmi M (2013) Woman participation in decision making and utilization of antenatal care Services in Indonesia. Centre of Economics and Development Studies (CEDs).
- 17 Taguchi N, Kawabata M, Maekawa M, Maruo T, Aditiawarman, et al. (2003) Influence of socio-economic background and antenatal care programmes on maternal mortality in Surabaya, Indonesia. *Trop Med Int Health* 8: 847-852.
- 18 Indonesia health profile 2010 (2010) Ministry of health republic of Indonesia.
- 19 [http://www.who.int/social\\_determinants/publications/9789241500852/en/](http://www.who.int/social_determinants/publications/9789241500852/en/)
- 20 Assfaw YT (2010) Determinants of antenatal care, institutional delivery and skilled birth attendant utilisation in Samre Saharti District, Tigray, Ethiopia. Department of public health and clinical medicine, Umea University, Sweden, p: 60.
- 21 Fatmi Z, Avan BI (2002) Demographic, socio-economic and environmental determinants of utilisation of antenatal care in a rural setting of sindh, Pakistan. *J Pak Med Assoc* 52: 138-142.
- 22 Trinh LT, Dibley MJ, Byles J (2007) Determinants of antenatal care utilisation in three rural areas of Vietnam. *Public Health Nurs* 24: 300-310.
- 23 Overbosch GB, Nsawah-Nuamah NNN, van den Boom GJM, Damnyag L (2004) Determinants of antenatal care use in Ghana. *J Afr Econ* 13: 277-301.