
PUBLIC HEALTH RESEARCH

Late Antenatal Booking and its Predictors in Lundu District of Sarawak, Malaysia

Sam Froze Jiee*, Razitasham Safii and Helmy Hazmi

Department of Community Medicine and Public Health, Faculty of Medicine and Health Sciences, Universiti Malaysia Sarawak.

*For reprint and all correspondence: Sam Froze Jiee Department of Community Medicine and Public Health, Faculty of Medicine and Health Sciences, Universiti Malaysia Sarawak.

Email : samfroze85@yahoo.com

ABSTRACT

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Introduction	Antenatal care is widely acknowledged as an effective tool to prevent adverse outcomes in pregnant women and their children. In Malaysia, early entry to antenatal care refers to a first visit within the 12 th week of gestation. Delayed access to antenatal care has not been extensively studied in Malaysia, whereas several studies have reported a high prevalence of late antenatal booking in developing countries. The objective of this study was to determine the factors and barriers associated with late antenatal booking and the level of knowledge about the timing of antenatal booking among women of childbearing age in the Lundu District of Sarawak.
Methods	This was a cross-sectional study among 284 pregnant women in all five Maternal and Child Health (MCH) Clinics of Lundu.
Results	The prevalence of late antenatal booking in Lundu was 28.2%. Unmarried women were more likely to book their pregnancy late compared to married women. The prevalence of late antenatal booking was also higher among unemployed women than those who were employed. Respondents without their own income also tended to book their pregnancy later than those who had their own income. Significantly, a high percentage of late antenatal booking was also reported among those who never utilize any contraceptive method, did not plan their pregnancy, those without a history of past medical illness or complications in a previous pregnancy and among those who have a problem with their marriage certificate. Those who booked their pregnancy beyond the 12 th week of gestation were also reported to have a lower level of knowledge about the need for an antenatal booking, as compared to those who started their antenatal care early.
Conclusions	Unplanned pregnancy, marriage certificate issues, an absence of past medical illness and past obstetric complications were significant predictors of late antenatal booking. Correct and appropriate information relating to antenatal care should be delivered to the public. Health education and advocacy are vital to promote the importance of early antenatal booking to achieve the goal of safe motherhood.
Keywords	Antenatal care - Late antenatal booking - Predictors - Lundu district.

INTRODUCTION

Antenatal care (ANC) is widely acknowledged as an effective tool to prevent adverse outcomes in pregnant women and their children. ANC services include: information, education, screening for abnormalities and complications, ongoing assessment and care, and preparation for delivery and motherhood. Therefore, ANC is an effective means of detecting and treating ailments, providing time for intervention, promoting health and facilitating informed choice.¹ Fundamentally, antenatal visits allow medical personnel to screen pregnant women for health and socioeconomic conditions. Interventions are performed for any condition which is likely to increase the possibility of specific adverse pregnancy outcomes. Having a new life developing inside the womb is a journey full of emotion, challenges and at the same time wonderful for every woman. ANC provides pregnant women with guidance and all the basic knowledge necessary to plan and prepare for a safe birth.

Internationally, the current consensus states that pregnancy must be booked as early as the first trimester of pregnancy.² Early booking enables the mother to obtain correct dating of the pregnancy, which is important for monitoring the growth of the fetus. In addition, women who have early antenatal care benefit from early blood tests which can detect any abnormal blood counts, and immunity screening for different infections. Early diagnosis improves health outcomes by providing care at the earliest stage. Unlike most areas of public health, maternity care is a complex process that involves a wide range of preventive, curative, and emergency services as well as various levels of care. From 2006-2013, antenatal care coverage in Malaysia (at least 1 visit) was 97%. In the same period, 99% of births were attended by skilled health personnel.³ Clearly, we can see the association between antenatal visits and safe delivery.

In Malaysia, antenatal care policy follows the latest guidelines. Its main priority is to promote safe pregnancy. The guidelines recommend that the first antenatal visit should be made prior to the 12th week of gestation.⁴ Despite WHO endorsement and Malaysia's ANC policy, studies in several parts of Peninsular Malaysia show that late booking of pregnancy remains a problem for the Ministry of Health. Studies conducted in an Orang Asli (Indigenous peoples) community in the district of Jempol, Negeri Sembilan in 2011 indicated that only 48.1% of women made their antenatal booking in the first trimester. A high proportion of those with early bookings were young mothers aged less than 30.⁵ This figure is lower than that in the studies done in 1998 to assess nutritional status among Orang Asli women in the Kuantan District of Pahang, in which 63.6% of respondents had their

first antenatal checkup during the first trimester.⁶ No similar study has ever been carried out in Sarawak. Therefore, this research was aimed at identifying the prevalence of late antenatal booking and the factors associated with it among pregnant women in the Lundu District of Sarawak. At the same time, knowledge about antenatal booking was also assessed among these women.

METHODOLOGY

Study setting, design and participants

Lundu district is located at the Northwest of Kuching Division of Sarawak, Malaysia, and borders with Indonesian Province of West Kalimantan. It has surface area of 1,962.2 km² (757.6 sq. mi) with a total population of approximately 35000 (2016). Under the Lundu District Health Office's jurisdiction, there are five Maternal and Child Health Clinics (MCH) providing antenatal care services to the people of Lundu. The community of Lundu is diverse in ethnicities which include Malay, Bidayuh, Iban, Chinese and Melanau. This allows us to recruit participants from several types of communities and multi ethnic groups. This was a health facility based cross sectional study involving antenatal mothers attended Maternal and Child Health Care (MCH) Clinics. It involved all the 5 MCH Clinics in Lundu namely, MCH Lundu, MCH Sematan, MCH Biawak, MCH Sampadi and MCH Stoh.

Sample size, sampling and data collection

The required sample size was 206 based on the 16% prevalence of late antenatal booking from a pilot study that was conducted earlier in Bau district of Sarawak. Attrition rate of 20% was being added and hence total participants needed for this study was 248. Systematic random sampling method was applied in which every odd number of antenatal mothers attending Maternal and Child Health Clinic (MCH) from January 2016 to June 2016 were approached for this study. It was being done during the antenatal clinic days. MCH Lundu and Sematan is situated in the semi-urban part of Lundu, while the rest are located at the rural side. All the MCHs were included in this study for result and outcome to be representative of the whole Lundu District. Consented respondents were briefed on this study and self-administered questionnaire were given. In addition, participant's antenatal and medical record were reviewed to identify the exact antenatal booking timing for every respondent.

Data collection instrument

A set of questionnaires was constructed based on available literatures that consists of 5 constructs:

- a) Socio demographic and economy status.
- b) Current obstetric status.
- c) Past Medical illness and obstetric history.