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Awareness of ultrasonography among antenatal mothers attending the tertiary care hospital in Bundelkhand region of UP

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ABSTRACT

Background: Ultrasound examination during pregnancy has become an integral part of antenatal care throughout the world. This technology is an important tool for the obstetricians, to reassure their patients regarding the well-being of their fetus in utero. The objective of this study was to assess the awareness of USG among pregnant women.

Methods: This cross-sectional study was carried out among pregnant women attending the ANC clinic of Obstetric department of MLB Medical College Hospital, Jhansi, UP from March to May 2018. The study included 300 pregnant women and data was collected by using pre tested questionnaire.

Results: The study reveals that 51.3% of participants were in the age group of 20-25 yr and 50% of them belong to upper lower class, most of them unskilled (83.4%), 63.3% of participants depicted that USG is done only to confirm the pregnancy and 81% of women considered that it is beneficial during pregnancy and 65% was known that USG can be used to determine sex of the foetus.

Conclusions: Awareness regarding the uses of ultrasonography during pregnancy was found to be average. There is need to create more awareness in community about the USG uses and PCPNDT act and its provisions. There is need of creating more awareness about the safety, utility and frequency of USG during antenatal period to avoid misuse.

Keywords: Antenatal mother, USG, Awareness, UP, Tertiary care hospital

INTRODUCTION

Ultrasound is non-invasive, safe and less expensive with real time imaging capabilities and it gives parents the image of the fetus. Globally there has been increased medicalization of pregnancy due to advances in technology. Ultrasonography examination during pregnancy has become an integral part of antenatal care throughout the world with advanced health care services. There is a role of ultrasound in reducing infant mortality rate by early detections of fetal anomalies like cardiac anomalies, neural tube defect and various other developmental effects, complication of pregnancy, detect high risk pregnancy, presentation of fetus, various

syndrome related to genetic abnormalities like down syndrome.² This technology is an important tool for the obstetricians, to reassure their patients regarding the wellbeing of their fetus in utero. For a pregnant mother, ultrasound is a source of connecting with her baby and there is a belief that it initiates bonding with the baby.³ For many expectant parents in India, ultrasound is only a tool for sex determination. In spite of media coverage, the knowledge regarding PNDT act among antenatal women in studies from Rajasthan and Mumbai, India were found to be only 52.4% and 34.3% of their study population. With the wide availability of ultrasound, the expectation of the general public towards ultrasound has dramatically increased but the actual knowledge regarding its use and

its limitations are lacking in them. 4,5 WHO TRS 875 (1998) supports that ultrasound is harmless: "Diagnostic ultrasound is recognized as a safe, effective, and highly flexible imaging modality capable of providing clinically relevant information about most parts of the body in a rapid and cost-effective fashion". Presently the decline in national child sex ratio has been often criticism for the use of modern technologies in Indian setup. Majority of women in developed countries no longer have fears regarding the safety of ultrasound and go for it uncritically. The paucity of literature in a developing nation like India, where the literature levels of women are modest and prenatal sex determination is banned warrants attention. The society, culture and the way of life in which pregnant women reside affect and influence their awareness, opinion and expectations from the antenatal scan. WHO TRS 875 (1998) supports that ultrasound is harmless: "Diagnostic ultrasound is recognized as a safe, effective, and highly flexible imaging modality capable of providing clinically relevant information about most parts of the body in a rapid and cost-effective fashion". Hence the present study has been planned in pregnant women to know their awareness, attitude regarding ultrasonography in pregnant women attending to Medical College Hospital of Jhansi, Utter Pradesh, India.

METHODS

The present Cross-Sectional study was conducted at Medical College Hospital of MLB Medical College, Jhansi, Utter Pradesh, India. The study population was the pregnant women attending to the ANC clinic of Obstetric department for routine checkup. After getting ethical approval and explaining them about the study, 300 pregnant women were participated in the study. The study subjects were selected randomly and explained the purpose of the study and assured confidentiality. Those willing were only included in the study after obtaining the informed consent. Those pregnant women with acute pain in abdomen or unwilling to participate were excluded from study. The data has been collected during the period of March to May 2018. The pre-tested questionnaire was used to collect the data from all participants. The detailed information was collected about socio-demographic profile, obstetric history and questions related to the awareness, attitude, expectations and experiences regarding ultrasonography during pregnancy. The data was collected and entered in Microsoft excel sheet and analysed in SPSS 19.0 version.

RESULTS

The present study was carried out among 300 pregnant women attending ANC clinic of Obs and Gynae department of MLB Medical College Hospital, Jhansi, UP. The demographic distribution of the participants (Table 1) shows that most of pregnant women 51.3% belong to 20-25 years age group, 33.3%% from 20-25 years, 14.6% above 30 years. 58.7%% of the participants were literate out of which 30% had primary education, 9% were graduate, Among all the participants majority

86.6% were unskilled, 12.3% semiskilled work, 1% engaged in skilled work. Majority of the participants belong to upper lower class while 41.3% were from lower social class as per modified Kuppuswami scale for socioeconomic status. 43.3% of the participants were primigravida and 56.6% multigravida.

Table 1: Distribution of socio demographic variables.

S. No.	Socio-demographic variable	Number	Percentage (%)
1	Age (in years)		
	<20	2	0.66
	20-25	154	51.3
	25=30	100	33.3
	>30	44	14.6
2.	Education		
	Illiterate	124	41.3
	Primary	90	30
	High School	59	18.6
	Graduate	27	9
3.	Occupation		
	Skilled	3	1
	Semiskilled	37	12.3
	Unskilled	260	86.6
4.	Socio-economic status		
	Upper middle	06	2
	Lower middle	20	6.3
	Upper lower	150	50
	Lower	124	41.3
5.	Parity		
	Primigravid	130	43.3
	Multigravid	170	56.6

Table 2: Distribution of responses about ultrasonography.

S. No.	Use of ultra sound	Yes N (%)	No N (%)
1	To confirm pregnancy	190 (63.3)	110(36.7)
2	Is it beneficial	245 (81.6)	55 (18.33)
3	USG safe procedure	190 (63.3)	110 (36.7)
4	To assess growth of the baby	230 (76.6)	70 (23.4)
5	To confirm presence of multiple pregnancy	156 (52)	144 (48)
6	To confirm well-being of the fetus	270 (90)	30 (10)
7	To find the fetal position	133 (44.4)	167 (55.6)
8	To find the expected date of delivery	50 (16.6)	250 (83.4)
9	To determine the sex of the baby	195 (65)	105 (35)
10	To determine the position of cord and placenta	53 (17.7)	247 (82.3)
11	Would you advice to other	263 (87.6)	37 (12.34)

In the present study 63.3% of participants was aware that USG is used to confirm the pregnancy and 83.4% was not aware that the USG is helpful to calculate EDD. 82.3% of participants were not aware that USG is used to find out the position of placenta. Doctors were the main source of information (87.6%) among all the participants. 53.3% of participants did not know about the law of sex determination.

Table 3: Distribution of source of information and awareness about PCPNDT.

S. No.	Source of information and awareness	No. (%)	
1	Ultrasound advised by		
	Doctor	263 (87.6)	
	Nurse	19 (6.33)	
	Husband	10 (3.33)	
	Friend	8 (2.67)	
2	Do you think sex determination is permissible by law?		
	Yes	160 (53.33)	
	No	140 (46.66)	
3	Do you know about the act		
	Yes	42 (14)	
	No	258 (86)	
4.	Do you know about punishmen	nt	
	Yes	23 (7.7)	
	No	277 (92.33)	

DISCUSSION

In present study majority of participants were age group of 20-25 yrs and 41.3% of participants were illiterate, 86.6% of participants were involved in unskilled work, majority of participants were belong to lower socioeconomic status and findings were found similar to the study carried out by Yadav. In this study, majority of participants (50%) belong to upper lower social class. More patients (44%) from upper middle social class in Yadav et al probably indicates, that owing to inflation and rising costs of commodities, some people from upper middle class can no more afford the costs incurred in private-medical sector and have to therefore seek medical services of a Government hospital. In this region lack of employment and less opportunity in farming most of the participants belong to upper lower of socioeconomic status. In this study awareness about the USG to confirm the pregnancy was 63.3% and among all the participants 81.6% were aware that it is a beneficial during pregnancy.76.6% of the participants were aware that it is done to assess the growth of baby. Study conducted by Munim was found that 82.1% participants considered that monitoring of growth is main use of USG. present study 63.3% of participants considered USG is safe procedure 94.83% responded USG is not only beneficial procedure for them but also experienced it as very safe procedure.⁹ In this study 36% of the participants considered sex determination as an indication for ultrasound during pregnancy and 26% of participants considered that sex determination is permitted by law. 10 This shows the lack of awareness regarding the components of PNDT act. A study from Rajasthan showed that the overall knowledge about PNDT act was present among 52.4% of their participants.¹¹ In present study 98% of the subjects, considered ultrasound as an essential component of antenatal care. Similar finding was found in other studies from Pakistan and Ghana in which 93.5% and 95.3% considering ultrasound as an important investigation during pregnancy.¹² In a study conducted by Ikeako et al found that 73.1% of their subjects considered ultrasound as a routine test done for every pregnant woman.¹³ Majority of participant (87.6%) got the information regarding the USG from the doctors and this finding is found similar with the study conducted by Krishnamoorthy et al.¹⁴

CONCLUSION

In present study, awareness regarding the uses of Ultrasonography during pregnancy was found to be average. There is need to create more awareness in community about the USG uses and PCPNDT act and its provisions. So that USG should not only be considered a tool to determine the sex of the foetus. There is need of creating more awareness about the safety, utility and frequency of USG during antenatal period to avoid misuse and to be used as a equipment to know the growth, malformation of the foetus.

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Institutional Ethics Committee

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