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SOCIO-DEMOGRAPHIC FACTORS INFLUENCING ANTENATAL CARE PRACTICES IN URBAN SLUMS OF AMRITSAR CITY, PUNJAB, INDIA

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ABSTRACT

Objective: The study was conducted to explore socio - demographic factors influencing antenatal care in various slum areas of Amritsar city in Punjab.

Methods: A total of 30 clusters of 7 units each were taken to make a sample of 210 units. The women who had delivered within one year before the interview were taken as study units. They were interviewed with the help of a pretested proforma and regression analysis was applied to evaluate the effect of various socio-demographic factors on antenatal care.

Results: On univariate analysis nativity, possession of identity proof, socio-economic status of women, type of family, age of women, literacy status of women and their husbands, parity and pre-planning of pregnancy emerged as significant factors influencing antenatal care practices of the women. But, multivariate regression analysis identified only literacy of the women (OR=3.02, CI=1.36 - 7.57, p=<0.01), literacy of their husbands (OR=2.52, CI=1.13 - 5.6, p=<0.05) and socio-economic status of the household (OR= 2.25, CI=1.5 - 5.5, p=<0.05) as significant factors affecting the antenatal care practices.

Conclusion: Literacy of women and their husbands and socioeconomic status of households are significant factors determining antenatal care. Therefore, efforts should be made to improve upon these factors.

Key words: Antenatal care, socio-economic status, practices, urban, slums.

INTRODUCTION

Pregnancy and its complications continue to claim the lives of over 1000 women in low and middle income countries every day.[1] Many women suffer from long term disabilities developed during pregnancy and childbirth. About 15% of all pregnant women develop obstetric complications in the form of haemorrhage, pre-eclampsia and eclampsia, obstructed labour, sepsis, ectopic pregnancy etc.[2] As the obstetric complications cannot be predicted and prevented, all pregnant women need access to good quality antenatal care. Antenatal period offers opportunities to reach out to pregnant women requiring intervention that may be vital for their health, their wellbeing and that of their infants. It also provides a route to ensure that pregnant women deliver with the assistance of a skilled health provider.[3] The percentage of women having antenatal care during pregnancy is also one of the indicators of Millennium Development Goals.[4] But unfortunately, in urban slums the condition of maternal health with regard to antenatal care during pregnancy is worse in comparison to non-slum population. It is disheartening to know that just 54% of pregnant women in slums have at least three antenatal visits in comparison to 83 % in non-poor urban areas.[5] This makes it pertinent to study various socio-demographic factors affecting antenatal care among women in reproductive age in slums so that the required measures can be introduced to improve their health. With this aim, the present study was conducted to explore socio-demographic determinants of antenatal care in urban slums of Amritsar city in Punjab.

MATERIAL AND METHODS

According to the records available in the Office of Municipal Corporation Amritsar, there are 108 pockets of slums in the city of Amritsar. By adopting cluster sampling technique,[6] 30 clusters of 7 units each were taken up for study making a total of 210 study units. Study units were women who had delivered within one year at the time of interview.

Those women were interviewed with the help of a pretested proforma. Modified Udai Pareek (MUP) scale[7] was used to assess the socio-economic status of the study subjects. The data was compiled and analyzed with the help of SPSS 15.0 v for windows. Various socio-demographic factors were studied for adequate antenatal care. Minimum four antenatal checkups during pregnancy were considered as adequate antenatal care. The factors found to be significant were evaluated further by applying logistic regression analysis and odds ratios (ORs) with 95% confidence interval (CI) were generated.

RESULTS

Table 1: Distribution of households according to their socio-demographic characteristics

Parameters		No. (n=210) (%)
Current age	<20	19 (09.0)
	≥ 20	191 (91.0)
Nativity	Native	95 (45.2)
	Migrant	115 (54.8)
Identity proof	Yes	148 (70.5)
	No	62 (29.5)
Caste	Scheduled caste	167 (79.5)
	Others	43 (20.5)
Type of family	Nuclear	110 (52.4)
	Joint	100 (47.6)
Socio-economic status	Upper	12 (5.7)
	Upper middle	40 (19.0)
	Lower middle	90 (42.9)
	Lower	68 (32.4)
Education	Literate	79 (37.6)
	Illiterate	131 (62.4)
Occupation	Working	61 (29.0)
	Housewife	149 (71.0)
Husband's Education	Literate	92 (43.8)
	Illiterate	118 (56.2)
Parity	1	77 (36.7)
	≥ 2	133 (63.3)

Table-1 describes the socio-demographic features of households. It was observed that 54.8% of study subjects were migrants, 29.5% of them did not have any identity proof and 79.5% belonged to scheduled castes. Approximately half of them (52.4%) were living in nuclear families and 75.3% were belonging to lower and lower middle socio-economic class. The age of majority of women (85.3%) was equal to or more than 20 years. More than 60% (62.4%) of them did not go to school for formal education and 29% were involved in income generating activities. Education status of husbands of study subjects was a little better as 43.8% of them were literate.

Table - 2 explores antenatal care practices of study subjects. Among 210 women, 64.8% of women

planned the pregnancy and only 42.4% of them had adequate antenatal checkups. Iron Folic Acid tablets were taken regularly only by 21.4% of study subjects and 89.5% were immunized against tetanus. As is evident from the table, nativity, possession of identity proof, type of family and socio-economic status, age of study subjects, their literacy status, literacy of their husbands, parity and planning of pregnancy are the significant factors affecting antenatal care of women.

Table 2: Distribution of women according to antenatal care practices

Practice	No. of Women (n= 210)	
	Yes (%)	No (%)
Planning of pregnancy	136 (64.8)	74 (35.2)
Minimum one antenatal checkup	154 (73.3)	56 (26.7)
Adequate No. of antenatal checkups*	89 (42.4)	121 (57.6)
Iron folic acid tablets	110 (52.4)	100 (47.6)
If yes, Regularity	45 (21.4)	65 (31.0)
TT immunization	188 (89.5)	22 (10.5)

* Minimum four antenatal checkups during pregnancy were taken as adequate antenatal care.

A perusal of Table – 5 shows that on univariate analysis, nativity, Identity proof, socio-economic status of women, type of family, age of women, literacy status of women and their husbands, parity and pre-planning of pregnancy emerged as significant factors influencing antenatal care practices of the women.

On multivariate analysis, adjusted odds ratios were obtained. For each socio-demographic factor, all other factors were adjusted. As is shown in the above table, literacy of women and of their husbands and socio-economic status remained significant factors whereas others transpired to be insignificant.

DISCUSSION

Generally, slum dwellers are migrants to the city from the far off places. In the present study too, more than half (54.8%) of the respondents were migrants from other states. Also, 29.5% of study subjects did not have any identity proof in the form of ration card or voter cards, depriving them of the basic facilities thus. Nearly 80% (79.5%) of the respondents belonged to scheduled castes and 52.4% of them were living in nuclear families. As expected, socio-economic status of households did not reflect any encouraging picture as 75% of study subjects belonged to the lower and lower middle socio-economic class. Age of large majority of women (91%) was 20 years and above. The education level of study subjects was alarmingly low as 62.4% of women and 56.2% of their husbands were illiterate. Among all women, 29% were involved in income generating activities. Parity of nearly two third of women was two or more.

Table 3: Distribution of women according to their socio-demographic characteristics and adequate antenatal care

Parameters		Adequate ANC (n=89)	Non-adequate ANC(n= 121)	Chi square, df, (p value)
Nativity	Native (95)	53	42	X^2=12.75, df=1 p**<0.001**
	Migrant (115)	36	79	
Identity proof	Yes (148)	75	73	X^2=14.1,df=1 **p<0.001**
	No (62)	14	48	
Caste	Scheduled caste (167)	68	99	$X^2$0.92,df=1 p= 0.45
	Others (43)	21	22	
Type of family	Nuclear (110)	54	56	X^2=4.2,df=1, **p<0.05**
	Joint (100)	35	65	
Socio-economic status*	Upper (12)	8	4	X^2=31.78, df=3, **p<0.001**
	Upper Middle (40)	31	9	
	Lower Middle(90)	32	58	
	Lower (68)	18	50	
Current Age	<20 (19)	04	15	X^2=3.89, df=1, **p<0.05**
	≥ 20 (191)	85	106	
Literacy	Literate (79)	57	22	X^2=45.96, df=1, **p<0.001**
	Illiterate (131)	32	99	
Occupation	Working (61)	28	33	X^2=0.43, df=1, p=0.5
	Housewife (149)	61	88	
Husband's Literacy	Literate (92)	61	31	X^2=38.37, df=1, **p<0.001**
	Illiterate (118)	28	90	
Parity	1 (77)	44	33	X^2=9.69, df=1, **p<0.01**
	≥ 2 (133)	45	88	
Planned pregnancy	Yes (136)	70	66	X^2=13.05, df=1, **p<0.001**
	No (74)	19	55	

Table 4: Logistic regression analysis of adequate antenatal care in relation to socio-demographic factors

Parameter		Adequate ANC (%)		Crude OR (CI)†	p value	Adjusted OR (CI)	p value
		Yes (n=89)	No (n=121)				
Nativity	Native (95)	53(55.8)	42(44.2)	2.7 (1.6- 4.9)	<0.01	1.10 (0.54-2.2)	0.77
	Migrant (115)	36(31.3)	79(68.7)				
ID Proof	Yes (148)	75(50.7)	73 (49.3)	3.5 (1.8-6.9)	<0.01	2.4 (0.6- 5.9)	0.6
	No (62)	14(29.5)	48 (70.5)				
Socio-economic status*	Upper (52)	39 (75.0)	13 (25.0)	6.5 (3.2-13.2)	<0.01	2.25 (1.5-5.5)	**0.03**
	Lower (158)	50 (31.6)	108 (68.4)				
Type of family	Joint (110)	54 (49.1)	56 (50.9)	1.8 (1.02-3.1)	0.04	0.6 (0.28- 1.28)	0.18
	Nuclear(100)	35 (35.0)	65 (65.0)				
Age in years	<20 (19)	04 (21.1)	15 (78.9)	0.33 (0.10- 0.8)	0.04	0.35 (0.09-1.3)	0.12
	≥ 20 (191)	85 (44.5)	106 (55.5)				
Education of mother	Literate (79)	57 (72.2)	22 (27.8)	8.0 (4.3 – 15.0)	<0.01	3.2 (1.36-7.57)	**<0.01**
	Illiterate (131)	32 (24.4)	99 (75.6)				
Husband's Education	Literate (92)	61 (66.3)	31(33.7)	6.3 (3.5-11.6)	<0.01	2.52 (1.13-5.6)	**<0.05**
	Illiterate (118)	28 (23.7)	90 (76.3)				
Parity	< 2 (77)	44 (57.1)	33 (42.9)	2.6 (1.5-4.6)	<0.01	1.57 (0.73- 3.3)	0.24
	≥2 (133)	45 (33.8)	88 (66.2)				
Planning of pregnancy	Planned (136)	70 (51.5)	66 (48.5)	3.07 (1.7-5.7)	<0.01	1.74 (0.79-3.86)	0.16
	Unplanned(74)	19 (25.7)	55 (74.3)				

*Socio-economic status groups were clubbed together for statistical analysis. Upper Middle Class was clubbed with Upper Class and Lower Middle Class was clubbed with Lower Class.
†OR (CI) – Odds Ratio (Confidence Interval)

It is highly desirable that women should have minimum four antenatal checkups during pregnancy. But in the present study, though 73.3% of respondents contacted a health provider at least once, only 42.4% of them had adequate number of antenatal checkups (ANC) putting the recommendations on the back burner. These figures are on lower side when compared with figures for Punjab which is 64%.[8]

Iron folic acid (IFA) tablets were taken regularly only by 21.4% of study subjects (Table- 2). These findings are in conformity with the results of NFHS III which showed that 18.5% women among urban poor consumed IFA for 90 days or more whereas the figure for urban non-poor is 41.8%.[6] Nearly ninety percent (89.5%) of study subjects were immunized against tetanus which is close to the percentage for urban non-poor.[6]

Various socio-demographic factors were studied for adequate antenatal care (Table-3). It was observed that nativity (p<0.001), possession of identity proof (p<0.001), type of family (p<0.05), socio-economic status (p<0.001), age of study subjects (p<0.05), their literacy status (p<0.001), literacy of their husbands (p<0.001), parity (p<0.01) and planning of pregnancy (p<0.001) are the significant factors affecting antenatal care of women. Logistic regression analysis was applied to statistically significant factors. On bivariate analysis nativity, possession of identity proof, socio-economic status of women, type of family, age of women, literacy status of women and their husbands, parity and pre-planning of pregnancy emerged as significant factors influencing antenatal care practices of the women. It was observed that native women were 2.7 times more likely to have adequate antenatal care [OR- 2.7, CI-1.6- 4.9, p -< 0.01] and the same was true for women having identity proof (OR=3.5, CI=1.8-6.9, p=<0.01). It may be because of the reason that migrant women because of lack of identity proof might not be able to avail certain facilities in the public health system. Similarly socioeconomic status of women was found to be a significant factor affecting antenatal care (OR=6.5, CI=3.2-13.2, p=<0.001) on bivariate analysis. Women from upper socioeconomic status were 6.5 times more likely to have adequate antenatal care and the results are in concordance with other another study.[9]

Women residing in joint families (OR=1.8, CI=1.02-3.1, p= <0.05) were found to be 1.8 times more likely to utilise antenatal care which indicates the positive impact of social support system in joint families. Women of 20 years of age and above were 66% less likely to have adequate antenatal care (OR=0.33, CI=0.10- 0.8, p=<0.05) as compared to women of less than 20 years of age. The findings are in concordance with another study conducted in Addis Ababa University [10]

Literacy status of women (OR=8.0, CI=4.3 – 15.0, p=<0.05) and their husbands (OR=6.3, CI=3.5-11.6, p=<0.01) also had a positive impact on adequacy of antenatal care which has been proved by other studies as well.[9]

Planning of pregnancy also showed a positive impact on antenatal care. Odds of women with adequate antenatal care were 3 times higher among women who had planned their pregnancy (OR=3.07, CI=1.7-5.7, p=<0.01) as compared to unplanned pregnancy. Parity had a statistically significant negative effect on antenatal care. Women with parity less than two were 2.6 times more likely to have adequate antenatal care (OR=2.6, CI=1.5-4.6, p=<0.01) which is in conformity with another study of factors influencing the use of antenatal care in rural area in Indonesia.[11]

But, on multivariate analysis, only literacy of the study subjects (OR= 3.2, CI=1.36 – 7.57, p<0.01), literacy of husbands of study subjects (OR= 2.5, CI=1.13-5.56, p<0.05) and socio-economic status (OR= 2.25, CI=1.5–5.5, p<0.05) emerged as significant determining factors of antenatal care practices. Interestingly, among these three factors, literacy of women is highly significant factor. and literacy of women is highly significant factor among them. It indicates the fact that universal primary education especially of girls can go a long way to improve the antenatal care. The fact has also been proved in a study conducted in Nigeria which has shown that literate women are more likely to have good antenatal care.[12]

A systematic review of literature of factors affecting the utilization of antenatal care in developing countries has also shown education of women and income of family as significant factors influencing the antenatal care use in developing countries.[13] Similar findings were also observed in other studies.[14-15] It indicates that the overall educational and socioeconomic status of women needs to be improved to boost the antenatal care during pregnancy.

CONCLUSION

The study conducted has proved that literacy and socio-economic status are the important determinants of antenatal care. Therefore, efforts should be made to provide universal education. At the same times opportunities should be provided to raise socio-economic status of people.

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