



Original Article

Utilization of Antenatal Care Services among Patients Presenting in Ayub Teaching Hospital

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ABSTRACT

Regular use of antenatal care services during pregnancy has a positive impact on maternal and fetal health and serves as a tool to reduce maternal morbidity and mortality. **Objective:** To assess the utilization of antenatal care services among pregnant women at Ayub Teaching Hospital in Abbottabad, Pakistan. **Methods:** This descriptive study was conducted in Ayub Teaching Hospital in Abbottabad, KPK province, Pakistan. Data were collected on paper-based questionnaires and analyzed using SPSS. A total of 208 patients participated. **Results:** Key findings from the study indicated that the average age of participants was 28 years. The majority of women came from lower-middle-class backgrounds. The study also revealed a wide range of educational backgrounds among participants. Most women had prior pregnancy experience. The study found that a significant percentage of women initiated antenatal visits during the first trimester with drop in visits during the third trimester. Understanding the reasons for seeking care is crucial, with various medical concerns and routine check-ups cited. Barriers to utilization included lack of awareness, family issues, and geographical distance. Additionally, only 72% of women reported taking recommended supplements during pregnancy. **Conclusions:** The study identified that women from middle income group with previous experience of pregnancy seek antenatal care in first trimester with various pregnancy problems but visits were not consistent. Major reason for non-utilization of services was unawareness about the services.

INTRODUCTION

In order to get the optimum outcome for both mother and child, antenatal care involves a clinical evaluation of the mother and fetus during the pregnancy. Compared to no prenatal monitoring, early observation and continued treatment during pregnancy resulted in more favorable deliveries. It serves as a crucial point of entry for pregnant women seeking a variety of health treatments, including nutritional upkeep, anemia prevention or treatment, malaria prevention, TB screening, and STD treatment [1]. The foundation of every health care delivery system for obstetric services is antenatal care. It is thought to be crucial for the wellbeing of expectant mothers and is the

means through which maternal and fetal problems are identified and treated. In industrialized nations, antenatal care has a well-established and acknowledged role by patients who are pregnant. Its significance is not generally understood in poorer nations, which results in the pregnant patient's low prenatal clinic attendance. The World Health Organization states that "care that consists of the proper performance in accordance with standards is defined as quality health care" [2]. Structure, method, and result are the three areas where the quality of treatment is evaluated [3]. Access to a maternity facility that is sanitary and well-equipped is part of the community's spectrum of maternal

health care. Other examples include the usage of indigenous languages, timely medical attention provided by professionals who respect their patients, and community traditions [4]. The minimum number of prenatal visits recommended by the World Health Organization (WHO) is four. Throughout these sessions, interventions such as tetanus toxoid (TT) immunization, infection screening and treatment, and detection of warning signals throughout pregnancy are all covered [5, 6]. Five lakh women worldwide pass away each year from pregnancy-related causes and delivery. Apart from fatalities, 50 million women have maternal morbidity as a result of severe pregnancy difficulties, which might be decreased by encouraging women to give birth in a medical facility or with the help of trained birth attendants [7]. In order to identify any suspicion or fear of medical interventions such as hospital deliveries, caesarean sections, or blood transfusions among women and to determine whether appropriate information, education, and communication (IEC) activities are necessary, it is necessary to look into women's knowledge and attitudes regarding health and medical care during pregnancy and childbirth [8, 9].

In order to execute the corresponding programs more successfully, it is crucial to have a thorough understanding of the numerous factors that influence the use of maternity care throughout pregnancy. These bottlenecks can be located, and then attempts can be made to break them in order to boost usage rates. Although studies on this topic have been done in the past, they looked at the level of mothers' awareness and their use of ANC services. But no such study was done in Abbottabad, so the objective of this study was to assess the antenatal care services and its utilization among patients presenting in Ayub Teaching Hospital.

METHODS

This descriptive cross sectional study was conducted in Ayub Teaching Hospital in Abbottabad, KPK province, Pakistan for the period of two months from 1st November 2023 to 31st December 2023. Data were collected from the patients visiting the Obstetrics and gynecology department of Ayub Teaching Hospital. Ethical approval was obtained from the hospital ethical review committee via letter Approval code /Ref.No.RC-EA-2023/208. All pregnant women who attended outpatient department were recruited in the study. The sample size was calculated using the WHO software openEpi where, true utilization of antenatal care for pregnancy was 37%, margin of error=5% and 90% confidence level. Sample size calculated was 250 [10]. A total of 250 women were selected through consecutive sampling technique. The required information was collected on a predesigned questionnaire. Consent

was obtained from the willing participants. Incomplete proformas were not entered for analysis so total of 208 participants were recruited. Age, parity, education, occupation, timing of first antenatal visit, reasons for visit were recorded along with use of supplements. Participants who visited for the first time were asked about reasons for not utilizing the services. Descriptive analysis were performed using SPSS version 17.0.

RESULTS

The average age of the women was 28.44years (SD \pm 6.1). The sample ranged from ages 17 to 45 years. Parity, no parity 24.5%, P1 26.4%, P2 11.5%, P3 14.9%. P4 8.2%, Others 13.9%. The patients were from various socioeconomic backgrounds, majority were from lower middle 55.3% and middle class 43.8%. Only 1% patients were from higher class shown in table 1.

Table 1: Socioeconomic status of the patients

Socioeconomic status	Frequency (%)
Lower middle	115 (55.3)
Middle	91 (43.8)
High class	2 (1.0)
Total	208 (100.0)

Patients had different educational backgrounds which included, uneducated 29.3%, primary 26%, matric 29%, graduated 11%, master 4.3% shown in figure 1.

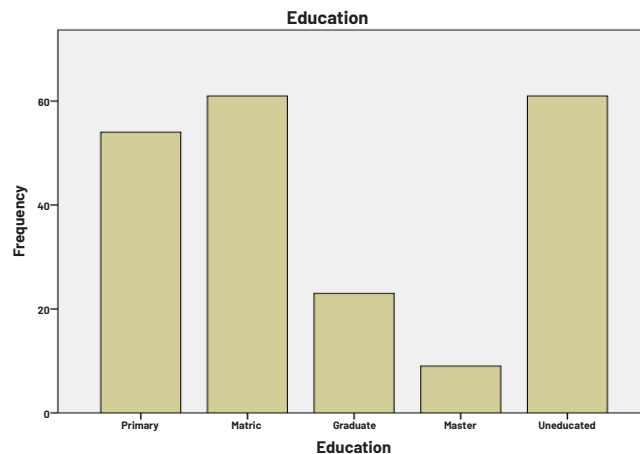


Figure 1: Educational status of the patients

Parity of the patients is shown in table 2. The frequency of primigravida is 22.6%, while 77.4% multigravida.

Table 2: Parity of the patients

Parity	Frequency (%)
Primigravida	47 (22.6)
Multigravida	161 (77.4)
Total	208 (100.0)

The percentage of patients that visited the doctor in first trimester was 70.2%, while in second trimester was 18.3% and third trimester was reduced to 11.5% shown in table 3.

About 66% patients had an anomaly scan done. The reason the patients had come in for the first visit was mainly to confirm pregnancy 32% patients. Other reasons included anemia, burning micturition, cardiac problems, delivery, epigastric pain, fever, high blood pressure, hydrocephalus, lower abdominal pain, pain epigastrium, previous C-section(s), bleeding, reduced fetal movement, routine antenatal check-up, twin gestation and vomiting.

Table 3: Timing of first antenatal visit

Antenatal Visit	Frequency (%)
1 st trimester	146 (70.2)
2 nd trimester	38 (18.3)
3 rd trimester	24 (11.5)
Total	208 (100.0)

The patients had a number of reasons for not utilizing antenatal care some explained about the lack of awareness 26.4% patients. While 7.2% patients had family issues, lived too far away from the hospital 8.2%, transport problems 1%. The other 10% women had no significant reason for not utilizing antenatal care shown in figure 2.

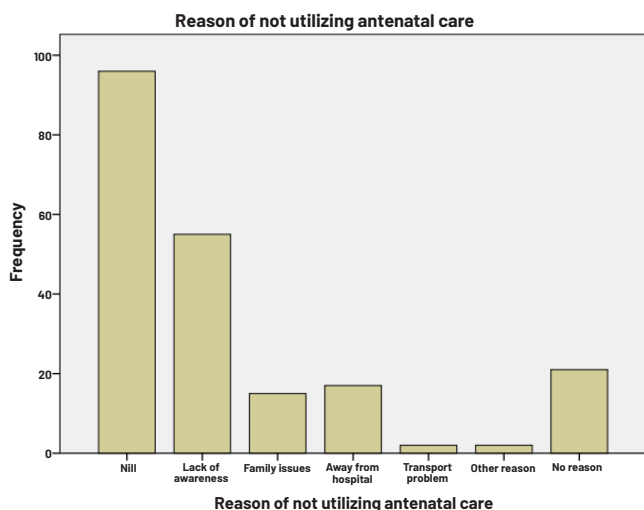


Figure 2: Reasons of not utilizing antenatal care

The majority of women that visited the hospital were house wives only 10% women were working women shown in figure 3. The patients were also questioned about the supplements they were taking during pregnancy. The supplements included Calcium, Iron and Folate which only 72% of women were taking. While the rest reported to have taken no supplements.

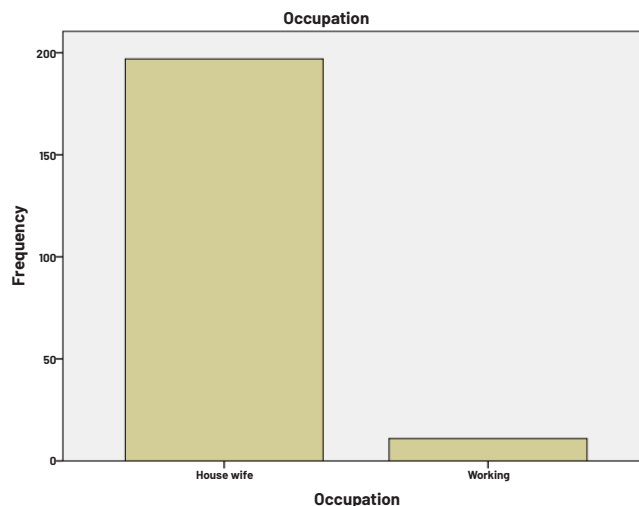


Figure 3: Occupation of the patients

DISCUSSION

In this study, we examined various demographic and healthcare-related factors among pregnant women to gain insights into the utilization of antenatal care services. The findings reveal several noteworthy trends and areas of concern in the context of antenatal care. The average age of women in our study was 28.44 years, reflecting a diverse age range from 17 to 45 years. This age distribution is consistent with previous research indicating that maternal age can significantly impact pregnancy outcomes [11] and emphasizes the importance of providing comprehensive antenatal care education and services to first-time mothers [12]. Our study population consisted predominantly of women from lower-middle-class backgrounds (55.3%) and middle-class backgrounds (43.8%), with only 1% belonging to the higher class. These findings are consistent with a study [13] and underscore the need to address socioeconomic disparities in access to antenatal care. Tailored interventions and support should be provided to women from lower-income households to ensure equitable access to quality care. The diversity in educational backgrounds, ranging from uneducated (29.3%) to master's degree holders (4.3%), underscores the importance of implementing health education programs that cater to varying literacy levels. Previous researches have also highlighted the positive impact of maternal education on antenatal care utilization, emphasizing the need to educate women about the benefits of antenatal care, even among those with lower education levels [14]. The majority of our study participants were multigravida (77.4%), indicating a high proportion of women with prior pregnancy experience. This aligns with the findings of and emphasizes the importance of antenatal care not only for first-time mothers but also for women with previous pregnancies, as each pregnancy carries its unique risks

and requirements [15]. Approximately 70.2% of women in our study visited the doctor during the first trimester, aligning with recommended guidelines for early antenatal care initiation (World Health Organization, 2016). However, there is a drop in the percentage of visits during the third trimester (11.5%). Encouraging regular check-ups throughout pregnancy, especially in the third trimester, is essential to monitor the health of both mother and fetus [16, 17]. Understanding the reasons women seek antenatal care is crucial. While a significant proportion came to confirm pregnancy (32%), it's essential to note that various medical concerns and routine check-ups were also cited. Previous studies have highlighted the multifaceted nature of antenatal care utilization, emphasizing the need to address these diverse needs and concerns to improve the overall quality and effectiveness of antenatal care services [18]. A subset of women reported barriers to accessing antenatal care, including lack of awareness (26.4%), family issues (7.2%), and geographical distance (8.2%). These findings are consistent with the findings of and underscore the need for community-based education and outreach programs to raise awareness about the importance of antenatal care and address practical obstacles such as transportation [19].

Only 72% of women reported taking supplements (Calcium, Iron, and Folate) during pregnancy. Promoting the importance of proper nutrition and supplement adherence during antenatal care visits can help improve maternal and fetal health outcomes, as demonstrated in studies by different studies [20, 21].

CONCLUSIONS

Our study showed that majority of the patient who attended antenatal clinics were from middle income groups with previous experience of pregnancy in first trimester for confirmation of pregnancy and other minor ailments. The major reason for not utilizing the antenatal services was lack of awareness. Study highlights several areas where interventions and improvements in antenatal care services are needed. These include tailored education for women of varying educational backgrounds, addressing socioeconomic disparities, promoting early and consistent antenatal visits, and implementing strategies to overcome barriers to utilization. Ensuring equitable access to quality antenatal care is vital for the well-being of both mothers and their infants. Further research is warranted to explore the effectiveness of targeted interventions and to monitor the impact of these initiatives on maternal and fetal health outcomes.

Authors Contribution

Conceptualization: AI

Methodology: SK, SB

Formal analysis: AAS, MUI

Writing-review and editing: IS

All authors have read and agreed to the published version of the manuscript.

Conflicts of Interest

The authors declare no conflict of interest.

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