

# Ultrasound Scanning and Prenatal Diagnosis: Its Knowledge and Cognisance in Pregnant Women of Islamabad

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## Author Contribution

<sup>1</sup>Conceived the idea, conceptualized the study design, article writing,

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## ABSTRACT

**Objective:** Prenatal care is exclusively associated with prenatal screening and ultrasound scan in this present era. The objective of this study was to precisely define the knowledge and awareness of pregnant females of Islamabad regarding ultrasound scan and prenatal diagnosis.

**Place and Duration:** The study was conducted in antenatal clinics private setup) from February 2016 to October 2016.

**Methodology:** It was a private practice based cross sectional study. Two hundred women, attending the antenatal clinics of Islamabad Capital Territory Pakistan, were asked to fill in a pre-tested structured questionnaire. Numerous variables of concern were compiled. Statistical analysis was done using SPSS 16.

**Results:** Our results showed that 90% of the women were aware about the importance of ultrasound investigation in pregnancy. Majority of the women thought that it should be performed at least twice during pregnancy but were not certain about the exact timing of the test. Most of them knew that it was to check the growth of the baby and majority of them considered ultrasound to be safe. Still, only 22% of women had any knowledge about Down's syndrome or its screening.

**Conclusion:** Pregnant females in our society are aware of the importance of ultrasound examination during pregnancy. However, there is a need to improve public awareness of problems like Down's syndrome and other complications.

**Keywords:** Ultrasound, Antenatal care, Down's syndrome

## Introduction

The use of ultrasound in obstetrics is very important.<sup>1,2</sup> With the help of ultrasound, we are able to diagnose many diseases even in the first trimester of the pregnancy. Down's syndrome is one of the examples of the above. The structural abnormalities can be best determined with the help of scan in 2<sup>nd</sup> trimester.<sup>3</sup> Although, there is a debate regarding its cost<sup>4</sup>, researchers have proved its cost effectiveness in medical field.<sup>5</sup> Ultrasound plays an important role; not only in the diagnostic field but it also improves the maternal attachment.<sup>6-8</sup> In our society, some of the couples attribute the role of ultrasound as a marker of gender determination.<sup>7-9</sup> In Pakistan, a number of

deliveries are done at home and antenatal care knowledge amongst the common people is nearly zero. Social and cultural environment, religious thoughts and literacy rate are among the leading factors. In Pakistan, there are some hospitals and institutions which offer free ultrasound scan both in the first trimester of the pregnancy and another scan at 18-23 weeks. It is observed that almost 50% of women going to antenatal clinics go through both these scans and the rest of the others register themselves after the first trimester

The purpose of this study was to see the knowledge and cognisance of ultrasound among the pregnant women

attending antenatal clinics and private hospitals in Islamabad capital territory of Pakistan.

## Methodology

It was a private practice based cross sectional study. Two hundred women, attending the antenatal clinics of Islamabad Capital Territory, Pakistan were asked to fill in a pre-tested structured questionnaire. Numerous variables of concern were compiled.

All information regarding the patient's background knowledge, ultrasound indication, time of ultrasound during pregnancy etc were mentioned. Trained doctors interviewed 200 pregnant females who came to antenatal clinics for checkup, from various areas of the Islamabad-Pakistan. Results were analyzed using SPSS version 16. Numerous variables of concern were compiled.

## Results

Our results showed that 90% of the women were aware about the importance of ultrasound investigation in pregnancy. In the study, mean age (years) of female patients was  $29.28 \pm 5.62$ . Majority of the women thought that it should be performed at least twice during pregnancy but were not certain about the exact timing of the test. Most of them knew that it was to check the growth of the baby and majority of them considered ultrasound to be safe. Still, only 22% of women had any knowledge about Down's syndrome or its screening. Table I shows these results.

**Table I: Patient's knowledge of ultrasound scan during conception**

Query	Reply	% response of the patients
Importance of ultrasound in pregnancy	No information	6% (n=10)
	Yes	90% (n=180)
	No	6% (n=10)
Frequency of ultrasound	Once during conception	
	Twice during conception	
	After every 3 months	
	No information	
Knowledge of Down's syndrome	Yes	22% (n=44)
	No	78% (n=156)
Knowledge of major abnormalities during conception	Yes	70% (n=140)
	No	30% (n=60)

By using chi-square test, there was statistically a significance association (p-value 0.006) between patient's knowledge of ultrasound scan during conception with ultrasound purpose. Our results also showed that most of the women had the knowledge that the principal aim of ultrasound scan is to monitor growth of the fetus. Half of the study subjects knew that the purpose of the ultrasound scan is to pre-diagnose the congenital diseases. The study also revealed that majority (82%) of the females got this information through their personalized experience whereas 10% acquired the information from their friends and families. Rest of the subjects (8%) got this information from their obstetrician. These results are shown in table II.

**Table II: Patient's knowledge about ultrasound purpose**

Query	Reply	% response of the subjects
Purpose of ultrasound is to monitor fetal growth	Yes	88% (n=176)
	No	8% (n=16)
	No information	4% (n=8)
Purpose of ultrasound is to congenital abnormalities	Yes	50% (n=100)
	No	25% (n=50)
	No information	25% (n=50)
Source of all information	Personal experience	82% (n=164)
	Friends & families	10% (20)
	Own obstetrician	8% (n=16)

## Discussion

Ultrasound scan is supposed to be an integral part of the antenatal care. Particularly, the scan at 18-23 weeks has many advantages.<sup>1</sup> Clinician's experience proved the effectiveness of ultrasound during pregnancy. Although some of the researchers<sup>4</sup> do not believe its efficacy, yet others are in favor of its effectiveness during 2<sup>nd</sup> trimester for the diagnosis of any congenital abnormality.<sup>5</sup> In our society, majority of conceived women are unaware about the usefulness of ultrasound scan during pregnancy for the diagnosis of congenital disorder.<sup>10,12</sup> Some of the researchers reported that 80% of females knew about the importance of ultrasound scan during pregnancy.<sup>13</sup> Our study showed that 88% women knew that the scan is useful to monitor fetal growth which is in accordance with some other studies.<sup>12,13</sup>

The results of our study shown that not only personal experience contributed towards the knowledge of pregnant women about ultrasound scan but friend and families also contributed towards the information. The knowledge of Down's syndrome is less in our society which is opposite to some other reports.<sup>14,15</sup>

## Conclusion

Our study has some limitations but it provides great information about the knowledge of pregnant females regarding the importance of ultrasound during pregnancy. Down's syndrome knowledge is limited but it can be increased with counseling etc.

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