

## A CROSS-SECTIONAL STUDY REGARDING KNOWLEDGE, ATTITUDE AND PRACTICE OF ANTENATAL CARE AMONG PREGNANT WOMEN AT TERTIARY CARE CENTER

Dr. Muhammad Khaliq<sup>1</sup>, Dr. Hafiz Muhammad Sohaib\*<sup>2</sup> and Dr. Amna Khan<sup>3</sup>

<sup>1</sup>PMDC# 74555-P.

<sup>3</sup>PMDC#75146-P.

\*Corresponding Author: Dr. Hafiz Muhammad Sohaib

Article Received on 15/03/2018

Article Revised on 05/04/2018

Article Accepted on 26/04/2018

### ABSTRACT

**Background:** Maternal mortality rate is very high worldwide. Every minute a women is dying due to pregnancy related complication in the world. The risk of maternal mortality is 200 times more in developing or low income countries than developed or high income countries. The health of mother can only be improved to proper checkup during pregnancy at antenatal clinics, early detection of pregnancy related complications and prompt treatment can reduce mortality rate. Antenatal Care (ANC), is given different meanings by different scholars, "Antenatal Care means care before birth and includes education, counseling, screening and treatment to monitor and to promote the well-being of the mother and fetus". Developing countries this shows that the Antenatal care activity is very weak in developing country. The main reasons that hinder the use of Antenatal Care are different from Country to Country. In our country antenatal services are not available to all the patients and lack of awareness and education among people regarding antenatal many women develop pregnancy related complications. Maternal mortality rate of Pakistan is 178/100,000, which is very high. **Aim of study:** This study will help to know how much percentage of women came to benefit from this very important service of women's health. And to assess knowledge and attitudes of pregnant women regarding the benefits of Antenatal care utilization at tertiary care unit of out hospital. **Method:** It is a cross-sectional study conducted at tertiary care unit, Nishtar hospital Multan from March 2016 to August 2016. Total 130 women were selected through random sampling technique. Data was collected in the form of questionnaire. Informed consent was taken from all the respondents. Pregnant women from age 15 to 45 years were enrolled in the study. **Results:** Total 130 candidates were enrolled in the study. 68 (52.3%) pregnant women were from age group 15-25, 33% (44) from 26-35 years age group and 17.6% (23) from 36-45 years. 72 respondents were housewife, 58 were working women. 70.9% respondents (candidates) were from urban areas and 29.1% from rural areas. 61% of the candidates were having monthly income less than 15000 PKR. Results showed that 125/130 women said that antenatal care is essential for them remaining 5 were not having any knowledge about ANC. 104 respondent were in favor of atleast 4 visits. Only 55/130 candidates were having knowledge regarding screening for infectious disease. 122 candidates (respondents) said that vaginal bleeding during pregnancy is an alarming sign, 105 pregnant women said that severe abdominal pain is a sign of danger, mostly women had no knowledge about remaining danger signs. 108 respondents said that hospital is better place for delivery. 98 women were having positive response and support regarding antenatal care from husband or family. All the respondents were against smoking and alcohol consumption during pregnancy. About 100 pregnant ladies were having no information regarding inj. Tetanus Toxoid. Only 57 candidates knew about iron and folic acid supplements importance. During assessment of attitude regarding antenatal care among pregnant women, almost 128/130 women showed positive response and 2 women having negative reviews regarding ANC. 60 candidates agreed that Blood Pressure monitoring is essential during pregnancy but very less percentage of women do this practice. Result calculated from the questionnaire showed that approximately 65-70% (84.6 +/- 5.54) pregnant women were having Knowledge about Antenatal Care. Approximately 59% (76.7 +/-3.4) respondents showed positive response regarding antenatal care, 22% showed negative and remaining 19% were neutral. The frequency of practice regarding antenatal care dropped to 47%. **Conclusion:** The antenatal care utilization is more among educated women and women from urban areas. Most of the women cannot follow antenatal care because of transport problems for patients from village, lack of family support and poor socioeconomic status. The overall knowledge and attitude was good among pregnant women, but there was lack of antenatal care practice. Government should provide easily accessible Antenatal care facilities to all rural areas, in order to improve maternal health.

**KEYWORDS:** Antenatal care (ANC), pregnancy, maternal, health, mortality, tertiary care unit, rural, urban.

## INTRODUCTION

A healthy mother brings a healthy child. The health, growth and development of a child is dependent on mother's health. Unfortunately the maternal mortality rate is very high worldwide. According to some studies, daily 1400 women die due to pregnancy related complications out of which 830 mother die due to preventable causes.<sup>[1,2]</sup> According to UNICEF report maternal mortality rate is high especially in sub Saharan and Asian countries accounts for 88% of total maternal death worldwide [WHO, UNICEF, UNFPA and world bank, *trends in maternal mortality 1990-2015, WHO, Geneva, 2015*]. Worldwide maternal mortality ratio is 216/100,000, in south Asian countries is 182/100,000 and in Pakistan MMR is 178/100,000. The risk of maternal mortality is 200 times more in developing or low income countries than developed or high income countries.<sup>[3]</sup> The main causes that directly lead to high mortality in pregnancy are hemorrhage, abortion, embolism, hypertension and sepsis. The three main reason that results poor outcome of pregnancy are: delay in seeking, delay in reaching health care facility and delay at institutional level in providing proper guidance and treatment.<sup>[4]</sup> According to a study, health of a country can be predicted from average life expectancy and maternal mortality.<sup>[5]</sup>

An effort by WHO was done regarding safe motherhood in 1987, the aim of this initiative was to reduce the number of deaths associated pregnancy and childbirth. The main pillar of this initiative was ante-natal care.<sup>[6]</sup> Improving maternal health is one of the goal of eight millennium development goals, the goal was decrease maternal mortality by 75% till 2015. Since 1990 maternal death has been reduced to 47%, but still not upto mark.<sup>[7]</sup>

Antenatal care is a routine checkup, you get from health professional during pregnancy, in order to diagnose disease and obstetric complication without symptoms. It is a type of screening process for pregnant women, provides information regarding lifestyle, pregnancy and child birth. It part of primary health care system which includes schedule routine visits. At first visit detailed history of patients and necessary investigations like confirmation of pregnancy, CBC, urine tests, dating USG, and screening for infections e.g. hepatitis B,C HIV Syphilis are done. In second trimester fetal anomaly scan is done. In last few weeks of pregnancy vaginal examination, blood pressure, USG for fetal presentation and mode of pregnancy are the main focusses. According to WHO guidelines there must be at least four ANC should be done. The advice regarding nutrition, prevention of anemia, iron and folic acid supplements and social and emotional support are the parts of ANC. Ultimately all these interventions leads to healthy pregnancy outcome and decrease mortality ratio among pregnant women.<sup>[8,9,10,11,12,13]</sup> there are many barriers that limits the quality of maternal health service like, lack of knowledge, awareness, support from husband and family

specialized health professionals, basic health facilities. Malpractices, malnutrition poverty and early marriages further worsens the condition.<sup>[14,15,16]</sup> According to WHO 98% of women from developed countries visit one session of ANC that decrease to 88% in developing countries and upto 54% in southeast Asia. In Pakistan only 73% women go for one visit and approximately 37% completes 4 visits. Maternal mortality rate has decreased in Pakistan 178/100000 but still it is very high as compare to Sweden 5, USA 24 and Brazil 58. UK 9, Australia 6, Singapore 10. Majority of deaths are avoidable if there had been proper planning, basic health facilities, awareness, education, emotional support and ANC was provided. Govt. of Pakistan provides ANA through basic health units, rural health centers and tertiary care hospitals. The study was conducted in order to assess knowledge, attitude and practice among pregnant women attending antenatal clinic at Nishtar Hospital Multan.

## METHODOLGY

It is a cross-sectional study was done to assess knowledge, attitude and practice regarding ANC among pregnant women at Nishtar Hospital Multan for a period of six months from March 2016 to august 2016. Total 130 pregnant women from age 15 to 45 years was enrolled in the study after taking informed consent. Ethical approval was taken from Ethical Review Committee of Nishtar Medical College and Hospital Multan. Candidates were selected through non probability random sampling technique. Informed consent was taken from all the respondents. The data was collected in the form questionnaire from all the candidates. Statistical analysis was performed using SPSS version 18.0.

**Table 1: Distribution of 130 candidates among different age groups.**

Age group (years)	n	%
15-25	68	52.3%
26-35	44	33.8%
36-45	23	17.6%

**Table 2: No. of pregnancy among No. of candidates.**

Pregnancy	Among candidates
First	54
Second	30
Third	22
Fourth or more	24

**Table 3: Occupation of candidates.**

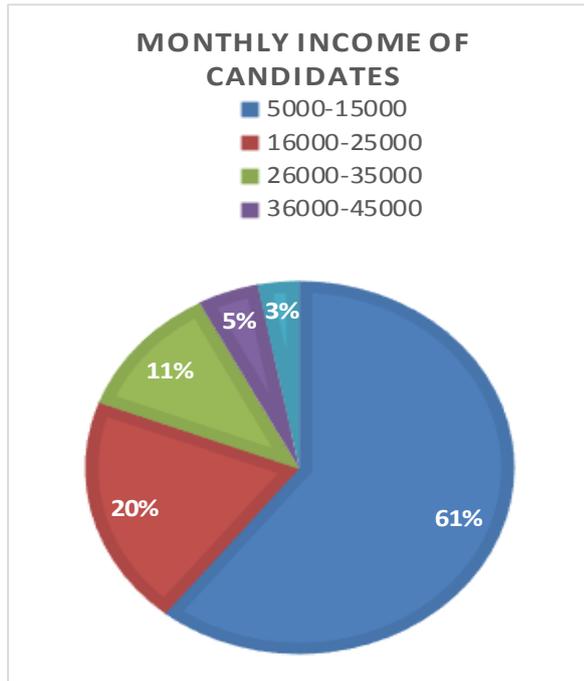
House wife	72
Working	58

**Table 4: Candidates belongs to area.**

Rural areas	38 (29.2%)
Urban areas	92 (70.8%)

**Table 5: Level of education among selected pregnant women.**

Education level	Among No. of respondents
Illiterate	28
Primary education	35
Middle	15
High school	18
Intermediate	25
Graduation/ Post-graduation/ Ph.D.	9



**QUESTIONNAIRE**

To access the knowledge of pregnant women.

**Note:** Each right answer to a question carry one mark. If a person answered 75% right answer, she is having good knowledge about antenatal care. Value in the brackets showing no of candidates, choose that answer.

- Is antenatal care essential for a pregnant woman?  
Yes (125)  
No (0)  
Don't know (5)
- Is it necessary to do atleast 4 visits to antenatal clinic?  
Yes (106)  
No (24)
- Is it necessary for a pregnant woman to undergo screening for hepatitis B, C, HIV, syphilis?  
Yes (55)  
No (15)  
Don't know (70)

- Do you know about any of the alarming signs during pregnancy?  
Vaginal bleeding (122)  
Hypertension (49)  
Severe vomiting/nausea (79)  
Severe abdominal bleeding (105)  
Toxemia (5)  
Convulsion/fits (25)  
Visual disturbance (5)  
No movement by baby (45)  
Know about all signs (5)  
Don't know anything (8)
- Hospital is better place for delivery?  
Yes (108) No (22)
- Does husband and family are supportive?  
Yes (98) No (32)
- Why antenatal care is necessary?  
To know about the condition of baby (10)  
To know about the health of mother (12)  
Both (102)  
Don't know (6)
- Is smoking/alcohol harmful for pregnancy?  
Yes (130) No (0)
- Do you know about T.T injection?  
Yes (30) No (100)
- Weight measurement is necessary during pregnancy?  
Yes (21)  
No (67)  
Don't know (42)
- Is supplementation of folic acid and iron necessary during pregnancy?  
Yes (57)  
No (20)  
Don't know (53)

To access Attitude among pregnant women

- First visit to antenatal clinic should be done in first trimester of pregnancy.  
Agree (69) Neutral (30) Disagree (31)
- Antenatal checkup is essential for pregnant women.  
Agree (125) Neutral (3) Disagree (2)
- Atleast 4 visits are must  
Agree (43) Neutral (27) Disagree (58)
- Screening of infection should be carried out at antenatal checkup.  
Agree (48) Neutral (67) Disagree (15)
- Blood pressure should be regularly monitored.  
Agree (60) Neutral (50) Disagree (20)

6. Dietary habits should be changed as advised by doctor.  
Agree (80)      Neutral (21)      Disagree (29)
7. Home delivery is better than hospital delivery for childbirth.  
Agree (7)      Neutral (6)      Disagree (117)
8. Iron and folic acid supplement is must for pregnant women during pregnancy.  
Agree (23)      Neutral (77)      Disagree (30)
9. Antenatal follow up is good for mother and child health.  
Agree (125)      Neutral (3)      Disagree (2)

To access Practice among pregnant women

1. At what duration of pregnancy you did first visit at antenatal clinic.  
In first trimester (37)  
In second trimester (54)  
In third trimester (39)
2. Are you regular in your antenatal care visit schedule?  
Yes (49)  
No (81)
3. No. of antenatal visits did you make?  
One (130)  
Two (55)  
Three (34)  
Four (30)  
Five and above (24)
4. Are to taking folic acid and iron as prescribed by your doctor?  
Yes (96)  
No (34)
5. Do you take proper rest as advised by your attending doctor?  
Yes (72)  
No (58)
6. Did you made changes in diet plan as advised?  
Yes (31)  
No (99)

## RESULTS

Total 130 candidates were enrolled in the study. 68 (52.3%) of the total patients from age group 15-25, 33% (44) from 26-35 years age group and remaining 17.6% (23) were from age group 36-45 years. 72 respondents were housewife, 58 were working in different in professions e.g. teaching, office, agriculture and labor. 70% respondents (candidates) were from urban areas and 29% from rural areas. Among selected candidates 58 were illiterate, 35 had got primary education, 15 upto middle class, 18 upto high school education, 25 passed

intermediate and 9 had done graduation. Majority of the candidates were having monthly income less than 15000 PKR. Results of questionnaire showed that 125/130 women said that antenatal care is essential for them remaining 5 were not having any knowledge about antenatal care, they presented for the first time and were not sure about the advantages of antenatal care. 104 respondent were in favor of atleast 4 visits are necessary throughout pregnancy even if there no medical illness or complication. Only 55/130 candidates were having knowledge regarding screening for infectious disease and most of them were multigravida having previous experience of antenatal care or educated women. 122 candidate said that vaginal bleeding during pregnancy is an alarming sign, 105 pregnant women said that severe abdominal pain is a sign of danger, mostly women with first pregnancy did not know about remaining alarming sign during pregnancy. 108 respondents said that hospital is better place for delivery. 98 women were having positive response and support regarding antenatal care from husband or family. All the respondents were against smoking and alcohol consumption during pregnancy. The reason about alcohol drinking was not health of child and mother but drinking alcohol is prohibited in Islam. About 100 pregnant ladies were having no information regarding inj. Tetanus Toxoid. Only 57 candidates knew about iron and folic acid supplements importance but percentage of patients that were taking IFA was high. They were taking iron and folic acid just because there doctor has prescribed them.

During assessment of attitude regarding antenatal care among pregnant women, almost all women showed positive response except 2 candidates because they had bad experience in current visit. 60 candidates agreed that Blood Pressure monitoring is essential during pregnancy but very less percentage of women do this practice. 80 pregnant women showed positive response regarding dietary modification but only 31 practically followed prescribed diet plan. Result calculated from the questionnaire showed that approximately 65-70% (84.6 +/- 5.54) pregnant women were having Knowledge about Antenatal Care. Approximately 59% (76.7 +/-3.4) respondents showed positive response regarding antenatal care, 22% showed negative and remaining 19% were neutral. The frequency of practice regarding antenatal care dropped to 47% only.

## DISCUSSION

It was observed in this study that overall knowledge regarding antenatal care among pregnant women was adequate. Almost everyone was in favor of antenatal care but many women did not know about screening of infectious disease, injection tetanus toxoid, folic acid importance and alarming signs of pregnancy. WHO recommended iron and folic acid supplementation to reduce the risk of pregnancy among pregnant women.<sup>[17]</sup> Research done in the past have showed that folic acid supplements during pregnancy can reduce the risk of neural tube defects in fetus.<sup>[18]</sup> A study conducted in

Islamabad showed that tetanus toxoid coverage was high among women utilizes ANC comparing to those did not.<sup>[19]</sup> Giving information regarding alarming signs can reduce the mortality ratio among pregnant women.<sup>[20]</sup> Respondents from urban areas have more knowledge than from rural areas. The family and husband of women from urban area were more supportive as compared to rural areas. The findings of this study indicated that the factors affecting utilization of ANC services were education, residence place, age at first pregnancy, gravidity, parity, occurrence of pregnancy without planning, and number of live children. Utilization ratios are high in educated women in Pakistan and other part of the world.<sup>[21,22]</sup> Many studies have shown association of occupation and distance with antenatal care utilization.<sup>[23,24]</sup> Therefore government should provide ANC services in village in other to increase awareness among community that will ultimately reduce maternal mortality. The findings of the study indicate that the factors affecting significantly number of visits, were mother's education, residence place, and husband work and health problems during pregnancy. About 90% were satisfied from the ANC receiving from our tertiary care antenatal clinic. In this study we have seen antenatal care provided in our hospital is mostly availed by middle class community. Family with strong financial status usually consult from private setup. The results of Attitude and Practice regarding antenatal care was more positive in women with good socioeconomic status and supportive family. Most of the women who were regularly attending antenatal clinic preferred hospital delivery. Government of Pakistan providing antenatal care at tertiary hospital and rural health center, but later is deprived of specialized professional. Limitation of our study is that it was conducted at tertiary care center, and people of rural areas does not have access due to long distance. Due to continued bad experiences, disparities and negligence of the rural areas the rural tribal community has developed negative attitudes to routine ANC in government. There is a need to motivate women to utilize maternal care services which are freely available in all the government health setups. Awareness should be developed in the community about the importance of registration for ANC, educating women about the detection of complications during pregnancy, importance of T.T injection, IFA tablet, extra nutrition, etc. Antenatal Care is an opportunity to promote the benefits of skilled attendance at birth and to encourage women to seek postpartum care for themselves and their newborn. It is also an ideal time to counsel women about the benefits of child spacing.

## CONCLUSION

Family and Community support can make antenatal care more flourish and in return will help to decrease mortality rate. The awareness regarding the importance of antenatal care is the need of this era. The antenatal checkup are helpful to mothers as well as to the fetus. Knowledge and Attitude regarding ANC was found to be satisfactory in the study. But a further knowledge would

improve the standards of the antenatal visits. The practices of ANC were not upto benchmark. To improve community awareness on ANC, information, education and communication activities should be increased on ANC through community campaign and mass media like local television channel, radio and local newspapers. There is also the need to encourage women to involve their male partners in birth spacing programs. Utilization of antenatal care can reduce pregnancy related complications and maternal mortality rate.

## SUGGESTION

- Family and community involvement can improve response to antenatal care
- Government should provide better health and antenatal care facilities in rural areas.
- Door to door awareness programs should be initiated.
- Family planning should be properly addressed to illiterate people.
- Awareness regarding alarming sign should be provided through TV ads, social media awareness campaigns, radio and sign boards.
- Discourage early marriages.
- Make transport system easy, so that women from rural areas could easily reach.

## ACKNOWLEDGEMENT

We are thankful to all the respondents for consent and support. We are thankful to our teachers for their guidance and help.

## CONFLICT OF INTEREST

None declared.

## REFERENCES

1. Kishk N, "Knowledge, Attitude & Practices of Women towards Antenatal care Rural-Urban Comparison", J Egypt Public Health Association, 2002.
2. Patel B.Barun, Gurmeet Prenaya, Sinalkar R. Dattreya, Pandya H Kapil, Singh Neha and A Mahen, "Knowledge & Practices of Antenatal care among Pregnant women attending Antenatal clinic at a Tertiary care Hospital of Pune, Maharashtra", 2016.
3. Agarwal P, Singh MM, Garg S. "Maternal health-care utilization among women in an urban slum in Delhi". Indian J Community Med, 2007.
4. Waiswa P, Kallander K, Peterson S, Tomson G, Pariyo GW: Using the three delays model to understand why new-born babies die in eastern Uganda. *Tropical Med Int Health*, 2010; 15(8): 962-72.
5. Central Bureau of Statistics. Nepal Census Report Demography. Kathmandu: Central Bureau of Statistics, WHO, 2001.

6. World Bank. Safe Motherhood — A Review. The Safe Motherhood Initiatives, 1987-2005 World Bank Report. New York: Family Care International, 2007.
7. United Nations. The Millennium Development Goals Report 2011. New York: United Nations, 2011.
8. G. Carroli, C. Rooney, J. Villar, How effectiveness is antenatal care in preventing maternal mortality and serious morbidity? An overview of the evidence Paediatric and Perinatal, *Epidemiology*, 2001; 15(1): 1-42.
9. T. Dragonas, G.N. Christodoulou, Prenatal care, *Clinical Psychology Review*, 1998; 18(2): 127-142.
10. Gupta P&Ghai O. Textbook of Preventive and social medicine. Second edition, Nodia India, Diamond agencies, 2007; 1-836.
11. Maternal Death. The Avoidable Crisis. Available at <http://www.msf.org.za/publication/maternal-death-avoidable-crisis-0> Accessed on March, 2012.
12. G.L. Wehby, J.C. Murray, E.E. Castilla, J.S. Lopez-Camelo, R.L. Ohsfeldt, Prenatal care effectiveness and utilization in Brazil, *Health Policy and Planning*, 2009; 24(3): 175-188.
13. [Z.M. Matthews, S. Kilaru, A. Ganapathy, Antenatal care, care-seeking and morbidity in rural Karnataka, India: results of a prospective study, *Asia-Pacific Population Journal*, 2001; 16(2): 11-26.
14. Barbhuiya MA, Hossain S, Hakim MM, Rahman SM. Prevalence of home deliveries and antenatal care coverage in some selected villages. Bangladesh Med Res Counc Bull, 2001; 27: 19-22.
15. M. Matsumura, Women's status, household structure and the utilisation of maternal health services in Nepal, *Asia-Pacific Population Journal*, 2001; 1(16): 23-44.
16. N. Taguchi, M. Kawabata, M. Maekawa, T. Maruo, Aditiawarman, L. Dewata, Influence of socio-economic background and antenatal care programmes on maternal mortality in Surabaya, Indonesia, *Tropical Medicine & International Health*, 2003; 8(9): 847-852.
17. 79. Kawai K, Spiegelman D, Shankar A, Fawzi W. Maternal multiple micronutrient supplementation and pregnancy outcomes in developing countries: meta-analysis and meta-regression: Bulletin of the World Health Organization, 2011; 89(6): 402-411.
18. Wehby G& Murray J: Folic Acid and Orofacial Clefts: A Review of the Evidence, *Journal of oral disease*, 16(1): 1-118.
19. Eric, B. "Barriers to utilization of prenatal care services in Turkey. *Journal of NursScholarsh*, 2003; 35(3): 269.
20. Maternal and Child Health. Available at <http://www.measuredhs.com/pubs/pdf/FR139/08Chapter08.pdf> -Accessed on April, 2010.
21. Rashad W& Essa R: Women's Awareness of Danger Signs of Obstetrics Complications: *Journal of American Science*, 2010; 6(10): 1299-1306.
22. Hailu M, Gebremariam A, Alemseged F: Knowledge about obstetric danger signs among pregnant women in AletaWoundo District, Sidama Zone, Southern Ethiopia, *Ethiop Journal Health Sciences*, 2010; 20(1): 25-32.
23. Erlindawati, ChompikulJ, Isaranurug S. Factors Related to the Utilization of Antenatal Care Services Among Pregnant Women at Health Centers In Aceh Besar District, Nanggroe Aceh Darussalam Province, Indonesia. *Journal of Public Health and Development*, 2008; 6(2): 99-108.
24. Bloom SS, Lippeveld T, Wypiz D, Health policy plan, Mar; 14:(=)38-48.Does antenatal care make a difference to safe delivery. A study in Urban Uttar Pradesh, India, 1999.