

# Assessment of knowledge about Essential Obstetric Care among Pregnant Females of Punjab, Pakistan

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## ABSTRACT

**Purpose:** The first step towards achieving the goals of the Child Health and Reproductive Health Program is to raise awareness and educate pregnant women about the essential features of basic and emergency maternity and neonatal care.

**Aims:** To assess the level of knowledge on essential antenatal care among pregnant females.

**Study Design:** A cross-sectional study.

**Place and Duration:** The study was conducted at Gynaecology and Obstetrics department of Sheikh Zayed Hospital, Rahim Yar Khan and Shahida Islam Teaching Hospital, Lodhran for the duration of six months from 16<sup>th</sup> August 2020 to 15<sup>th</sup> February 2021.

**Methods:** This study was held among 110 pregnant women who arrived based on information on antenatal care in the literature. Participants were selected by simple random sampling, and data on "essential obstetrics care" information was collected through a structured interview program based on the mother-Child Protection Charter.

**Results:** This study shows that 46.4% of participants have sufficient knowledge of the signs / symptoms of the dangers of pregnancy, 44.5% have sufficient knowledge of antenatal care and only 9.1% have sufficient knowledge of maternity care. It was found that knowledge of obstetric care is significantly related to the education level of pregnant women.

**Conclusions:** The knowledge gap found in this study indicates the need to reassess the effectiveness of health education activities implemented through the health system and improve / renew the content and quality of health education materials in order to raise awareness among pregnant women.

**Keywords:** Antenatal care, MCP card, Obstetrics care, Primary health care.

## INTRODUCTION

The health of a country is directly proportional to the health of women, especially those of childbearing age<sup>1</sup>. Therefore, much attention has been paid to the health of mothers and babies (MCH) around the world, and Pakistan is no exception. Maternal and child health care, including family planning services, is one of the eight components of primary care provided in Pakistan. Reproductive and Child Health programs were launched in 1997-98 which was the primary obstetrics care<sup>2-3</sup>. It includes Basic obstetrics care for all pregnant women; 1. Registration of early pregnancy, 2. Provision of at least three antenatal tests by ANM / Doctor, 3. Provision of safe home or facility birth 4. Provision of three postnatal follow-ups<sup>4-5</sup>. The integration of antenatal care programs has contributed to the widening of the scope of their services, and this has contributed to a significant reduction in maternal and infant mortality in the country<sup>6</sup>. As part of the effective implementation of elements of antenatal services, a common card "Mother and Child Protection" (MCP) was developed as a tool with a graphic presentation of demographic characteristics, information about the mother and the child which encompassed Antenatal, antenatal and postpartum hemorrhage, maintenance details and practices<sup>7-8</sup>. The MCP helps families learn, understand, and apply practices to achieve good health in pregnant women, young mothers,

and children. The card also serves as a powerful tool for monitoring and providing preventive and curative maternal and child health services<sup>9-10</sup>. The MCP is used nationwide and is easy to understand by both mothers and healthcare professionals, thanks to the visual recording of mother and baby details. Appropriate obstetric knowledge of antenatal women will be reflected in their knowledge and understanding of the information obtained from the MCP card<sup>11</sup>. On this basis, a study was planned and carried out to assess the level of knowledge of pregnant women about "basic obstetric care".

## METHODS

It is a descriptive, cross-sectional population study conducted to assess the level of knowledge about the 'basic obstetric care' of pregnant females. The sample size was calculated using the formula  $[4 PQ / L2]$  which came to be 91.9, at 95% level with 20% limit of accuracy. The final sample size was calculated taking into account 10% non-response and rounded to 110 pregnant women. The list of antenatal women was obtained from the records, and 110 pregnant women were selected by simple randomization.

Data collection was done through home-to-home visits using a structured questionnaire containing background information and knowledge of basic maternity care developed for the MCP card. Basic knowledge of

obstetric care was assessed in three elements: 1. Knowledge of Antenatal care, 2. Signs of risks in pregnancy, 3. Obstetric care. For each of the items, the correct answer to the question was scored "1", and the remaining answers were scored "0". The maximum score that can be obtained at the end of the interview is "9" and a score above 50% is considered sufficient information. Data were analyzed using SPSS version 17. The student's t-test was used to assess statistical significance between the mean scores and antenatal care information. The study was conducted after obtaining the approval of the Ethical Committee. Informed consent was obtained prior to data collection.

## RESULTS

Information on antenatal care is provided in Table 1. It was observed that 66.3% of participants had correct information on the timing of antenatal registration, but 60% did not know the required minimum antenatal checks. In addition, 56.3% of the women knew that blood pressure should be measured at each visit, while 32.7% of the participants were unaware of the minimum number of iron and folic acid tablets to take during pregnancy. The knowledge of the correct dose of anti-tetanus injection was good [80.9%], but the knowledge of emergency preparations was insufficient as 59.1% of the participants were unaware of this.

Table 1: Information concerning antenatal care.

Frequency	Characteristic [n=110]	Percentage
<b>Timing of antenatal registration</b>		
Correct (1st trimester)	73	66.3
Wrong	23	22.7
Do not know	12	10.9
<b>Minimum number of antenatal check ups</b>		
Correct (4 times)	41	37.2
Wrong	66	60
Do not know	3	2.7
<b>Number of times BP should be measured during pregnancy</b>		
Correct (during every visit)	62	56.3
Wrong	42	38.1
Do not know	6	5.4
<b>Minimum number of IFA tablets to be taken during pregnancy</b>		
Correct (100 tablets)	49	44.5
Wrong	36	32.7
Do not know	25	22.7
<b>Number of TT injections to be given during pregnancy</b>		
Correct (2 injections)	89	80.9
Wrong	13	11.8
Do not know	8	7.2
<b>Preparation for emergency labour*</b>		
Do not know	65	59.1
Save money	32	29.1
Arrange for transport	51	46.3

Table 2 provides information on the signs and symptoms of the risk of pregnancy. It was observed that 45% of the participants responded to abdominal pain as an important sign of danger of pregnancy, followed by 34.5% of vaginal bleeding. No pallor case was reported. About 26.4% were unaware of any dangerous signs of pregnancy. Information on maternity care is provided in

Table 3. This study shows that 71.8% of respondents were not aware of the "five cleans standards" of home / institutional birth and 83.6% were unaware of the importance of the family planning symbol, the Red Inverted Triangle.

Table 2: Information regarding danger signs and symptoms of pregnancy.

Characteristic	Frequency [n=110]	Percentage
Do not know	29	26.4
Bleeding per vagina	38	34.5
Fever	11	10
Pedal Oedema	16	14.5
Convulsions/Unconsciousness	27	24.5
Pain Abdomen	58	52.7
Bursting of bag (Rupture of membrane)	9	8.2

Table 3: Information regarding obstetric care.

Characteristic	Frequency [n=110]	Percentage
<b>Five Cleans of home / institution delivery*</b>		
Do not Know	79	71.8
Clean Hands	12	11
Clean Surface	16	14.5
Clean Blade	11	10
Clean Umbilical	23	20.9
Cord/Cord tie		
Clean Clothes	2	1.8
<b>Meaning of family planning symbol [inverted red triangle] when shown</b>		
Knows	18	16.4
Do not know	92	83.6

The relationship between average outcomes and basic characteristics such as education level, family type and reading ability is shown in Table 4.

Table 4: Relationship amid knowledge scores and background features.

Characteristic	Number [n = 110]	Mean Score	t' value	P value
<b>Educational Status</b>				
	79			
>10 <sup>th</sup> standard	23	45.12		
<b>Ability to read Urdu</b>				
Read Urdu	89		2.20	0.021*
Can't read Urdu	21	35.22		
		26.14		
<b>Type of family</b>				
Nuclear	53	30.85	1.7	0.042*
Joint	57	36.22		

This study shows that 46.4% of participants have sufficient knowledge of the signs / symptoms of the dangers of pregnancy, 44.5% have sufficient knowledge of antenatal care and only 9.1% have sufficient knowledge of maternity care.

## DISCUSSION

Adequate knowledge of antenatal and maternity care for pregnant women is a preliminary step to achieving the goals of the antenatal program. While the mean age of the

study participants was 25.10W years, the J. Laishram study found that the mean age of the participants was 29.5. About 58% were high school graduates and 89% could read and write Urdu. In this study, 46.4% of participants had sufficient knowledge of antenatal care, while the Manju Sharma study shows that 51.2% of participants had sufficient knowledge<sup>10-11</sup>. While approximately 44.5% of participants knew the number of iron and folic acid tablets to take during pregnancy, 80.9% correctly answered the number of tetanus toxoid injections to be administered. J. Laishram showed that 34.2% of participants knew the correct number of iron and folic acid tablets, similar to the results of this study<sup>12</sup>. Approximately 59.1% of the respondents indicated that they are not aware or have no prior plans or preparations for an emergency work situation. About 66.3% of the respondents knew the time of antenatal registration, but only 37.2% knew the minimum number of antenatal visits. A maternal healthcare utilization study in the Kancheepuram region found that 96.6% of antenatal mothers had the required minimum antenatal visits, and about 99% of births were in an institution<sup>13-14</sup>. More than 90% have been vaccinated with tetanus toxoid while consuming 100 or more IFA tablets. In this study, 52.7% of participants said abdominal pain was a dangerous sign of pregnancy, and 34.5% said it was vaginal bleeding as danger sign. Kapil Gyawali reported that 42.2% of participants felt abdominal pain as an important sign of the danger of the upcoming delivery<sup>15-16</sup>. Overall, 46.4% had adequate knowledge of the dangers of pregnancy signs and symptoms. Only 9.1% of the participants in this study had sufficient knowledge of the proper elements of maternity care. Almost 71.8% of pregnant women are unaware of the importance of "five clean elements" being given at home or in an institution for the prevention of neonatal infections, which is a cause for concern. Studies from Nepal, Pakistan and Nigeria have found that infections are responsible for up to 40% of newborn deaths, mainly due to insufficient knowledge of clean birth practices<sup>17-18</sup>. The analysis of the relationship between the level of knowledge and the characteristics of the predecessors showed that the mother's education played an important role in her knowledge about antenatal care. People from united families obtained better results than nuclear families. The Laishram and Manna studies also showed similar statistically significant results. This study showed that there is a significant relationship between education level and family type in terms of improving the target group's knowledge of antenatal care<sup>17-18</sup>. However, this study shows that there is a large gap between the literacy rate and the level of knowledge about antenatal / delivery care. The study of Tara M.S. revealed that only less than 70% of health professionals are knowledgeable to provide health education to antenatal mothers. According to a recent article, antenatal care in Pakistan is around 50% for multiple visits and around 10% for more than four visits, while the availability of trained personnel at delivery is only around 20%<sup>19-20</sup>. This strongly indicates that the coverage of antenatal care in Pakistan needs to be significantly increased. While antenatal services show better health rates thanks to a better-established health system, the target population's level of

knowledge of the services provided needs to be improved in order to better use the services provided<sup>21-22</sup>.

## CONCLUSION

The study provided sufficient information on gaps in the education of target groups based on antenatal care programs. The conducted research shows that the content and quality of health education materials related to health services for mothers and children, especially with basic maternity care and provided with MCP cards, do not reach the target group sufficiently. As mothers' level of education plays a key role in understanding and developing their knowledge, it is imperative that all would-be mothers have better educational opportunities to achieve an acceptable level of education that helps fill the knowledge gap. This would significantly contribute to reducing maternal and infant morbidity and mortality in the country.

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