



## Original Article

## Assessment of Husbands' Knowledge on Antenatal Care in a Tertiary Care Hospital, Karachi

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## ABSTRACT

The husband's involvement during pregnancy was considered very disappointing earlier. As a result, women did not inform their husbands about their troubles and concerns during pregnancy. In some cases, the severity of complications leads to the death of the fetus and mother. However, with time, husbands now take responsibility for their wives during pregnancy and antenatal care. The involvement of husbands in antenatal care visits reduces the risk of maternal mortality. **Objective:** To evaluate the level of knowledge regarding antenatal care among husbands of pregnant women attending a tertiary care hospital in Karachi. **Methods:** A cross-sectional research design was selected and conducted with 360 husbands who accompanied their wives for the antenatal services at the Outpatient Gynecology and Obstetrics Department of Dow University of Health Sciences (DUHS) Ojha Campus Karachi. The study questionnaire comprised twenty questions about the husband's knowledge of antenatal care. Data were analyzed by using SPSS version 21.0. **Results:** The study findings showed that (57.5%) husbands felt that antenatal care was valuable, the majority of the husbands (95.6%) felt that it was not necessary to go for antenatal care if there was no complication, and (32.2%) husbands were considered to believe that a minimum of three antenatal visits were enough for the care. More than half were aware of the danger signs of pregnancy, and they knew that a pregnant woman should deliver her baby in the health care facility. **Conclusions:** The current research study concluded that a large number of husbands felt that antenatal care was valuable, but still a lack of knowledge was found in different antenatal care components. There was a need for awareness of all the components of antenatal care among husbands of pregnant women.

## INTRODUCTION

Antenatal Care (ANC) is among the essential interventions in the effective continuum of care for the enhancement of maternal health. Antenatal Care (ANC) aims to provide safe and secure health services to both mother and child. The high maternal mortality in developing countries has shown a significant association with non-utilization of Antenatal Care (ANC). The world's maternal and neonatal morbidities can be improved if Antenatal Care (ANC) interventions are executed and operated [1]. The World Health Organization (WHO) has suggested antenatal education as a significant intervention to improve Maternal Mortality Ratio, especially

in developing countries. In Pakistan, there is no standard antenatal education program exists. Factors such as low literacy, poor economic conditions, and cultural practices are the main hindrances in antenatal education programs. There is a need to establish a standard educational program to improve decision-making among parents regarding pregnancy and childbirth [2]. A research study conducted in India highlighted the importance of husband participation in Antenatal Care (ANC); the research also found that men with awareness of pregnancy-related problems and their wives are more approachable to



utilizing services of maternal health. Hence, educating and authorizing men regarding pregnancy complications will play vital parts in lessening ongoing maternal and neonatal deaths [3]. The husband's support during and after pregnancy plays an important role in the mother's health and safe childbirth. The literature also showed that the women who lived away from their spouse during pregnancy are at more risk of having complications and may lose their pregnancies [4]. Moreover, a community survey at the Pakistan Institute of Medical Sciences Islamabad revealed a strong association between fathers' connection to maternal health with factors like fathers' education, age, criteria of income, and approach [5]. The stages of active involvement of men in antenatal care are different because of socio-cultural issues and work obligations. The majority of men showed adequate knowledge of antenatal care, mainly about the danger signs, and were involved in decision-making [6]. The male participation in antenatal services may encourage enhanced and efficient care, the knowledge of husband regarding antenatal services will also help in detecting and considering for health care in case of danger signs of pregnancy. The involvement of husband in antenatal services have a strong impact on both mother and child health outcomes [7]. The cross-sectional study conducted in India reported that majority of husbands had sufficient knowledge about antenatal care, while only 4.7% did not have sufficient knowledge, the level of education was found to be significantly associated with the involvement of male partner in antenatal care [8]. Furthermore the research study revealed that negative attitude of husbands towards antenatal care was due to social stigma and cultural hindrances, as many communities believed that it's the women's obligations and male has nothing to do with antenatal care [9]. The lack of husband support and involvement in antenatal care process were the leading barriers in achieving the antenatal care goal [10]. The results of research study conducted in Kenya indicated that 50% of the husbands knew about antenatal care, but only 31.8% were aware that ANC should be started in first trimester of pregnancy. Surprisingly no significant associations were found between demographic variables and husbands' attitude towards antenatal care [11]. Furthermore the study conducted in India also showed that the majority of the husbands had satisfactory knowledge regarding ANC, similarly no associations were found between knowledge score and demographic characteristics [12]. Three major factors were identified in the study conducted in Uganda that are directly linked with the maternal death during pregnancy, the first factor was the poor decision making regarding health care facility for receiving care, second factor was the delay in transferring to health care setting due to lack of transport and third factor was the delay

treatment at the health care setting.. At least two factors can be prevented by better male involvement in antenatal care [13]. Increased husband attendance in antenatal care was significantly associated with the factors such as, being married at 18 years and older, better knowledge of pregnancy-related issues, higher education level and high economic status [14]. Furthermore many research studies from developing countries revealed that less than 50% of husband attended at least one antenatal care session [15]. The objective of study is to evaluate the level of knowledge regarding antenatal care among husbands of pregnant women attending a tertiary care hospital in Karachi.

## METHODS

The study design was cross-sectional. The current study was conducted at the OPD of Gynecology and Obstetrics Department, Dow University of Health Sciences Karachi. The study population was the husbands of pregnant women. The study was conducted from December 2020 to May 2021. The sample was selected using a consecutive sampling technique. The sample size of 360 participants was calculated using Open Epi Software with a 95% confidence interval, 80% power of test, and 5% margin of error. Inclusion criteria involve husbands and wives who visit their doctor and were willing to give their personal opinions on the research questionnaire. Exclusion criteria were based on age factors; less than 18-year-old and more than 47-year-old women were not added to this research. The study permission letter for data collection was taken from the university and the hospital's Medical Superintendent of DUHS with reference number (DUHS/ION/MSN/2020/405/18). Study approval was taken from the research committee of Dow University with reference number (DIONAM/MSN/2020/404-1). Each individual filled out the informed consent before the data collection. Data were collected using a questionnaire comprised of 20 questions. Data were collected on various factors, including age, family income, educational level, and husband's concern for their wives during pregnancy. The structured research questionnaire of 360 individuals was taken during DHUS OPD department visits with husbands and wives. This questionnaire was translated to those husbands who could not read English. The statistical package of the SPSS version 21.0 was used for data analysis. The percentage of the knowledge of the husbands was measured during this research questionnaire. Descriptive statistics such as percentages and frequency tables were used to display the results.

## RESULTS

Table 1 presented a summary of the socio-demographic characteristics of a sample of 360 individuals. In terms of women's age, a greater number of individuals fall within the

18-34 age category (83.3%), followed by the 35-50 age category (16.7%). Family types were mainly extended (56.4%), while nuclear families comprised (43.6%). Family income was different, with (13.6%) earning between 10,000-20,000 rupees, (38.6%) earning between 21,000-30,000 rupees and (47.8%) earning above 30,000 rupees. The educational status of husbands showed that (38.6%) were uneducated, (11.2%) completed primary school, (9.4%) completed secondary school and (40.8%) graduated high school.

**Table 1:** Socio Demographic Variables (n = 360)

Socio-Demographic Variables	Characteristics	N (%)
Age of Pregnant Women	18 - 34	300 (83.3%)
	35 - 50	60 (16.7%)
Type of Family	Nuclear	157 (43.6%)
	Extended	203 (56.4%)
Family Income Per Month	10,000 - 20,000	49 (13.6%)
	21,000 - 30,000	139 (38.6%)
	Above 30,000	172 (47.8%)
Educational Status of Husband	Uneducated	139 (38.6%)
	Middle	40 (11.2%)
	Matric	34 (9.4%)
	Intermediate	147 (40.8%)

The results of table 2 showed that (57.5%) of husbands felt that antenatal care was valuable, the majority of the husbands (95.6%) felt that it was not necessary to go for antenatal care even if there was no complication, and (32.2%) husbands were considered that minimum 3 antenatal visits were enough for the care. The knowledge regarding the importance of tetanus injection, vitamin supplements, and Iron /folic acid supplements during pregnancy among husbands was found to be below (50%). A large number of husbands (67.2%) believed that pregnant women need extra food compared to non-pregnant women, while (52.2%) felt that pregnant women should continue to do household jobs during pregnancy. Ultrasound test during antenatal care was not considered significant by the majority of husbands (53.3%), similarly more than (50%) were unaware of the importance of monitoring blood pressure and weight at every antenatal visit. In contrast more than (50%) of the husbands have good knowledge regarding Blood screening for HIV, Hepatitis, and Thyroid during antenatal care. In terms of laboratory tests, (72.5%) of individuals were aware of sugar testing, while only (12.5%) had knowledge of haemoglobin measurement, and (37.8%) knew about urine testing during antenatal care. Alarming results were found in terms of alcohol consumption and smoking by pregnant women, (80%) husbands assumed that alcohol consumption and smoking were not harmful for the fetus. More than half were aware of the danger signs of pregnancy and they knew that pregnant women should deliver their baby in the health care facility.

**Table 2:** Knowledge of Husbands Regarding Antenatal Care

Questions Asked	Response	
	Yes N (%)	No N (%)
Do you think Antenatal Care is Valuable or not?	207 (57.5%)	153 (42.5%)
Is it Necessary to go for ANC Even if there is no Complication?	16 (4.4%)	344 (95.6%)
Are Minimum 3 Antenatal Visits Required?	116 (32.2%)	244 (67.8%)
Is Injection TT Required to be given During Pregnancy?	37 (10.3%)	323 (89.7%)
Does a Pregnant Woman Need Vitamin Supplements?	170 (47.2%)	190 (52.8%)
Does a Pregnant Woman Need Iron /Folic Acid Supplements?	167 (46.4%)	193 (53.6%)
Does Pregnant Woman Need Extra Food Compared to Non-Pregnant Woman?	242 (67.2%)	118 (32.8%)
Is Alcohol Consumption/ Smoking by Pregnant Woman Harmful for Fetus?	72 (20%)	288 (80%)
Should USG be done to Assess Fetal Wellbeing?	168 (46.7%)	192 (53.3%)
Is Weight Measurement Required During Every Antenatal Visit?	163 (45.3%)	197 (54.7%)
Is BP Measurement Necessary During Every ANC Visit?	44 (12.2%)	316 (87.8%)
Is Haemoglobin Measurement During Pregnant Required?	45 (12.5%)	315 (87.5%)
Is Blood Sugar Testing Required?	261 (72.5%)	99 (27.5%)
Is Urine Test Required?	136 (37.8%)	224 (62.2%)
Is Blood Screening for HIV Required?	215 (59.7%)	145 (40.3%)
Is Blood Screening for Hepatitis Required?	188 (52.2%)	172 (47.8%)
Is Blood Screening for Thyroid Necessary?	220 (61.1%)	140 (38.9%)
Should Pregnant Women Continue to do Household Jobs?	188 (52.2%)	172 (47.8%)
Are You Aware of Danger Signs of Pregnancy?	224 (62.2%)	136 (37.8%)
Where Should a Pregnant Woman Deliver her Baby? Health Care Facility	302 (83.9%)	58 (16.1%)

## DISCUSSION

The research aims to find the impact of husbands' involvement in anti-natal care on maternal and child health outcomes. The objectives of the research were to find out the perceptions of husbands towards ANC and the effects of husband's involvement in ANC on maternal and child health. The result of current study reveals that majority of the husbands (57.5%) believed that Antenatal Care is valuable. Comparable results were found in the study conducted in Nigeria, the (63%) of the husbands had good knowledge of antenatal care [16]. The findings of present study showed that majority of the participant thought that minimum 3 Antenatal visits were not enough. Similar results were found in the research study in Yangon, Myanmar showed that the antenatal hospital visits were more likely to have more than four during pregnancy [17]. Moreover the result of this study showed that (62.2%) of the respondents were aware of danger signs of the pregnancy. Similarly the results of cross-sectional study surveyed 150 husbands in India showed that the majority of husbands exhibited sufficient knowledge of antenatal care, particularly regarding identifying danger signs [18]. This

similar comparison may be due to the geographical location, as both countries are neighboring countries. In contrast a study conducted in Bangladesh found that one quarter of males could recall three or more delivery-related risk signs, even though most husbands were aware of prenatal danger indications [19]. The complications can be prevented by the early detection of danger signs. Furthermore the current study revealed that (59.7%) husband reported blood screening for HIV is necessary during pregnancy, while 52.2% believed that blood screening for hepatitis is mandatory during ante-natal period. The contradictory results were found in the cross-sectional study conducted in Swat, Pakistan, the study results indicated that majority of husband (60.5%, 57.5%) were not aware of importance of screening of HIV and hepatitis [20]. This study further revealed that only (10.3%) respondents had the knowledge of importance of tetanus toxoid injection during pregnancy and less than half of the respondents were aware of supplements required in pregnancy. The much healthier results were reported in the study conducted in Mumbai, India, where (45%) of individuals had knowledge of importance of tetanus toxoid injection during pregnancy and more than half of the respondents were aware of supplements required during pregnancy [21]. This study further discovered that (37.8%) respondents assumed that urine analysis is required during pregnancy, which is consistent with the study findings of India, where (17.1%) of individuals thought that urine test is necessary during antenatal period [22]. Additionally the present study showed that (46.7%) of participants reported that ultrasound should be done to assess fetal well-being. Less than (50%) of participants had the knowledge regarding importance of blood pressure and weight measurement during antenatal visits. In contrast the results of study conducted in India reported that (72%) respondents considered ultrasound measurement is essential during pregnancy and (50%) had the knowledge regarding importance of blood pressure and weight measurement during antenatal visits [23]. The findings of current study revealed that only (20%) of the respondents reported that smoking and alcohol consumption by pregnant women is harmful for the growth of fetus. In contrast the results of cross-sectional descriptive researched conducted in India showed that (58%) of the husbands considered smoking and alcohol consumption harmful for the fetal growth [24].

## CONCLUSIONS

Knowledge of the husband about antenatal care was essential because it was helpful for pregnant women during pregnancy and childbirth. Pregnant women easily communicate and discuss their problems and complications with their husbands, so the husband's training was beneficial. Socio-demographic factors and antenatal care develop the husband's ability to make

treatment decisions and proper health care. Any complication during pregnancy was timely observed and treated effectively. This study can further identify the husband's interest and help improve ANC according to the need.

## Authors Contribution

Conceptualization: MA, SNZ

Methodology: MA, NAM

Formal analysis: MA, SNZ, DAS

Writing, review and editing: MA, DAK, FS, N

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

## Conflicts of Interest

All the authors declare no conflict of interest.

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