# **Original Research Article**

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# Antenatal counselling- is it adequate? A cross-sectional study from Chandigarh tricity, India

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#### **ABSTRACT**

**Background:** Antenatal care (ANC) provides an important opportunity to improve maternal understanding about pregnancy, childbirth, and care of the newborn. Adequate and quality ANC can help ensure a favourable pregnancy outcome, but the coverage of ANC in India remains inadequate. The present study was conducted with an objective to assess ante natal counselling services at health centers in Chandigarh Tricity.

**Methods:** The cross-sectional study was conducted in the Chandigarh Tricity during April 2012 to September 2013. Stratified multistage sampling technique was used to select health centers in tricity. A total of 345 pregnant women in second and third Trimester were interviewed with the help of pre-designed, structured and pre-tested questionnaire after taking their written informed consent. It was supplemented by observation of ante natal sessions. Data was entered and analyzed using SPSS version 19.

**Results:** Nearly one-fourth (28.1%) participants received counselling regarding diet and rest. Only 26 (07.5%) participants were explained about danger signs during pregnancy. Significant difference was found between counseling given regarding 'diet and rest' with respect to city (p=0.03) and health centers (p=0.00). Significant difference was found between counselling for 'family planning' with respect to city (p=0.01) and health centers (p=0.00).

**Conclusions:** Findings from our study indicate low level of counselling on various components of ANC. Thus, strategies under National Health Mission to improve quality of antenatal communication as well as maternal understanding should be strengthened.

Keywords: Antenatal, Counselling, Chandigarh, India

# INTRODUCTION

In any community, mothers and children constitute a priority group. Together they constitute nearly 57.5% of the total population. Worldwide, every day at least 1600 women die from complications of pregnancy and childbirth, most which occur in the developing world. Further, much of the sickness and deaths among mothers and children is largely preventable. Antenatal care (ANC) provides an important opportunity to improve maternal

understanding about pregnancy, childbirth, and care of the newborn. In many South Asian cultures the use of preventive health services like routine ANC is an alien concept because such services are perceived to be existing solely for curative purposes.<sup>3</sup> Maternal mortality in resource-poor nations has been attributed to the "three delays" i.e. delay in deciding to seek care, delay in reaching care in time, and delay in receiving adequate treatment. Studies that have examined quality of antenatal counseling suggest that adequacy of information provided is low - with less information-sharing than guidelines

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recommend.<sup>4-6</sup> The low status of women in society and their low literacy levels prevent the women from taking antenatal care even if services are available. Available data suggests that patients often perceive counseling to be poor, and low maternal knowledge following counseling has been attributed to insufficient communication.<sup>7-10</sup> Adequate and quality ANC can help ensure a favorable pregnancy outcome, but the coverage of ANC in India remains inadequate. The present study was conducted with an objective to assess ante natal counseling services at health centers in Chandigarh Tricity.

#### **METHODS**

### Study area

Chandigarh is a city and a Union Territory in the northern part of India. It also serves as the capital of the states of Punjab and Haryana. Chandigarh Tricity includes Chandigarh along with two satellite cities viz. Panchkula in state of Haryana and Mohali (also called Sahibzada Ajit Singh Nagar or SAS Nagar) in state of Punjab.

## Study design, study period and sampling technique

The cross-sectional study was conducted at health centers in the Chandigarh Tricity during April 2012 to September 2013. Stratified multistage sampling technique was used to select health centers in tricity from three strata *viz*. community health center (CHC), primary health centre (PHC) and sub center (SC). Two available community health centers (CHCs) and four sub centers (SCs) at random were selected in Chandigarh. No primary health centre (PHC) is available under Chandigarh health care delivery system. In Mohali, two CHCs, two PHCs and two SCs were selected at random. In Panchkula, two available CHCs along with one PHC under each CHC and one SC under each PHC were taken. So, total number of six CHCs, four PHCs and eight SCs were selected.

### Sample size and data collection

A total of 345 pregnant women who had come for antenatal checkup in second and third Trimester at ANC clinics of selected health centers included in the study. Sample was calculated based on 90% confidence coefficient and 5% permissible error and several parameters of maternal and child health services of interest. Those patients who attended ANC clinics but having incomplete records and presenting in first Trimester were excluded. The data was collected by author herself by visiting all the selected health centers. It was collected using the predesigned, structured and pre-tested questionnaire, after taking written informed consent of participants. The information comprising socio-demographic profile and counseling regarding various components of ANC was collected from the participants. It was supplemented by observation of ante natal sessions.

## Statistical analysis and ethical approval

Data was entered into SPSS version 19. Discrete data was analyzed using frequency, percentages and Chi-square test. The study was conducted after obtaining approval from the Faculty of Medical Sciences, Panjab University, Chandigarh. The privacy and confidentiality of information obtained was assured.

#### RESULTS

Mean age ( $\pm$  S.D.) of participants was 24.5 ( $\pm$  3.6) years. According to city, 96 (27.8%), 103 (29.9%) and 146 (42.3%) participants were from Chandigarh, Panchkula and Mohali, respectively. Among these, 114 (33.0%), 69 (20.0%) and 162 (47.0%) participants had availed services from SCs, PHCs and CHCs, respectively.

Table 1: Distribution of participants according to socio-demographic profile.

Characteristics	Number (N=345)	Percentage (%)
Age in years		
18-21	66	19.1
22-25	156	45.2
26-30	101	29.3
31-45 <sup>a</sup>	22	06.4
Place of residence		
Rural	217	62.9
Urban	128	37.1
Education		
Literate	266	78.0
Illiterate	76	22.0
Occupation		
Homemaker	326	94.5
Working	19	05.5
Socioeconomic Status		
Middle	216	62.6
Lower	129	37.4
Type of family		
Joint	199	57.7
Nuclear	146	42.3

<sup>&</sup>lt;sup>a</sup>There were only 03 participants in age group 36-45 years.

Almost all of participants were aware regarding the importance of antenatal check-ups, tablet Iron-Folic acid (IFA), routine blood & urine investigations, and importance of institutional delivery. Nearly three-fourth (247, 71.6%) participants had the awareness regarding schemes like *Janani Suraksha Yojna* (JSY) & *Janani Shishu Suraksha Karyakaram* (JSSK). Among the participants who were aware about JSY and JSSK, 134 (54.3%) respondents said that they received the information through their friends and relatives followed by 69 (27.9%) who received this information from local health functionaries *viz.* auxiliary nurse midwives (ANMs), Accredited social health activists(ASHAs) and

anganwadi workers (AWWs).Only three (01.2%) participants received information from doctor. Rest of the participants i.e.24 (9.7%) and 17 (6.9%) received the information from IEC material and already knew since previous pregnancy, respectively.

Table 2: Distribution of participants according to awareness regarding ANC check-up (N=345)

Components	N=345	%
ANC check should be carried to all pregnant women	340	98.6
Tablet IFA should be provided	343	99.4
Routine blood & urine examination should be done	338	98.0
Delivery should be conducted in hospital	337	97.7
Awareness regarding JSY & JSSK	247	71.6

However, the percentage of health education/ counseling done at the ANC clinics regarding various components was low. Nearly one-fourth (28.1%) participants received counseling regarding diet and rest. Only 26 (07.5%) participants were explained about danger signs during pregnancy, 25 (07.2%) participants were counseled regarding family planning, 24 (07.0%) participants were explained about signs of labor and 21 (06.1%) participants were informed regarding cleanliness at time of delivery. Counseling in tricity regarding diet and rest was given to maximum number of participants (37.9%) in Panchkula followed by Mohali (24.7%) and least in Chandigarh (22.9%), and this difference was found to be significant (p = 0.03). Majority of the participants did not received counseling regarding family planning (95.9%, 94.8% and 86.4% in Mohali, Chandigarh and Panchkula, respectively), and this difference was found to be significant (p = 0.01). Although majority of participants did not explain about danger signs and signs of labor in tricity, but the differences were not found to be significant.

Table 3: Counselling regarding various factors among antenatal participants in tricity (N=345)

Factor	Chandigarh N=96 (%)	Panchkula N=103 (%)	Mohali N=146 (%)	Total N=345 (%)	χ <sup>2</sup> ; <b>p</b>		
Counselling regarding	Counselling regarding diet & rest given						
Yes	22 (22.9)	39 (37.9)	36 (24.7)	97 (28.12)	6 00. 0 03*		
No	74 (77.1)	64 (62.1)	110 (75.3)	248 (71.88)	6.99; <b>0.03</b> *		
Danger signs during	Danger signs during pregnancy explained						
Yes	10 (10.4)	08 (07.8)	08 (05.5)	26 (07.54)	2.04; 0.36		
No	86 (89.6)	95 (92.2)	138 (94.5)	319 (92.46)			
Signs of labor explain	Signs of labor explained						
Yes	09 (09.4)	08 (07.8)	07 (04.8)	24 (06.96)	2.03; 0.36		
No	87 (90.6)	95 (92.2)	139 (95.2)	321 (93.04)			
Counselling regarding Family Planning given							
Yes	05 (05.2)	14 (13.6)	06 (4.1)	25 (07.2)	8.90; 0.01*		

Table 4: Counselling regarding various factors among antenatal participants according to type of health facility (N=345).

Factor	Sub centre N=114 (%)	PHC N=69 (%)	CHC N=162 (%)	Total N=345 (%)	χ <sup>2</sup> ;p	
Counseling reg	Counseling regarding diet & rest given					
Yes	26 (22.8)	37 (53.6)	34 (21.0)	97 (28.12)	27.87;	
No	88 (77.2)	32 (46.4)	128 (79.0)	248 (71.88)	0.00*	
Danger signs d	Danger signs during pregnancy explained					
Yes	07 (06.1)	07 (10.1)	12 (07.4)	26 (07.54)	0.00, 0.61	
No	107 (93.9)	62 (89.9)	150 (92.6)	319 (92.46)	- 0.99; 0.61	
Signs of labor e	explained					
Yes	08 (07.0)	06 (08.7)	10 (06.2)	24 (06.96)	0.49, 0.70	
No	106 (93.0)	63 (91.3)	152 (93.8)	321 (93.04)	0.48; 0.79	
Counselling regarding Family Planning given						
Yes	07 (06.1)	12 (17.4)	06 (3.7)	25 (07.25)	13.79;	
No	107 (93.9)	57 (82.6)	156 (96.3)	320 (92.75)	0.00*	

Counseling at various health facilities regarding diet and rest was given to maximum number of participants (53.6%) at PHC followed by sub center (22.8%) and least at CHC (21.0%), and this difference was found to be significant (p=0.00). Majority of the participants did not received counseling regarding family planning (96.3%, 93.9%) and 82.6% at CHC, Sub centers and PHC, respectively), and this difference was found to be significant (p=0.00). Although majority of participants did not explain about danger signs and signs of labor at health facilities, but the differences were not found to be significant as shown in Table 4.

## **DISCUSSION**

Health information-sharing is an essential element of focused antenatal care. Yet, baseline study findings showed that although women had multiple antenatal visits, they were not profiting entirely from effective communication for care during and after pregnancy. Such low levels of awareness indicated a missed opportunity for health promotion during pregnancy. In our study, information about diet and rest was given in 28.1% cases, danger signs were explained to only 07.5% and family planning advice was given to only 07.2% participants. In contrary to our findings it was observed by Patel et al in Gujarat where information regarding danger signs was provided in 26.8% cases. 11 Dasgupta U et al in West Bengal observed that advice on diet, rest, family planning and exclusive breastfeeding was not given to 38.5%, 41.0% and 26.0% mothers, respectively, 35.0%, indicating poor health education services. 12 In a study done by Dhandapany G et al in Pondicherry found that only 21.0% "booked" mothers had received antenatal counseling on breastfeeding. 13 In the "counseled" group 87.0% mothers were aware that breastfeeding should be initiated immediately after birth and 78.0% knew that exclusive breastfeeding should be continued for 6 months. However, even in the "counseled" group awareness regarding correct breastfeeding technique and concept of continuing breastfeeding during illness in the baby was no different from those in the "not counseled" group, therefore it is required to improve our counseling practices and giving adequate time for counseling and guiding mothers properly.

In our study 71.6% participants had awareness regarding schemes like JSY & JSSK and most common source of information was friends and relatives in 54.3% followed by AWW/ ASHA in 17% while Panja TK et al in West Bengal found most common source of information as ANMs/ AWWs in 66.7% of cases. 14 Majority, 71.6% of participants were aware of facilities provided under schemes like JSY & JSSK in our study while Panja TK et al in West Bengal observed poor knowledge among participants where 52.8% had heard the phrase JSY and only 27.5% of them knew all the benefits of JSY. 14 Financial benefit through JSY was taken by 09.5% mothers while in a study done by Puwar BT et al in Gujarat found JSY was availed by 08.0% mothers. 15

Similarly, Bhanderi et al in Gujarat found that 89.2% women did not know about the JSY. 16

Antenatal health counseling is an important strategy to promote awareness of maternal and newborn health during pregnancy, yet quality of communication is often poor and understudied. Findings from our study also indicate low level of counseling on various components of ANC. Thus, strategies under National Health Mission to improve quality of antenatal communication as well as maternal understanding should be strengthened.

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