

## Factors associated with late antenatal booking in Harare, Zimbabwe

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### Abstract

*The purpose of antenatal care (ANC) is to improve the health outcomes of both the mother and the baby, and maximum benefits from ANC services are achieved if pregnant women initiate ANC services in the first trimester of pregnancy so that any pregnancy related complications may be identified and addressed. In many developing countries, including Zimbabwe, a significant proportion of women initiate ANC services later than the recommended first trimester of their pregnancy, which often results in poor health outcomes for both mother and baby. The purpose of this study was to determine the factors associated with late ANC booking by pregnant women in Harare, Zimbabwe. A cross-sectional study was used to collect data using an interviewer-administered questionnaire on 150 respondents. The mean age of the respondents was 26.3 years and 88.7% had attained at least secondary school education. Half of the respondents initiated ANC after 24 weeks, however, there were weak associations between demographic variables and timing of booking, but none of these associations were statistically significant.*

Key words: antenatal care, late booking, health care, Harare, Zimbabwe, health outcomes

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## **Introduction**

The World Health Organization (WHO) recommends that pregnant women in developing countries should attend a minimum of four ante natal care (ANC) visits per pregnancy (Joshi et al, 2014). In Zimbabwe, ANC is recommended within first the 14 weeks of pregnancy (Zimbabwe Maternal Health Road Map, 2010-2015). However, many women do not adhere to this recommended timing to initiate ANC. Globally, low utilization of ANC services is reported to be influenced by factors such as low maternal education, teenage pregnancies, multi-parity, unplanned pregnancies, economic status, and cultural factors (Simkhada et al. 2008). Feresu et al (2005) concluded that the high frequency of stillbirths in Zimbabwe can be reduced by improved quality of obstetric care during labor and delivery; and that early ANC could help reduce perinatal deaths by linking the woman to the health care system, thus saving many mother and baby lives. Other studies found that women in polygamous relationships, unemployed, and multiparous booked later than their counterparts who were in monogamous relationships, employed, and earned more (Adekanle & Isawumi, 2008). Other studies have linked social class and ethnicity with the patterns of attendance for antenatal care (Rowe & Garcia, 2008).

While developed countries place a strong emphasis on a high number of ANC visits, which may be as high as twelve during pregnancy (Sibeko & Moodley, 2006), in low and middle-income countries just above two-thirds of women get an estimated one ANC visit per pregnancy (Banda, 2014). Pregnant women in Zimbabwe usually present for ANC services after 14 weeks, which is considered late, and make fewer than the recommended number of ANC visits (Zimbabwe National Health Strategy 2010-2015). Zimbabwe recorded a decline in early access to ANC services from 69% in 2007 to 49% in 2009 (ZDHS 2005/6), which was attributed to the deteriorating capacity and responsiveness of the health care system, as well as limited budgetary allocation for ANC services by the Government of Zimbabwe. In particular, this decline affected women in the low-income category of the population, which resulted in limited access to antenatal services (ZDHS 2005/6).

Although ANC coverage is high in Zimbabwe, the number of visits per clinic attendee remains low, with women making an average of two visits per pregnancy and most women only seeking access to ANC in the later stages of pregnancy (Munjanja et al, 2007). The purpose of this study was to identify factors associated with late antenatal care booking by pregnant women in Harare, Zimbabwe.

## **Methodology**

### **Study Design**

A quantitative, cross-sectional design was used to collect data from pregnant women attending ANC services at five polyclinics in Harare. The study was conducted in Harare, the capital city of Zimbabwe, which houses the major administration offices of government. The City of Harare's

Annual Health Report of 2012 reported that only 2% of pregnant women booked for ANC early in their first trimester, with the majority booking at later stages of their pregnancy. The sample size was calculated at 138 participants using the Dobson formula. In order to have a representative sample from the health facilities, thirty respondents were randomly selected from each of the five poly clinics, which resulted in a sample of 150 participants.

### **Data collection**

Pregnant women were randomly and individually approached while waiting to be attended by the clinic nurse, and asked to participate in the study. Details of the study were given to those that agreed. They were given the opportunity to ask questions and were requested to provide informed consent, which was followed by the self-administered questionnaire.

### **Data analysis**

Data was exported to Statistical Package for Social Scientists (SPSS) version 16.0 for cleaning and analysis. The descriptive analysis yielded frequencies and summary statistics (mean, standard deviation, and percentage) and bivariate analysis explored associations between late booking and demographic variables of participants. To differentiate between reasonable and extreme late booking in the context of ANC booking trends in Zimbabwe, bookings made between 14 and 24 weeks of pregnancy were considered acceptable and bookings made after 24 weeks of pregnancy were considered late.

### **Ethical Considerations**

Ethical clearance was obtained from the Ethics Committee of the Department of Health Studies at UNISA and the Harare City Health Department. Permission to conduct the study was obtained from the managers of the clinics in which the study was conducted.

### **Results**

A total of 150 women participated in the study. Of this 39.3 % (n=59) were aged between 18 and 24 and 32, 7% (n=49) were between the ages of 25 and 29. The mean age of respondents was 26.3 years. The majority, (90.7%, n=136) of the respondents reported that the pregnancy was planned. Regarding parity, a third (30.7%, n=46) were first-time pregnant mothers, 58 (38.7%) had one child, 35 (23%) had two children, 10 (6.7%) had three children, and 1 (0.7%) had five children. The majority (88.7%, n=133) of the respondents had attained secondary school education and 8.7% (n=13) having attained tertiary education level. Almost all the respondents (97.3%, n=146) were married. The majority (62.6, n=94) were not employed and relied on their husbands, partners and relatives for support. The rest of the sociodemographic variables are reflected in Table 1.

**Table 1: Sociodemographic variables**

<b>Variable</b>	<b>Frequency (N)</b>	<b>Percentage</b>
<b>Age in years</b>		
<18	4	2.7
18-24	59	39.3
25-29	49	32.7
30-34	21	14
35-39	16	10.6
40-44	1	0.7
<b>Marital Status</b>		
Single	3	2
Married monogamous	146	97.3
Married polygamous	1	0.7
<b>Area of residence</b>		
High density	109	72.7
Medium density	6	4
Low density	34	22.7
Peri-urban	1	0.7
<b>Highest level of education attained</b>		
Primary	4	2.7
Secondary	133	88.6
Tertiary	13	8.7
<b>Employment Status</b>		
Formally employed	33	22
Informally employed	23	15.4
Unemployed	94	62.6
<b>Husband's/partner's employment status</b>		
Formally employed	95	63.3
Informally employed	33	22
Unemployed	22	14.7

**Timing of ante natal booking**

The results showed that the majority of the participants were in the first and the second trimester at the time of data collection. The proportions of participants who initiated ANC in the first 24 weeks and those who initiated after 24 weeks were almost equal to 50% each. Some of the participants reported that they had to seek permission from their husbands, partners, or mothers before initiating ANC. The results showed the equal proportion of women who had to seek

permission from their partners or mothers before initiating ANC services and those who did not. These proportions are reflected in Table 2.

**Table 2: Gestational age of the participants and timing of initiation of ANC**

	Frequency	percentage
<b>Gestational age</b>		
14 to 24 weeks	54	54.7
25 to 36 weeks	18	12.0
Beyond 36 weeks	50	33.3
<b>Gestational age at which ANC was initiated</b>		
14 to 24 weeks	76	50.7
25 to 36 weeks	62	41.3
Beyond 36 weeks	12	8%
<b>Sought permission to initiated ANC booking (n=78)</b>		
14-24 weeks	42	53.8
>24 weeks	36	46.2

**Factors that influenced timing of ANC booking**

Table 5 shows a number of factors which were identified as having influenced the timing of ANC booking. The majority (67.3%, n=101) of the participants reported that the reasons for booking were influenced by the benefits of ANC. This was influenced by the experiences of their previous pregnancies.

**Table3: Reasons for late or early ANC booking**

Factor	Frequency	percentage
Benefits of ANC	101	67.3
Previous pregnancy complications	10	6.7
Cost of ANC	12	8
Excitement about pregnancy	23	15.3
Other	4	2.7

**Factors associated with ANC bookings**

Logistic regressions were computed to determine the factors associated with the timing of ANC booking. The results showed that satisfaction with the care rendered during ANC sessions (95% CI; 0.76-9.22), area of residence (95% CI; 0.56 - 1.05), the cost of antenatal care services (95% CI; 0.99-2.30), previous pregnancy (95% CI; 0.70- 2.04), unemployment (95% CI; 0.70-1.35), husband employment status (95% CI; 0.82- 1.61), parity (95% CI; 1.09-1.99), planned pregnancies (95% CI; 0.85-2.00), and being accompanied to the clinic (95% CI; 0.77-1.54) were not statistically associated with timing of booking.

## **Discussion**

In this study, most of the respondents were young mothers between the ages of 18 and 24, which is prime for childbearing for females. For the majority (90.7%), the pregnancy was planned, and a third (30.7%) of the respondents were first-time pregnant mothers. Despite the pregnancy being planned for the majority of respondents, half of them initiated ANC after 24 which is regarded as a late booking. In contrast with other studies which found that the timing of ANC booking was significantly associated with younger age (Van Eijk et al, 2006), whether the pregnancy was planned or not (Oladokun et al, 2010) and distance to the health facility (Banda et al, 2014; Simkhada et al, 2008), these variables were not significantly associated with timing of ANC booking in the current study. These differences can be explained by the conclusions of Velicer et al, (2007), who found that it is common for associations between demographic variables which are static, and dynamic variables (like the timing of booking at ANC clinic), to yield non-significant results. The results are similar to other findings which found non-significant associations between timing of ANC booking and previous pregnancy-related complications (Okunlola et al, 2006; Raatikainen et al, 2007).

The quality of care at the clinics did not emerge as a barrier to accessing antenatal care in this study, almost all (93.3%) the respondents reported being satisfied with ANC services. This is contrary to previous findings that ANC services in Zimbabwe were not considered to be satisfactory (Mathole et al, 2004). However, because the previous study was conducted in rural Zimbabwe, the results of this study may suggest that the quality of care has improved, or it may reflect the differences in quality of care between urban and rural areas. The cost of ANC services also did not emerge as a barrier to accessing antenatal care in this study even though over a third (35%) of the respondents mentioned that it was a barrier. Almost two-thirds (58%) were of the opinion that no fees should be paid for accessing ANC services.

## **Conclusion**

The results did not identify significant relationships between a number of demographic variables and the timing of ANC booking. Although late booking remains a challenge, a number of factors contribute to this practice and no single factor was significantly associated with the late booking. It may also be that the practice of late booking occurs because some women do not know the right gestational age at which they should make their first antenatal care visit and the benefits of early attendance at antenatal care (Kisuule et al, 2013).

## **Recommendation**

It is recommended that the health system in Zimbabwe and Harare, in particular, review the entrenched practice of late booking. A study that will look at other factors, other than those explored in this study, is recommended. Such a study may have to adopt the qualitative approach, to try and understand cultural and other factors that were not the focus of this study.

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