Research Paper

Volume : 4 | Issue : 4 | April 2015 • ISSN No 2277 - 8179

Socioeconomic Determinants of Antenatal Care Among Rural Women in Chitradurga District of Karnataka State

Economics

KEYWORDS : ANC score, socioeconomic determinants of ANC

Smt. Rajeshwari Pujari — Research Scholar Department of Studies in Economics Kuvempu University, Jnana Sahyadri Shankaraghatta-577 451, Shimoga District, Karnataka

Dr. K.B.Rangappa — Associate Professor Department of Economics, Davangere University Shivagangothri Campus, Davangere-577002 Karnataka

ABSTRACT

Utilisation of maternal health care services helps in reducing maternal and child mortality and improves the reproductive health of women. Recent policy initiatives like RCH programme, JSY are expected to improve the utilisation of antenatal care services. ANC score has been computed by using the primary data on the ten ANC services collected from 240 respondents to estimate the extent of ANC services utilised and to study the socioeconomic determinants of ANC. Results of the study clearly indicate the significant association between the ANC and the economic status of the respondents' family. Improvement in economic status brings improvement in the utilisation of ANC services. The education level of the respondent as well as the education level of her husband is having greater influence on the ANC. The percentage of respondents in the poor ANC was found to be highest among the agriculture women followed by the women who were doing labour work.

1. Introduction

Antenatal care (ANC) is one of the most important components of Maternal Health Care (MHC) for ensuring 'safe motherhood'. It indicates the interventions and advices that a woman receives during pregnancy and is a key entry point for pregnant women to receive a broad range of health promotion and preventive health services (Carroli. Et.al., 2001). The main purposes of antenatal care are to prevent certain complications, such as anaemia, and identify women with established pregnancy complications for treatment or transfer. The key principle is to plan services according to needs of the pregnant women (Pallikadavathet.al. 2004). Antenatal consultations provide opportunities for health education, health promotion and social support at both the individual and community level. Accessing antenatal care, especially in the rural setting, is an important step in bringing women into contact with the health care system. This contact has facilitated women's access to medical care for future health needs, including postnatal care

ANC services,in India, consist of a set of professional pregnancy checkups, tetanus and other immunisations, prophylaxis through iron and folic acid tablets, blood pressure check-up and advice and information regarding delivery methods and services. Although ANC services are available in the private sector, Government has made provision for these services through a large network of health centers like Primary Health Centers (PHCs), Community Health Centers (CHCs) and District Hospitals (DHs) and has become a largest supplier of ANC services.These are staffed by trained personnel like Auxiliary Nurse Midwife(ANM) who provide antenatal and postnatal care at the hospitals and also make home visits for providing ANC and immunisation servicesto pregnant women. This program has been in place since the late 1950s and has grown rapidly since then, in both coverage and services (Renu and Ganesh, 2014).In-spite of these provisions, utilisation of ANC services was considered to be far from satisfactory. WHO estimate shows that out of the 536,000 maternal deaths globally each year, 136,000 (25.7%) happen in India. In addition to these, millions suffer pregnancy related morbidity: estimates of Global Burden of Disease for 1990 show that India contributes 25% to disability adjusted life years lost due to maternal conditions (Vora. et.al., 2008). Non-attendance of antenatal care has been observed to be among the principal risk factors for dying from pregnancy related causes (Oosterbaan and Guinea, 1995). Utilisation of maternal health care services helps in reducing maternal and child mortality and improves the reproductive health of women.

In recent years, realising the importance of MHC, the public sector has shifted its focus of MHC policy away from provisioning of 'physical health care infrastructure' to provision of integrated and comprehensive health care (Goel, 2007).A policy milestone is the implementation of National Rural Health Mission (NRHM) in 2005 to strengthen the maternal health care system in rural areas. Two major programmes under the NRHM that focused on maternal and child care are a) Reproductive and Child Health Programme (RCH) that gives special attention, among others, to the reduction of maternal mortality rateand b) Janani Suraksha Yojana (JSY) that focuses on increasing institutional deliveries. Besides, the Accredited Social Health Activist (ASHA), Anganwadi Worker (AWW) and Auxiliary Nurse Midwives (ANM) workers were trained to provide additional support to strengthen the quality of antenatal care to increase in actual utilization (Renu and Ganesh, 2014). These policy initiatives are expected to improve the utilisation of antenatal care. In this backdrop, this study has undertaken to analyse the level of utilisation of antenatal care and socioeconomic factors associated with the level of utilisation of ANC.

2. Methodology

This study is based on the primary data collected from women who have had either live birth or still birth during 2013. These respondents have been selected by using multistage random sampling procedure. In the first stage five villages have been randomly selected from list of villages of each taluks. List of women who have had either stillbirth or live birth during 1st January 2013 to 31st December 2013 and available in the village during the survey period has been prepared for each of the selected villages. Such lists have been prepared in consultation with anganwadi workers and ASHA of the respective villages. Eight women have been randomly selected from each village. Thus totally 240 respondents have been randomly selected. Primary data on the relevant variables have been collected from the respondents by using well structured, pretested schedule prepared for this purpose. Survey work has been carried out during March to May months of 2014.

ANC comprises of several health care services. In order to measure the extent of ANC scoring technique has been used. Ten ANC variables have been selected for the computation of ANC scoring. These variables have been selected based on the review of the existing literature and consultation with the gynecologists. Information on the individual respondent's status with respect to these variables was collected and assigned the score as per the details given in table-1.

'Table-1 about here'

The total score secured by an individual respondent is the sum of the scores obtained in all the ten variables. An individual respondent with best care in all the variables will get the score of 100 and respondent with worst care will get 0 score. The respondents who secured the score of more than 90 were categorised under the 'Best ANC' and the respondent with less than 75 scores were considered as 'Poor ANC'. The respondents with the score in between the above scores were considered as 'Normal ANC'. This classification mainly intended to identify the respondents in the either ends of ANC. Information about the socioeconomic characteristics of the respondents and their families was collected to examine their association with the extent of the ANC. Respondents' personal background like Age, education and occupation and their family background like education and occupation of husband as well as wealth index of the family were considered for evaluating their association with the extent of ANC.

Income is one of the most important determinants of MHC expenditure. But, it is very difficult to collect data on income from the people working in unorganized sectors. Short term fluctuations in income appear to have weak association with MHC expenditure. Wealth index indicates long run economic status of the people will have strong association with ANC. Therefore, recent studies prefer wealth index instead of income. Wealth index has been computed by using the principle component analysis for the selected wealth variables. Finally, households were arranged in the descending order of the household index values to classify the household into different categories. The top $1/3^{rd}$ were categorise into rich, next $1/3^{rd}$ families into middle class and bottom $1/3^{rd}$ families into poor families. This is a relative concept and relevant only for this particular study.

3. Results and Discussion

Classifications of the respondents based on their personal background and the extent of the ANC is given in table-2. Age, education, occupation of the respondent and her present pregnancy order are the variables considered under the personal background. Associations between the personal background of the respondents and the extent of ANC have been tested through the chi-square value. Maximum numbers of respondents have been classified under normal ANC (51.6%) followed by best ANC (27.1%) and poor ANC (21.3%). Respondents have been classified into three groups based on their age; namely young (< 20 years), middle (20-30 years) and relatively old age (> 30 years). The percentage of respondents in the best ANC category was reported to be more in the middle aged respondents (32.3%) followed by young age (29.4%). Maximum number of respondents in the poor ANC category was found to be among the relatively old age category (32.9%). The chi-square value calculated to test the significance of association between the age of the respondents and extent of ANC was found to statistically significant. Respondents in the middle age are having better ANC followed by respondents in the young age category.

'Table-2: about here'

Education of the respondents is one the most important variable which is considered to be associated with the ANC practices. Maximum number of respondents were reported to be completed the primary (85) and secondary education (76). The percentage of respondents in the best ANC category found to be increasing with the improvement in the education level. Only 4.5 percent of the respondents in the uneducated category were in the best ANC category where as it was 49.1 percent among the respondents with college education. The percentage of respondents in the poor ANC found to be declining with the improvement in the education level of the respondents. The association between the level of education and the extent ANC is found to be statistically significant at one percent probability level. Improvement in education level of the respondents improves the ANC practices.

Maximum number of respondents reported that their main occupation is household activities, house-wife (168) followed by wage labour (34). Only 10 respondents are doing government/ private jobs. Only respondents with house wife occupation were found to be in the best ANC category. The percentage of respondents in the poor ANC was found to be maximum among the agriculture women (67.9%) followed by the women who were doing labour work (44.1%). The calculated chi-square value (80.609) revealed the significant association between the occupation of the respondent and the level of ANC. The percentage of respondents who reported their present pregnancy order is of second and above order (144) is relatively more compared to the respondents who have reported their first pregnancy (96). The chi-square value calculated to test the significance of association between pregnancy order and extent of ANC is not statistically significant.

Distribution of the respondents across the different family background and the extent of the ANC are given in table-3. Education of the respondent's husband is as important as the education of the respondent herself in determining the ANC practices. Distribution of the respondents across the education level of their husband is given in this table. Majority of the respondents reported that their husband has obtained the college education (86) followed by secondary education (84). The percentage of respondents in the best ANC category found to be increasing with the improvement in the education level of the respondents' husband. The percentage of respondents in the best ANC category is found to be highest (41.9%) among the respondents whose husband is reported to be having college education. It is lowest for the respondents whose husband is uneducated (8.0%). It is opposite with respect to the respondents in poor ANC category. The chi-square value calculated to test the significance of the association between the education level of the respondents' husband and the extent of ANC is statistically significant at one percent probability level. Thus, education level of the husband influencing the ANC practices.

'Table-3: about here'

Occupation of the respondents' husband is another important variable which could influence on the ANC practices. The respondents whose husband is a skilled labour or agriculturist are relatively more in the best ANC category. The respondent whose husband is an agriculture labour are relatively more in the poor ANC category. The percentage of respondents whose husband is doing job is supposed to be relatively more in the best ANC category but surprisingly they are relatively more in normal ANC category. It might be because majority of them are doing private jobs in nearby cities whose economic status is not much superior to the respondents whose husbands occupation is agriculture and skilled labour.

There is a clear and significant association between the economic status of the respondents' family and their ANC practices. The percentage of respondents in the best ANC category increases with the improvement in the economic status of the respondents. The percentage of the respondents in the best ANC category was found to be maximum among the rich (41.2%) and minimum among the poor (8.7). There is considerable variation between rich and the poor with respect to ANC practices. It is quite opposite with respect to the respondents in the poor ANC category. The chi-square value calculated to test the significance of association between the economic status of the respondents and extent of ANC (33.776) was found to be maximum and statistically significant at one percent probability level. It clearly reveals the fact that even today improvement in the economic status brings improvement in ANC practices.

Volume : 4 | Issue : 4 | April 2015 • ISSN No 2277 - 8179

4. Conclusion

Antenatal care (ANC) isa crucial entry point for pregnant women to receive a broad range of MHC services. Respondents were classified into best, normal and poor antenatal care categories based on the ANC care score.Results of the study clearly indicate the significant association between the ANC and the economic status of the respondents' family. The education level of the respondent as well as the education level of her husband is having greater influence on the ANC. Only respondents with house wife occupation were found to be in the best ANC category. The percentage of respondents in the poor ANC was found to be highest among the agriculture women followed by the women who were doing labour work. Respondents in the middle age are having better ANC followed by respondents in the young age category.

Table-1: Scheme for ANC Scoring

Sl No	ANC Variables	Status of ANC	Score	Minimum Score	Maximum Score
1	ANC within First Trimester	Received	10	0	10
		Not-Received	0		
2	Number of ANC Received	Full (≥3)	10	0	10
		Partial (1or 2)	5		
		Not Received (0)	0		
3	Clinical Checkups Performed	All Checkups	10	0	10
		Few Checkups	5		
		No Checkups	0		
4	Lab Tests Performed	All Tests	10	0	10
		Few Tests	5		
		No Tests	0		
5	Ultrasound Scanning	Performed	10	0	10
		Not Performed	0		
6	Number of IFA Tablets Used	Full (≥100)	10	0	10
		Partial (<100)	5		
		Not Used	0		
7	Number of TT Injections Taken	2	10	0	10
		1	5		
		0	0		
8	Person Performed ANC	Doctor	10	0	10
		Nurse	5		
		None/Untrained	0		
9	Consumption of Nutritious Food	Adequate	10	0	10
		Moderate	5		
		Inadequate	0		
10	Rest	Adequate	10	0	10
		Moderate	5		
		Inadequate	0		
			Total	0	100

Table-2: Respondents' Personal Backgrounds Associated with Extent of ANC

Background of Respondents Best ANC		Extent of ANC				Chi-Square Value
		Normal ANC	Poor ANC	Total		
Age of Women	Less than 20	20 (29.4)	32 (47.1)	16 (23.5)	68 (100)	15.261*
	20 to 30	30 (32.3)	54 (58.1)	9 (9.7)	93 (100)	
	More than30	15 (19.0)	38 (48.1)	26 (32.9)	79 (100)	
	Total	65 (27.1)	124 (51.6)	51 (21.3)	240 (100)	
Education of Women	Uneducated	1 (4.5)	13 (59.1)	8 (36.4)	22 (100)	41.525*
	Primary Education	11 (12.9)	44 (51.8)	30 (35.3)	85 (100)	
	Secondary Education	25 (32.9)	42 (55.3)	9 (11.8)	76 (100)	
	College Education	28 (49.1)	25 (43.8)	4 (7.0)	57 (100)	
	Total	65 (27.1)	124 (51.6)	51 (21.3)	240 (100)	
Occupation of Women	House Wife	65 (38.7)	88 (52.4)	15 (8.9)	168 (100)	80.609*
	Agriculture	0 (0.0)	9 (32.1)	19 (67.9)	28 (100)	
	Wage Labour	0 (0.0)	19 (55.9)	15 (44.1)	34 (100)	
	Job	0 (0.0)	8 (80.0)	2 (20.0)	10 (100)	
	Total	65 (27.1)	124 (51.6)	51 (21.3)	240 (100)	
Pregnancy Order	First	24 (25.0)	52 (54.2)	20 (20.8)	96 (100)	0.463
	Second and above	41 (28.5)	72 (50.0)	31 (21.5)	144 (100)	
	Total	65 (27.1)	124 (51.6)	51 (21.3)	240 (100)	

Note: Figures in parenthesis are percentages to the respective row total

* indicate significance at one percent probability level

Table-3: Respondents' Family Backgrounds Associated with Extent of ANC

Family Background of Respondents Best ANC		Extent of ANC				Chi-square Value
		Normal ANC	Poor ANC	Total		
Education of Husband	Uneducated	2 (8.0)	13 (52.0)	10 (40.0)	25 (100)	21.126*
	Primary Education	11 (24.4)	23 (51.1)	11 (24.4)	45 (100)	
	Secondary Education	16 (19.1)	49 (58.3)	19 (22.6)	84 (100)	
	College Education	36 (41.9)	39 (45.3)	11 (12.8)	86 (100)	
	Total	65 (27.1)	124 (51.7)	51 (21.2)	240 (100)	
Occupation of Husband	Agriculture	36 (33.3)	49 (45.4)	23 (21.3)	108 (100)	22.637*
	Agriculture Labour	7 (18.4)	16 (42.1)	15 (39.5)	38 (100)	
	Skilled Labour	15 (36.6)	20 (48.8)	6 (14.6)	41 (100)	
	Job	7 (13.2)	39 (73.6)	7 (13.2)	53 (100)	
	Total	65 (27.1)	124 (51.7)	51 (21.2)	240 (100)	
Wealth Index	Poor	7 (8.7)	43 (53.7)	30 (37.5)	80 (100)	33.776*
	Middle Class	25 (31.3)	40 (50.0)	15 (18.7)	80 (100)	
	Rich	33 (41.2)	41 (51.3)	6 (7.5)	80 (100)	
	Total	65 (27.1)	124 (51.7)	51 (21.2)	240 (100)	

Note: Figures in parenthesis are percentages to the respective row total

* indicate significance at one percent probability level

REFERENCE

Carroli,G., Rooney, C., and Villar, J (2001), 'How Effectiveness is Antenatal Care in Preventing Maternal Mortality and Serious Morbidity? An Overview of the Evidence, Pediatric and Perinatal', Epidemiology, Vol. 15(1), Pp. 1-42 | Goel S., (2007), 'From Bhore Committee to National Rural Health Mission: A Critical Review', Internet Journal of Health, 7(1). | Oosterbaan, M.M., and Guinea Bissau, (1995), 'Maternal Mortality Assessment', World Health Status, Vol. 48 (1), Pp.34-38 | Pallikadavath, S., Mary Foss R.M. and Stones, R. W (2004), 'Antenatal Care in Rural Madhya Pradesh: Provision and Inequality', http://eprints.soton.ac.uk/11146/1/Chap4.pdf | Runu, B., and Ganesh, K.A., (2014), 'Linkages between Parental Education, Utilization of Health Care Facilities and Health Status of Children: Evidence from India', WP-2014-036, Indira Gandhi Institute of Development Research, Mumbai, http://www.igidr.ac.in/pdf/publication/WP-2014-036.pdf | Vora, K.S., Mavalankar, D.V., Ramani, K.V., Upadhyaya, M. and Sharma, B., (2008), 'Maternal Health Situation in India: A Case Study', W.P. No.2008-03-02, Indian Institute of Management Ahmedabad