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Original Research

Health Systems and Patient-Related Factors Contributing to Late Antenatal Care Attendance among Pregnant Women

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Abstract

Introduction: Antenatal care is a maternal health service provided throughout pregnancy to identify risks of complications and reduce maternal and perinatal mortality. The aim of the study is to assess the prevalence and reasons for the late initiation of antenatal care.

Methods: A facility-based cross-sectional study was conducted at three primary healthcare centres in Limpopo province, South Africa, from October to November 2020. A consecutive sample of 231 pregnant women who received antenatal care during the data collection period participated in the study. Pregnant women were asked "What was your gestational age at your first ANC visit with the current pregnancy?" If it was found that pregnant women presented late for their first ANC visit, a follow-up open-ended question was posed: "What factors contributed to your late presentation for your first ANC visit? "To analyze continuous and categorical variables, mean ± standard deviation, frequencies, and percentages were used, accordingly.

Results: The findings indicate that 43.12% of the women initiated antenatal care late. The most common reasons for late initiation included lack of information, cultural beliefs, distance to the facility, waiting times, and the operating hours of the facility.

Conclusion: There is an urgent need to develop and implement educational programs for antenatal care, strengthen community-based services, and evaluate staff workload at the study sites.

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INTRODUCTION

Antenatal care (ANC) is a critical health service provided to pregnant women to identify risks and minimize complications during pregnancy. Following risk identification, suitable health and educational interventions are implemented to prevent maternal and perinatal mortality. The World Health Organization (WHO) advises that ANC should begin within the first 12 weeks of gestation [1]. In April 2017, the South African government adopted and put into effect the WHO's 2016 ANC guidelines [1], with the health ministry responsible for distributing information on the revised ANC package to public healthcare facilities across the country.

The global rate of ANC initiation shows considerable variation among countries, from 2% in Poland to 33% in Malta [2] and reaching 70% in Pakistan [3]. There is a notable disparity between developed and developing regions in terms of ANC initiation. Developing regions, especially sub-Saharan Africa, tend to have higher rates of late ANC initiation, with prevalence rates ranging from 30% to 90% [2][4][5][6][7]. A study in two South African provinces revealed that over two-thirds (72%) of women were late in initiating their first ANC visit, with Limpopo province showing the highest late initiation rate of 83%, compared to 62% in the Northwest province [8].

Several factors contributing to the late initiation of ANC visit include women's lack of information about ANC, cultural beliefs, distance to ANC facilities as well as overcrowding, long queues, extended waiting times, and a shortage of healthcare workers at facilities [4][5][6][9][10][11]. Studies in South Africa have identified healthcare workers' attitudes, women's busy schedules, and a lack of knowledge about the early signs of pregnancy as barriers to initiating ANC visit early [8][12][13]. Other obstacles include long waiting times, distance to ANC facilities, unplanned pregnancies, avoidance of HIV testing, challenges with transportation, and cultural secrecy of being pregnant. Late initiation of ANC can increase pregnancy-related complications and poses potential harm. In the rural areas of Limpopo province, the prevalence and impact of late ANC initiation have seldom been studied. Thus, this research aims to evaluate the extent and causes of delayed ANC initiation among pregnant women attending selected public clinics in the Limpopo province of South Africa.

METHOD

Study design and Setting

This descriptive study is a sub-study of a larger cross-sectional research conducted at three primary healthcare clinics in the Capricorn district, Limpopo province, South Africa. Data was collected from October to November 2020 at PHC clinics in selected villages. The area has seven PHC clinics and three were purposefully sample as they were the busiest. These clinics serves Sepedi speaking people and those from other countries such as Zimbabwe, Mozambique, Somalia, and Ethiopia. The clinics renders the following PHC services: ANC, immunization, family planning, sexual transmitted infections, management of mental and chronic diseases and treatment of minor elements.

Study Population

The study population were pregnant women who attended ANC services during the study period in the three selected PHC clinics of the Limpopo province.

Inclusion and exclusion criteria

Pregnant women aged 18 years and older were asked to participate in the study. Women who needed urgent medical attention as well as those who were mentally and physically unstable were not eligible to participate.

Sample Size and Sampling Technique

Information from the Operations managers of the selected PHC clinics revealed that 470 pregnant women visited the three PHC facilities for ANC from January to December 2018. The study's sample size was calculated using the Yamane (1967)[14] formula with a 5% sampling error. The required minimum sample size was 216, but accounting for a 10% non-response rate, the final sample size was set at 238. This number was proportionally distributed according to the size of each clinic. A consecutive sampling of pregnant women who visited these healthcare facilities for ANC during the study period was conducted.

Data collection

Data was collected using a self-administered questionnaire, which was developed through a review of literature [4][5][6][9][10][11][15]. The questionnaire was translated into Sepedi, the local language, for those who did not understand or preferred not to use English. It included a socio-demographic profile and a question to determine if the women presented late for their first ANC visit, phrased as "What was your gestational age at your first ANC visit with the current pregnancy?" If it was found that pregnant women presented late for their first ANC visit, a follow-up open-ended question was posed: "What factors contributed to your late presentation for your first ANC visit?"

Data analysis

The gathered data were analysed using the Statistical Package for the Social Sciences (SPSS) version 25 (IBM Corp., New York, USA). To interpret categorical and continuous variables, frequencies, percentages, and mean ± standard deviation was utilized respectively.

Ethical Considerations

The study received ethical approval from a university research ethics committee in South Africa (TREC/305/2020: PG). Permissions were granted by the Provincial Department of Health (Ref: LP_2020_10_338) and the Capricorn District's director of health services (Ref: 4/2/2) to conduct the study at the three selected PHC clinics. Verbal consent was provided by the operation managers of the PHC clinics, following the Provincial Department of Health's approval. Participants provided signed informed consent, having received study details in their preferred language (English or Sepedi). The tool was administered while women waited for services or after receiving services to prevent disruption of the patient flow. As data was collected during the COVID-19 pandemic, measures were taken to safeguard all

participants, including health workers, from COVID-19 by adhering to the National Department of Health Guidelines.

RESULT

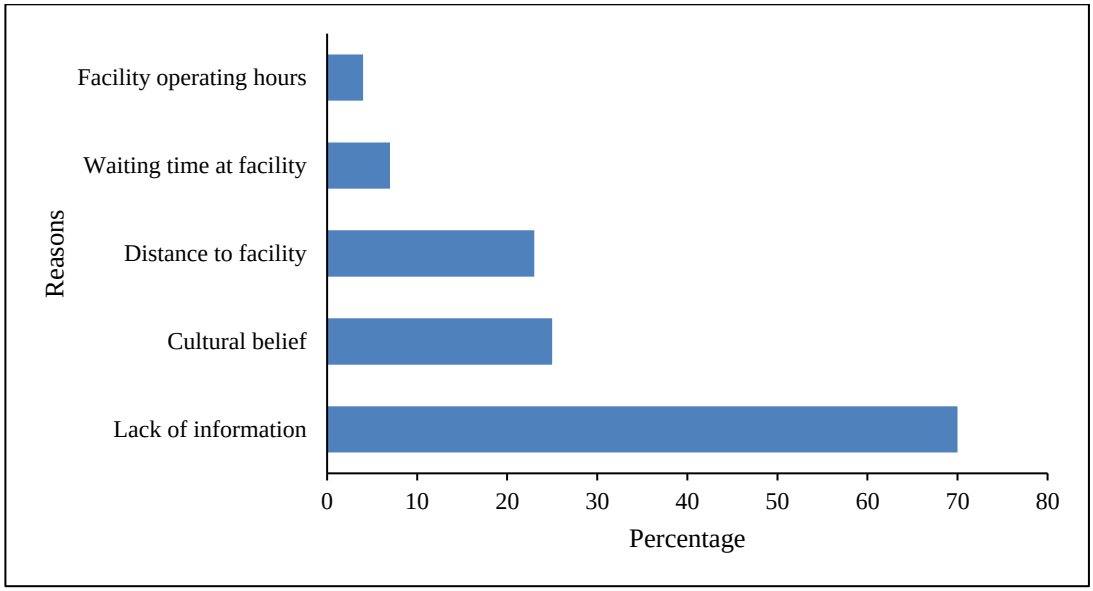

Fig. 1: Identified reasons for late presentation of first ANC visit (n=100).

A total of 231 pregnant women participated in the study, resulting in a response rate of 97.1% (231/238). The average age was 26.3±4.9 years, with a range from 18 to 41 years. Most participants (87%) were single, with 77% having completed secondary education, and only 8% were employed. More than half of the women (55%) had given birth multiple times.

Among the participants, 100 (43.12%) started their first ANC visit late. Seventy-eight women reported one reason for the delay, sixteen reported two reasons, and six reported three or more reasons. As shown in Fig. 1, the most frequent reasons for the delayed first ANC visit included lack of information, cultural beliefs, and the distance to the healthcare facility.

DISCUSSION

This study assessed the delay in initiating the first ANC visit and found that 43% of the participants were late. This aligns with a study in Cameroon, which found 44% of pregnant women were late for ANC [4]. Our results are lower than the 90.4% reported in rural Kenya [5], 59.4% in Ethiopia [6], and 83.1% in Nigeria [7], but higher than the 33.4% in another Ethiopian study [2]. Research across two rural provinces in South Africa indicated that 72% of women were late for their first ANC, with Limpopo recording the highest rate at 83%, compared to 62% in the Northwest province [8]. These discrepancies may be due to different interpretations of what constitutes late ANC initiation according to WHO guidelines [1] and varying socio-demographic factors.

Several factors lead to the delayed start of ANC by pregnant women. Our research points to a lack of information as the primary cause for the postponement of initial ANC appointments, which is in line with multiple studies in developing nations [5][6][11]. Despite 70% of pregnant women in South Africa's Eastern Cape Province acknowledging the importance of early ANC registration [12], a continuous shortfall in knowledge persists [13]. This may be due to healthcare workers being too overburdened to properly educate women on pregnancy matters. Moreover, cultural beliefs are also a major reason for late ANC commencement, as supported by other studies [4][9]. There's a common notion among some women that disclosing pregnancy should be delayed guarding against early vulnerabilities and the threat of witchcraft [10][13][16]. Additionally, the practice of using traditional medicine to avert adverse pregnancy outcomes is prevalent in many African countries, including South Africa [15][17][18][19].

Consistent with other research [4][9] the distance to health facilities, necessitating travel via uncomfortable transportation on poor roads, was recognized as a barrier to initiating ANC. Our finding also indicated that the waiting times and operational hours of these facilities are primary factors for delayed ANC commencement. In Cameroon, women have voiced concerns over overcrowded conditions and lengthy waits at healthcare facilities [9]. Similarly, research in South Africa has identified extensive queues and waiting times at ANC clinics as contributing to late ANC initiation [12][13]. Additionally, a negative attitude and a lack of healthcare workers have been cited as significant reasons for delayed ANC initiation [10][11][12]. However, our study revealed that none of the women cited a shortage of or impolite language from providers as a deterrent to early ANC initiation, possibly because the data were collected while some were waiting for services at the PHC clinics.

STUDY LIMITATIONS

This study presents multiple limitations. First, it was carried out in healthcare facilities, which may lead to an underreporting of factors related to healthcare workers that contribute to delayed ANC initiation. Second, the research was limited to three PHC clinics, making it difficult to generalize the results to other facilities within the province. Nonetheless, the study's methodology could be applied in other healthcare settings.

IMPLICATIONS FOR CLINICAL PRACTICE

The results of the study are anticipated to aid in the development and execution of policies concerning use of antenatal care. It is expected that policymakers will devise strategies to tackle the challenges associated with delayed initiation of ANC. There is urgently call for the development and implementation of educational programs for ANC, strengthening of community-based services, and evaluation of staff workloads at the study sites. It is also essential for midwives to understand, acknowledge, respect, and integrate women's cultural practices. Furthermore, it is imperative to organize training and awareness campaigns

for local health workers, religious leaders, and the community to enhance engagement and involvement in ANC issues.

CONCLUSION

Our study has identified that delays in initiating ANC are due to health system factors, such as inadequate education, lengthy travel to facilities, prolonged waiting periods, and limited operational hours, as well as patient-related factors, including cultural beliefs. The findings suggest that these barriers ought to be considered when formulating new policies or amending existing programs to promote early initiation of ANC. Additionally, more research is required to determine the prevalence and demographic factors linked to the delayed initiation of ANC among women.

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CONFLICT OF INTEREST

None declared

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