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Awareness about antenatal care services among rural pregnant women

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Abstract

A sample of 150 rural pregnant women belonging to middle and low SES groups residing in 5 villages of Parbhani district were selected by adopting purposive random sampling method. The data pertaining to the study were collected by personally interviewing the sample rural pregnant women based on open ended interview schedule. Irrespective of SES, majority of the rural pregnant women (55.33%) were found to be unaware about the delivery process and benefits of TT vaccine during pregnancy (48.66%). It is obvious from the results that irrespective of SES all the rural pregnant women were found to be aware and have preliminary information about significance of blood pressure check-ups and ultrasonography followed by assessing haemoglobin level (95.33%), urine (73.33%), blood type (62.00%), blood sugar (52.66%), HIV infection (26.66%), Hepatitis B (24.00%) and STDs (19.33%) during pregnancy. On the whole based on the SES with reference to the awareness of rural pregnant women about importance of antenatal care, significant differences were observed particularly for few aspects of it.

Keywords: Antenatal care, pregnancy, early registration, prenatal, awareness, practices

Introduction

Pregnancy is a special event in women's lives. Healthy pregnancy enhances the chances of giving birth to a healthy baby. However antenatal care (ANC) is the pivotal factor for it. Adequate antenatal care improves the chances of having a healthy pregnancy. Antenatal care refers to health education and regular medical check-ups given to pregnant women in order to make the outcome of pregnancy safer, reduce cases of maternal morbidity and mortality through early detection and treatment. ANC is also necessary to screen high risk pregnancy and high risk labor signs. (Vikaspedia). One of the most important component of antenatal care is to offer information and advice to women about pregnancy related complications and possible curative measures for early detection and management of complications. Antenatal care also play a critical role in preparing a woman and her family for birth by establishing confidence between the woman and her health care provider and by individualizing promotional health messages. Further antenatal visits may raise awareness about the need for care during delivery or give women and their families a familiarity with health facilities that enables them to seek help more efficiently during a crisis. However, uptake of these services is far from universal even in settings where they are widely available. (Chandhiok *et al.* 2006) ^[2] Evidence suggests that raising awareness of women about obstetric danger signs would improve early detection of problems and reduces the delay in deciding to seek obstetric care. (UNICEF, 2010) ^[10].

Several studies had shown that the level of awareness regarding ANC among rural pregnant women was not satisfactory. They do not have proper knowledge and awareness about the various parameters of ANC. Low education, low economic status, exclusive use of private ANC and living in poor households, self employment, becoming pregnant before 25 years of age and living in poor communities were main factors associated with risk for overall inadequate ANC use in rural areas. Therefore, interventions focussing on poor and less educated women, especially in rural areas should be prioritized. The focus need to be given on the importance of early attendance of ANC and proper utilization of available services. Financial support for economically backward poor women need to be considered to increase the overall antenatal care utilization. As inappropriate ANC increases its adverse effects such as likelihood of maternal morbidity and mortality, can be minimized if pregnant women are aware to ensure about proper ANC. (Jaiswal *et al.* 2022) ^[11]. On this background, it is felt necessary to study on awareness about Antenatal Care Services among rural pregnant women.

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Materials and Method

Total 150 rural women who are pregnant during the time of the study residing in 5 villages of Parbhani district of Marathwada region of Maharashtra State were selected to conduct this research study as the investigator was having easy approach to them. After obtaining consent from the rural pregnant women, the data pertaining to the study were collected by personally interviewing them. After obtaining consent from the rural pregnant women, at their residences based on structured and open ended interview schedule. Besides it, Kuppuswamy's socio-economic status (SES) scale revised by Dr. Sheikh Mohd. Saleem (2018) was administered on them for assessing their SES. Data collected from the rural pregnant women were pooled, tabulated, statistically analysed and discussed.

Results and Discussion

Table 1 indicates about the awareness of rural pregnant women about the importance of antenatal care. Irrespective of socio-economic status, a higher percentage of rural pregnant women (89.33%) expressed that 20-30 yrs age is the most appropriate for conceiving a baby. Whereas according to the remaining of them 15-20 yrs age is appropriate to conceive baby. Further it was observed that all the rural pregnant women were aware about significance of ANC. As ICDS workers and ASHA (Accredited Social Health Activist) are playing very active role in creating awareness about ANC, a higher percentage of Low SES rural pregnant women opined that, ANC is essential for the safety of pregnant women and foetus, followed by for knowing the condition of foetus (72.22%) for having safe delivery (71.11%), preventing health hazards during pregnancy (62.22%), for knowing the health status of pregnant women (57.77%) for giving birth to the healthy baby (37-77%) and for avoiding complications during pregnancy (24.44%). On the other hand the corresponding percentages of their counter parts middle SES pregnant women were 60.00, 58.33, 66.66, 56.66, 28.33, 56.66 and 26.66. Further it was noticed that all the rural pregnant women were aware about the right time for visiting to ANC clinic and they claimed that as soon as possible after the confirmation of pregnancy every pregnant women must give visit to the ANC clinic. Further irrespective of SES, about 58.00 percent rural pregnant women, expressed that, they need to give 4 visits for ANC which is in line with the recommendation given by Maternal health Division, Ministry of Health & Family Welfare Government of India. While remaining of them opined that pregnant women need to give three (15.00%) and five (30.00%) visits respectively. With regard to the safe place for delivery all the sample rural pregnant women claimed that hospital is the safe place for performing the delivery under the supervision of doctors and trained health workers as it helps in avoiding complications during delivery process. Irrespective of SES majority of the rural pregnant women (55.33%) were found to be unaware about the exact delivery process. Therefore these findings indicate the need of developing awareness about delivery process among rural women for avoiding general complications occur during the delivery process. On the whole based on the SES, with reference to the awareness of rural pregnant women about importance of antenatal care, significant differences were observed particularly for few aspects of it. The findings are in support of some of the results observed by Gupta *et al.* (2015) [3] and Akhtar *et al.* (2018) [1].

Table 2 depicts about awareness of pregnant women

regarding antenatal care practices. Irrespective of SES 23.33 percent of the rural pregnant women stated that for protecting pregnant women from tetanus, TT vaccine need to be injected to her. Whereas 17.33 percent rural pregnant women expressed that for protecting both mother and baby from tetanus this vaccine is beneficial. While 10.66 percent of them expressed that to protect new born from tetanus TT vaccine is advantageous. However majority of the rural pregnant women (48.66%) found to be unaware about benefits of TT vaccine during pregnancy.

Further a higher percentage of the rural pregnant women (90.00%) reported that, two doses of TT vaccine need to be given to the pregnant women, while only 6.00 percent of them stated that, pregnant women need to take 3 TT vaccines during pregnancy period. While a meagre percentage of them (4.00%) were found to be unaware about number of doses.

Further when these rural pregnant women were asked about benefits of calcium and multivitamin tablets supplements in pregnancy, a higher percentage of low SES rural pregnant women (90.00%) stated that for preventing pre-eclampsia, to increase the bone density in infants (53.33%) and to prevent hypertension (47.77%) these supplements are beneficial during pregnancy. The corresponding percentages of their counterparts middle SES rural pregnant women were observed to be 46.66, 78.33 and 16.66. Similarly with reference to the benefits of taking IFA tablets during pregnancy, irrespective of SES, a higher percentage (98.66%) of them were recorded to be aware about its benefits, majority of them stated that for avoiding anaemia (55.33%), low birth weight baby (45.33%) and preterm delivery (30.66%) IFA tablets are beneficial during pregnancy.

With reference to the adverse effects of consumption of over the counter drugs during pregnancy, it was noticed that a higher percentage of low SES rural pregnant women (57.77%) and middle SES rural pregnant women (75.00%) were aware about it. However as 42.22 percent low SES and 25.33 percent middle SES rural pregnant women were found to be unaware about adverse effects of taking over the counter drugs during pregnancy, the focus need to be given on this aspect by the health workers while para educating rural families on maternal and child health for avoiding birth defects.

On the whole based on the findings it is obvious that there is a great need to develop awareness among rural pregnant women about benefits of TT vaccine during pregnancy and also about the adverse effects of consuming over the counter drugs during pregnancy. Based on SES, statistically significant difference were recorded among rural pregnant women awareness with regard to some aspects of antenatal care practices. Some of these finding are in line with the results reported by Hossain *et al.* (2014) [4], Kumar *et al.* (2019) [5] and Tefera *et al.* (2020) [9].

Table 3 shows awareness about significance of various tests and physical examination while undergoing ANC checkups. It is obvious from the results that irrespective of SES, all the rural pregnant women were found to be aware and have preliminary information about significance of blood pressure check-ups and ultrasonography followed by assessing haemoglobin level (95.33%), urine (73.33%), blood type (62.00%), blood sugar (52.66%), HIV infection (26.66%), Hepatitis B (24.00%) and STDs (19.33%). However based on the results, it is clear that as a higher percentage of rural pregnant women were observed to be unaware about need of assessing HIV infection, Hepatitis B and STDs, these aspects

need to be focussed more by the health workers while imparting information about maternal and childcare. Statistically results proved that significantly more number of middle SES rural pregnant women were aware particularly about significance of assessing haemoglobin level, urine and type of blood during ANC visits. Some of the findings are in line with the results reported by Akhtar *et al.* (2018) [1].

Table 4 indicates about awareness of rural pregnant women about high risk pregnancy. About 80-91 percent rural pregnant women stated that pregnant women having low Hb level, heart diseases, diabetes mellitus and tuberculosis are considered as high risk pregnancy women. Whereas a higher

percentage of middle SES rural pregnant women (81.66%) expressed that women having weight below 45kg, short stature and are primigravida or grand multipara (41.66%) are the conditions of high risk pregnancy. The corresponding percentages of their counter parts low SES rural pregnant women were noticed to be 47.77, 38.88 and 11.11. Statistically no significant differences were recorded among low and middle SES rural pregnant women about their awareness regarding common symptoms of high risk pregnancy. The findings are in conforming with the results recorded by Leslie *et al.* (2016) [6] and Nagraj *et al.* (2019) [8].

Table 1: Awareness of rural pregnant women about the importance of antenatal care

Awareness about the important of antenatal care	Percentage of rural pregnant women based on socio-economic status (150)			
	Low SES (n=90)	Middle SES (n=60)	Percentage of rural pregnant women irrespective of SES (n=150)	Z values
Appropriate age to conceive baby				
15-20 yrs	12.22(11)	08.33 (05)	10.66(16)	0.85 NS
21-30 yrs	87.77(79)	91.66(55)	89.33(134)	02.85**
31-40 yrs	--	--	--	--
Significance antenatal care				
Aware	100.00(90)	100.00(60)	100.00(150)	--
Reasons				
For the safety of pregnant women and Foetus	77.77(70)	60.00(36)	70.66(106)	02.20*
For treating and preventing health hazards during pregnancy	62.22(56)	56.66(34)	60.00(90)	00.73 NS
For giving birth to the healthy baby	37.77(34)	56.66(34)	45.33(68)	00.23 NS
For knowing the condition of foetus	72.22(65)	58.33(35)	66.66(100)	1.77 NS
For having safe delivery	71.11(64)	66.66(40)	69.33(104)	0.06 NS
For knowing the health status of pregnant women	57.77(52)	28.33(17)	46.00(69)	3.77**
For avoiding complications during pregnancy	24.44(22)	26.66(16)	25.33(38)	0.28 NS
Awareness about antenatal checkups	100(90)	100(60)	100(150)	--
No of ANC visits pregnant women need to give				
Three	25.55(23)	15.00 (09)	21.33(32)	01.58 NS
Four	60.00(54)	55.00(33)	58.00(87)	00.53 NS
Five	14.44(13)	30.00(18)	20.66(31)	02.32 *
Safe place for delivery				
Home	--	--	--	--
Hospital	100(90)	100(60)	100(150)	--
Awareness about delivery process				
Aware	35.55(35)	53.33(32)	44.66(67)	02.20*
Unaware	61.11(55)	46.66(28)	55.33(83)	01.82 NS

Figures in parenthesis indicate frequencies of rural pregnant women

* $p < 0.05$ level

** $p < 0.01$ level

NS- Non Significant

Table 2: Awareness of rural pregnant women regarding antenatal care practices

Awareness regarding antenatal care practices	Percentage of rural pregnant women based on socio-economic status (150)			
	Low SES (n=90)	Middle SES (n=60)	Percentage of rural pregnant women irrespective of SES (n=150)	Z values
Benefit of TT vaccine				
To protect pregnant women from tetanus	30.00(27)	13.33(08)	23.33(35)	02.61**
To protect both mother and baby from tetanus	13.33 (12)	23.33(14)	17.33(26)	01.54 NS
To protect newborn from tetanus	8.88 (08)	13.33-(08)	10.66(16)	02.37*
Unaware about TT vaccine	47.77 (43)	50.00(30)	48.66(73)	00.36 NS
No of TT vaccines need to be given				
Two	91.11(82)	88.33(53)	90.00(135)	0.58NS
Three	4.44 (04)	8.33(05)	06.00(09)	0.99 NS
Unaware	4.44 (04)	3.33(02)	04.00(06)	0.33
Benefits of calcium and multivitamin tablets in pregnancy				
To prevent pre-eclampsia	90.00 (81)	46.66(28)	72.66(109)	06.13
To Increase the bone density in infants	53.33(48)	78.33(47)	63.33(95)	03.33
To prevent hypertension	47.77(43)	16.66(10)	35.33(53)	04.38**
Benefits of IFA tablets in pregnancy				
Aware	97.77(88)	100(60)	98.66(148)	01.66 NS

Aware	--	--	--	--
Unaware	02.22(02)	--	01.33(02)	--
IFA tablets are given to pregnant women				
For avoiding anaemia	48.88(44)	65.00(39)	55.33(83)	00.89 ^{NS}
For avoiding low birth weight baby	48.88(44)	30.00(24)	45.33(68)	02.27*
For avoiding Preterm delivery	37.77(34)	20.00(12)	30.66(46)	02.34*
Adverse effects due to the consumption of over the counter drugs				
Aware	57.77(52)	75.00 (45)	64.66(97)	02.35*
Unaware	42.22(38)	25.00(15)	35.33(53)	02.22*

Figures in parenthesis indicate frequencies of rural pregnant women

* $p < 0.05$ level

** $p < 0.01$ level

NS- Non-Significant

Table 3: Awareness about the significance of various tests and physical examination while undergoing ANC checkups

Awareness on the tests and physical examination during ANC checkups	Percentage of rural pregnant women based on socio-economic status (150)			Z values
	Low SES (n=90)	Middle SES (n=60)	Percentage of rural pregnant women irrespective of SES (n=150)	
Significance of assessing				
Blood Pressure	100(90)	100(60)	100(150)	--
Ultrasonography	100(90)	100(60)	100(150)	--
Haemoglobin level	92.22 (83)	100(60)	95.33(143)	02.86**
Urine	66.66(60)	83.33(50)	73.33(110)	02.44*
Blood type	54.44(49)	73.33(44)	62.00(93)	02.47**
Blood sugar	47.77 (43)	60.00(36)	52.66(79)	01.58 ^{NS}
HIV infection	31.11 (28)	20.00 (12)	26.66(40)	01.54 ^{NS}
Hepatitis B	26.66(24)	20.00(12)	24.00(36)	00.86 ^{NS}
STDS	22.22(20)	15.00 (09)	19.33(29)	01.10 ^{NS}

Figures in parenthesis indicate frequencies of rural pregnant women

* $p < 0.05$ level

** $p < 0.01$ level

NS- Non-Significant

Table 4: Awareness of rural pregnant women about high risk pregnancy

Awareness about high risk pregnancy	Percentage of rural pregnant women based on socio-economic status (150)			Z values
	Low SES (n=90)	Middle SES (n=60)	Percentage of rural pregnant women irrespective of SES (n=150)	
Low Hb level	80.00(72)	88.33(53)	83.33(125)	01.34 NS
Weight below 45 kg	47.77(43)	81.66(49)	61.33(92)	00.24 NS
Primigravida or grand multipara	38.88(35)	41.66(25)	40.00(60)	01.76 NS
Short stature	11.11(13)	16.66(10)	15.33(23)	00.55NS
Pregnant women having				
Heart diseases	86.66(78)	90.00(54)	88.00(132)	00.75 NS
Diabetes mellitus	85.55(77)	91.66(55)	88.00(132)	01.13 NS
Tuberculosis	83.33(75)	91.66(55)	86.66(130)	01.47 NS

Figures in parenthesis indicate frequencies, NS- Non Significant

Conclusion

Irrespective of SES majority of the rural pregnant women (55.33%) were found to be unaware about the delivery process. Therefore these findings indicate the need of developing awareness about delivery process among rural women for avoiding general complications occurs during the delivery process.

There is a great need to develop awareness among rural pregnant women about benefits of TT vaccine during pregnancy and also about the adverse effects of consuming over the counter drugs during pregnancy. Based on SES statistically significant difference were recorded among rural pregnant women awareness with regard to some aspects of antenatal care practices. Statistically results proves that significantly more number of middle SES rural pregnant women were aware particularly about significance of assessing haemoglobin level, urine and type of blood during ANC visits. About 80-91 percent rural pregnant women stated that pregnant women having Hb level, heart diseases, diabetes

mellitus and tuberculosis are considered as high risk pregnancy women. Whereas a higher percentage of middle SES rural pregnant women (8.00%) expressed that women having weight below 45kg, short stature and are primigravida or grand multipara (41.66%) are the conditions of high risk pregnancy. The corresponding percentages of their counterparts low SES rural pregnant women were noticed to be 47.77, 38.88 and 11.11. Statistically nosignificant differences were recorded among low and middle SES rural pregnant women about their awareness regarding common symptoms of high risk pregnancy.

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