

## Factor affecting the utilization of Antenatal care services among pregnant women at District Headquarter Hospital, Mirpurkhas

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### Abstract:

**Background:** In Pakistan every year 276/100,000 women die during pregnancy related causes, which can be avoided by receive of medical care before (antenatal), during (intranatal) and after (post-natal) childbirth. This study was design to find out prevalence of Ante natal care (ANC) services and factors associated with its utilization among the pregnant women of rural Sindh.

**Methodology:** It is a hospital based cross sectional study, conducted at District Mirpurkhas in June-August 2010. A total of 464 multigravida pregnant women attending antenatal clinic were selected by systematic random sampling. For data collection face to face Interview was conducted by using a pre-tested semi-structured questionnaire. The variables assess were demographic characteristics, socioeconomic status, and ANC services utilization with reasons of inadequate utilization.

**Results:** Among 464 respondents n=119 (25.7%) didn't received ANC services during last pregnancy due to multiple reasons lack of awareness n=44 (34.4%) financial constrain n=40 (33%), lack of personal interest n=39 (32.5%), busy schedule n=21 (16%), difficulty in access n=25 (21%), shame and embracement n=17 (14%), family restriction n=14 (11.6%), fear of illness & preference for traditional practices n=15 (12.6%). Among total 61.6% complain they wait > 2 Hrs. The utilization of services was more in literate respondents n=365 (85%).

**Conclusion:** The study showed that low level of ANC coverage. The main reason was identify limited knowledge, preference on traditional practices, & low level of socioeconomic status. There is need to uplift the quality of services, socio-economic status & level of awareness are recommended.

**Keywords:** ANC, Reason of low coverage, level of satisfactions

### Introduction:

Maternal morbidity and mortality during child labour, birth and after birth is a serious public health problem in low and middle income countries. Globally in 2008, an estimated 358,000 women died due to complications developed during pregnancy and child birth. The maternal deaths is high in developing countries 240/100,000 as compared to developed countries 16/100,000 and lifetime risk of death due to pregnancy is higher 1 in 150 in women of developing countries then developed countries 1 in 38002. In Pakistan every year 276/100,000 women die during pregnancy related causes and this rate is high in rural area 319/100000 than urban 175/100000. 3.75% percent of maternal deaths occur during childbirth and the postpartum period, a great proportion of maternal deaths are avoidable by early receive of medical care in before, during and after childbirth<sup>4</sup>. Antenatal care (ANC) is one of the key strategies in reducing maternal and newborn mortality in "safe

motherhood package"<sup>5</sup>. ANC is a group of services provided to the mother for monitoring of mother's & fetus' health by trained health care personnel during entire pregnancy at regular intervals. According to World Health Organization (WHO) recommendations, a minimum of four antenatal visits (at least 20 minutes duration for each) is needed to accomplish the essential level of ANC<sup>6</sup>.

In Pakistan there are two types of ANC services are provided one is hospital and other is domiciliary based. In former ANC services are provided by Doctor, LHV or nurse & in later services are provided by UIW & TBA 1Dai.

Domiciliary ANC service is beneficial for women of low socio economic status causes improvement in level of satisfaction, medical knowledge & level of satisfaction<sup>7</sup>. Estimated population of Pakistan in 2011 was 187 million. Approximately 24.7% are women aged 15 to 49 years, with a Total Fertility Rate of 4.1 (PDHS 20062007)<sup>3</sup>.

Majority of them have poor health condition & suffering from diseases associated with pregnancy.

In Pakistan only 28% percent of pregnant women attend four or more antenatal care visits during the whole period of their pregnancy with 48% in urban 20% in rural.

Among these 61% received ANC from skilled health providers that is, from a doctor, nurse, midwife or Lady Health Visitor & 3% from a traditional birth attendant

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(DAI)3. Comparative Reports of Demographic Household Survey of different countries shows the percentage of women attend 4 or more ANC visit Bangladesh 20%, Cambodia 27%, India 37%, Indonesia 81%, Nepal 29.%, Philippines 77%, Vietnam 30.1 %8. A study conducted in Bangladesh showed factors poor socio-economic status, lack of women empowerment and decrease awareness associated with under coverage of ANC9. Another study conducted in turkey also finds relationship of ANC utilization with demographic and socio-cultural factors like maternal age, number of children, education, and place of residence10. In a study carried out in a rural community in Northern Nigeria the major barriers were associated with economic, cultural and women's perception of their condition11.

There is a lack of specific research explain the reasons of underutilization of antenatal care services among women of rural area of Sindh. To fill this existing gap of knowledge a study was conducted to find out the prevalence and factors associated with antenatal care services utilization. The result of this study could help to policy maker in development of interventions for increasing the utilization of antenatal care services.

#### Material and Methods:

A hospital based Cross Sectional study was conducted in the department of Gynecology and obstetrician at District hospital Mirpurkhas, Sindh from June-August 2011. The objective of current study was to find out the prevalence and factors associated with antenatal service utilization. Sample size was calculated by using prevalence 28% of women who made four or more prenatal care visits during their pregnancy reported in PDHS 06-07, by applying the formula for calculating the prevalence ( $p = t \cdot l \cdot x \cdot p / (l - p) / m^2$ ) at 95% confidence interval. A sample size of 309 women was calculated, incorporate the design effect of 1.5, the final sample size was calculated as an  $n = 309 \times 1.5 = 464$ . Multigravida pregnant women, resident of Mirpurkhas (urban or rural), reported ANC clinic at department of gynecology & Obstetrician were enrolled by using systematic random sampling (every 3rd women).

A ell structured and pre-tested questionnaire was used to collect the quantitative data. The questionnaire was initially designed in English but later translated to Urdu & Sindhi. For achieving the accurate data questionnaire was pretested in same setting with 20 participants.

This study was conducted after approval by ethical review committee of Muhammad Medical College with permission of Medical superintendent of respective hospital. Written consent was obtained after telling the study aim and objectives to the respondents & than face-to-face interviews was conducted. The variables assess were demographic characteristics, socioeconomic status, utilization of ANC services in last pregnancy with reasons of not utilization, outcome and place of last pregnancy. The data collected was entered and analysis by using SPSS version 11.

#### Results:

We approached 484 multigravida pregnant women, attending ANC clinic at district hospital Mirpurkhas among them 20 were refused to participate in the study. The average age of the respondents was 25.5 years ( $S0 = 6.3$ ), with a range of 16 to 49 years, and majority of 73.2% ( $n = 340$ ) belonging to the 1530 year-old age group. Among the total 67.2% ( $n = 312$ ) were living in rural area of district Mirpurkhas. Most of them 94.6% ( $n = 439$ ) were House Wife. Household income was 6,000-15000 rupees per month. In this study 73% ( $n = 340$ ) respondents state that her husband has education among these 70.5% ( $n = 240$ ) have primary education, 10.2% ( $n = 35$ ) secondary & 19% ( $n = 65$ ) metric & above. Out of 464 respondents 83.4% ( $n = 387$ ) were ill-literate & 16.6% ( $n = 77$ ) were literature.

Practices of ANC services utilization in last pregnancy among Multigravida Mothers: Out of 464 Multigravida mothers 74.3% ( $n = 345$ ) mentioned that they received ANC services during last pregnancy, among them 23% ( $n = 80$ ) and 77% ( $n = 247$ ) received ANC services at home and health facilities respectively. LHW 57.5% ( $n = 46$ ) and Dai 42.5% ( $n = 34$ ) were the main services provider at home. Doctors 54.6% ( $n = 135$ ), Nurse 21.4% ( $n = 53$ ), LHV 23.8% ( $n = 59$ ), was the most frequent source of ANC services in health facilities. 27% ( $n = 94$ ) women said that they started ANC services from the first trimester, 34.7% ( $n = 120$ ) second trimester and 38% ( $n = 131$ ) third trimester. Only 40.5% ( $n = 140$ ) received four or more ANC visits during their pregnancy either from hospital or dometrically ANC services. The outcome of last pregnancy was live birth 95.2% ( $n = 442$ ), still birth 3.4% ( $n = 16$ ) & abortion 1.2% ( $n = 6$ ).

Variables	Frequency
<b>(N=464)</b>	<b>Age In years</b>
< 30 Year	> 30 Year
340 (73.2%)	124 (26.7)
<b>Area of living</b>	<b>Rural</b>
Urban	312 (67.2%)
152 (32.7%)	<b>Women Occupation</b>
<b>House Wife</b>	<b>Working women</b>
439 (94.6%)	25 (5.3%)
<b>Women Education</b>	<b>Ill-literate</b>
<b>Primary</b>	<b>secondary</b>
<b>Metric &amp; above</b>	<b>76 (16.3%)</b>
<b>281 (77%)</b>	<b>62(17%)</b>
<b>22(6%)</b>	<b>Monthly income</b>
<b>6,000-15000</b>	<b>&gt;15000</b>
<b>340(73%)</b>	<b>124(27%)</b>
<b>Parity</b>	<b>Multi Gravida 464(100%)</b>

**Table-1: Distribution of Demographic, Socioeconomic and maternal Child Health Characteristics of women attending antenatal care visits**

On inquired regarding the Place of last baby born 63.5% (n=295) said at home, 22.4% (n=104) at public hospitals and 14% (n=65) at private hospitals (Figure 1). Among the total respondents 25.6% (n=119) didn't utilize ANC

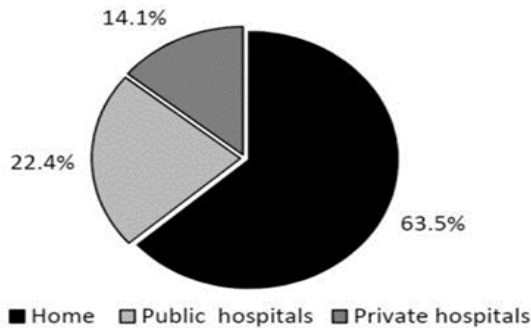


Figure 1: Place of Birth in Last Pregnancy

services in last pregnancy, on asking they revealed more than one reason for this such as lack of awareness 34.4% (n=41), due to financial problem 33% (n=40), lack of personal interest 32.7% (n=39), difficulty in access 21% (n=25), too much busy schedule 16% (n=21), unavailability of health facility 16% (n=21), due to shame and embracement 14% (n=15), preference for traditional practices & fear of illness 12.3% (n=15), not allowed from the family 11.7% (n=14) and absence of transport. 10% (n=12). The utilization of services was 15% (n=65) in ill-literate 85% (n=365) in literate respondents. In the literate respondents this utilization was increase with level of mother education 13% (n=48) in primary educated mother 24% (n=89) in secondary and 63 % (n=228) in metric or above educated mother (Table 2)

**Problems & attitude of pregnant Mother:**

This study revealed that in ANC users 28.8% (n=134) feel difficulty in access of ANC services, 21.7% (n=101) were poorly satisfied from quality of services & 68.7% (n=319) form medicine. 61.6% (n=286) complain that they wait > 2 Hrs for receiving ANC services. 32 % (n=149) said that they received instruction about ANC, exercise & bed rest. Only One fourth 26.2% (n=123) of the population told that they were using family planning for spacing the birth. Among the non-user group 52.5 % (n=244) have Intention to Use FP (Table 1).

**Discussion:** Antenatal care is responsible for prevention of maternal morbidity and mortality directly through early detection and treatment of pregnancy related illness & indirectly by Identification of high risk women & pregnancies. The present study has indicated that 74.4% of the pregnant women utilized antenatal care services during last pregnancy which is higher from stud~ conducted in Indonesia 63.13%<sup>12</sup> and Karachi 51%<sup>13</sup>. The current study shows that 40.6% of women attend ANC clinic four or more times which is higher from the findings of PDHS 06-07, Bangladesh household demographic survey 07 &

India household demographic survey 05-06 where re- sults were 28%,20.6% & 37.% respectively. These differ-

Variables		Frequency (N=464)	
<b>ANC during last Pregnancy</b>			
<b>Received</b>		<b>Not Received</b>	
345 (74.3%)		119 (25.6%)	
<b>Place of receiving ANC</b>			
<b>At home</b>		<b>Health facilities</b>	
80 (23%)		124 (77%)	
<b>Total number of ANC Visits</b>			
<b>Four or more than four</b>		<b>Less than four</b>	
140 (40.5%)		205 (59.5%)	
<b>Outcome of last Pregnancy</b>			
<b>Live birth</b>		<b>Still birth</b>	
<b>Abortion</b>		442 (95.2%)	
16 (3.4%)		6 (1.2%)	
<b>Reason of not usin2ANC services (n=119)</b>			
<b>Lack of awareness</b>		<b>Financial problem</b>	
<b>Lack of personal interest</b>		<b>Difficulty in access</b>	
<b>Too much busy schedule</b>		<b>Unavailability of health facility</b>	
<b>Due to shame and em- bracement</b>		<b>Traditional practices Preference</b>	
<b>Fear of illness</b>		<b>Not allowed from the family</b>	
<b>Absence of Transport</b>		41_(34.4%)	
40 (33%)		39 (32.7%)	
<b>25 (21%)</b>		<b>21 (16%)</b>	
15 (12.6%)		15 (12.6%)	
14 (11.7%)		12 (10%)	

Table-2: Practices of ANC services utilization in last pregnancy among Multigravida Mothers

ence may be due difference in study setting. In our study first reason which identifies for poor utilization of ANC was difficulty in access of ANC services 16% same type of reason were found in study conducted in Indonesia<sup>14</sup>. A qualitative study also reported that long travel time worsened by poor road conditions prevented communities from attending antenatal services<sup>15</sup>. This result shows that improvement in access to health services will effect on utilization of services. The other barrier for underutilization were lack of knowledge & permission from family reported by 34.4% & 11.6% respondents respectively same type of result 28% & 8% found in study

conducted in Karachi<sup>13</sup>. Same study which was conducted in Karachi also reported association between absence of transport with utilization of ANC services which is closest to this study. This type of obstacles could be removed by arranging a transport mechanism and conduction of health education session with pregnant mother as well as other family member such as mother in law & husband. Financial restrains was the next reason for poor use of ANC reported by 33% respondents this finding is high from the study conducted in Military hospital Rawalpindi where 10% women didn't utilize the ANC services<sup>16</sup> due to this reason. This may be good socioeconomic condition of army employees. Same study which was conducted in army setup also account that 26% respondents have beliefs on traditional practices (Dai) which is higher from our study where belief was 12.3%. Out of 430 Multigravida mothers 74.4 % (n=320) mentioned that they received ANC services during last Pregnancy in this 23% (n=73) from LHW or Dais and 77% (n=247) from the health facilities. Doctors 54.6% (n=135), Nurse 21% (n=53), LHVI Midwife 23 %, (n=59), was the most frequent source of ANC services in health facilities. 74.4 % % sample state that they received ANC during last Pregnancy in this 23% at home from LHW or Dais and 77% from the health facilities by Doctors 54.6%, Nurse 21%, LHVI Midwife 23 %. This result is slightly low from the study conducted In Islamabad<sup>17</sup> which may difference in socio economic status education. According to PHOS 2006-07, 61% of mothers receive ANC from skilled health providers, from a doctor, nurse, midwife or Lady Health Visitor. Only 3 percent of women receive prenatal care from a traditional birth attendant (Dai). Other study carried out in Karachi<sup>13</sup> shows 51% women who received ANC, in this 33% from an untrained care provider (specifically a dai), 20.4% midwife, 20.4% nurse, 19.1% doctor and 7% from Lady Health Visitor. In this study 40.6% respondents made four or more prenatal care visits during their last pregnancy which was slightly high reported in PHOS 06-07, 28% & low 48.0% from study conducted in Northwest Ethiopia<sup>18</sup> and closed to (36%) finding of a study conducted in xiengkhouang province<sup>19</sup>. Comparative Reports of Demographic Household Survey of different countries shows the percentage of women attend 4 or more ANC visit Bangladesh 20%, Cambodia 27%, India 37%, Indonesia 81%, Nepal 29.%, Philippines 77%, Vietnam 2002 30.1%<sup>20</sup>. 63% state that last baby was deliver at home, 22.4% public hospitals and 14.1% private hospitals nearest result were reported in study conducted in Islamabad<sup>17</sup> where 59%, baby deliver at Home 27.5% Government hospital 11% Private clinic / hospital. The other study conducted in rural area of Pakistan reported 31% deliveries were conducted at home which is low from the study due to difference in study setting<sup>21</sup>. This study shows that 21.7% were poorly satisfied from quality of services & 68.7% form medicine same level of dissatisfaction from the medicine found in study carried out in a teaching hospital of Hyderabad<sup>22</sup>. Same study

found that 86.2% women have to wait more than two hours which is higher form our study the reason may be difference in level of health care facility.

#### **Conclusion:**

This study revealed that utilization of maternal health service is inadequate in ANC & delivery services. Financial problem, lack of personal interest, difficulty in access, too much busy schedule, and unavailability of health facility, shame and embracement and preference of traditional practices are major obstacles to utilization of ANC. The study finds that even though women attend the ANC visit in hospital during pregnancy but many of them delivered their last baby at home. Majority of respondents were poorly satisfied from quality of services form medicine & complain that they wait > 2 hours for receiving ANC services

#### **Recommendation:**

Based on the above finding it is recommended that, encourage the women education beyond the primary school and increase women's empowerment within their family. Develop a system for increases the knowledge mother, husband & mother in law regarding the importance of ANC, institutional delivery, family planning and child spacing. Moreover, the health department provides training to TBAs/Dai & improves public sector hospital obstetric services through increasing resources, adequate medicine supply, and assurance of staff on duty.

#### **Limitations:**

First, this is hospital bases cross sectional survey was conducted in only one district located in rural area of Sindh which might affect its generalizability<sup>23</sup> Second socio-cultural barriers were faces at the time of interview so many respondents didn't give detail information third one the chance of recall bias in answers of respondents Finally, time and budgetary constraints played a limiting role in extending this study beyond one hospital & district.

#### **Conflict of Interest:**

The author(s) declare that they have no conflict of interest.

#### **Authors' Contributions:**

MA was the primary researcher, conceived the study, designed, participated in data collection, conducted data analysis and drafted the manuscript for publication. MFB and GMY assisted in data collection and preparation of first draft of manuscript. All authors interpreted the results, and reviewed the initial and final drafts of the manuscript.

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