Maternal Characteristics OG Pregnant Women In Rural Pondicherry- A Cross Sectional Study

Dr Kameshvell C[1], Dr. Gowdhaman. N[2], Dr Rajkumar[3], Dr Subash Chandra Bose.G[4]

[1]Associate Professor, Department of community medicine, Sri Lakshmi Narayana Institute of Medical Science Pondicherry
[2]Formerly Associate professor, Dept. of physiology AVMC, Pondicherry
Mail ID: kameshvell@gmail.com
[3]Assistant professor, Department of community medicine, Dhanalakshmi Srinivasan medical college Perambalur
[4] Lecture in Statistics, Department of community medicine, AVMC&H, Pondicherry

ABSTRACT
Introduction:
The health of mother and child are closely interlinked and tend to influence each other. Apart from health service related factors, maternal characteristics like genes, socio-demographic profile, behavioural pattern, pre-pregnancy body mass index (BMI), gestational weight gain, etc may contribute to birth weight and consequently to child survival.Ergo nowadays maternal and child health are provided in an integrated package.
Aims & objectives:
The aimsis to study the maternal characteristics of pregnant women residing in Bahourcommunepanchayat, a rural area of Pondicherry UT.
Materials & method:
The study is a community based longitudinal study conducted in Anganwadi centres under Bahourcommune panchayat from January 2012 to May 2012. All registered and consented pregnant women fulfilling the inclusion criteria within the designated period were included in the study. A semi-structured questionnaire was administered and followed up with periodical height, weight and blood pressure measurements.
Results & discussion:
The study population were mostly young adults (21-30 years), highly literate (87.7%) with few childhood marriage, well informed with 100% ante natal registration, had better access to ante natal services, bore lesser number of children (1.13) and had greater acceptance of female gender. These positive attributes were marred by lower socio-economic status, wide spread patriarchal mindsetand high prevalence of anaemia, pre-hypertension and hypertension.
Conclusion:Notwithstanding of high literacy and better access to health care facilities the high prevalence of Anaemia, pre hypertension and hypertension emphasis the need of further research.

1. INTRODUCTION

The health of child bearing women and infants is a major area of concern, which needs special attention because of higher vulnerability. The health of the mother and child are so closely linked that each has the capacity to influence the other. The connection between them

starts from child bearing in the case of women; and growth, development and survival in the case of infants and children.[1] The outcome of pregnancy in terms of healthy newborn is dependent on the physical, physiological, mental and nutritional state of the mother during pregnancy and rather than that there are some specific health interventions jointly protect pregnant women and the babies (e.g. immunization and nutritional supplementation). In the past, maternal and child health services were rather fragmented and provided by different agencies, in different ways and in separate clinics. As the health of the mother and child are so closely linked the present strategy is to provide mother and child health services as an integrated package. According to WHO, globally 5, 29,000 women die of pregnancy related causes every year. Global observations show that the maternal mortality ratio averages at 8 per 100,000 live births in the developed regions, but in the developing regions the figure is 450 per 100,000 live births. This difference between developed countries and developing countries is due to the access to special care during pregnancy and child birth.[1]

India is one of the most populous countries in the world with a population of approximately 1.21 million. Out of these, women of child bearing age are 15-44 years constitute 22.2%. Every year in India, roughly 30 million women experience pregnancy and 27 million have live births. Every year over 100,000 pregnancy related maternal deaths occur in the country.According to WHO estimates India is one of the worst performing state in terms of child survival with NNMR of 25.4 and IMR of 40.4 per 1000 live birth respectively. Apart from non-institutional delivery and lack of access to emergency obstetric care maternal characteristics likegenetic characteristics, socio-cultural, demographic, behavioural factors, pre-pregnancy body mass index (BMI), gestational weight gain,etc contribute to birth weight which in turn determine the child survival rate[2].The aimsof this study is to focus on maternal characteristics of pregnant women residing in Bahour commune panchayat, a rural area of Pondicherry UT.

2. MATERIALS & METHODS

The study is a community based longitudinal study conducted in Anganwadi centres under Bahour Commune Panchayat from January 2012 to May 2012. A total of 258 pregnant women who were registered in designated anganwadi centres within the study period, consented and fulfilled the inclusion criteria were included in the study. Of the 258 women, 244 was followed up till delivery, 9 got aborted and 5 lost to follow up. A semi structured questionnaire was administered and information about socio-demographic characteristics like age, sex, literacy, occupation and socio-economic status, housing, medical co-morbidities, antenatal services and pregnancy outcome was obtained and was followed by height, weight and blood pressure measurements.

3. RESULTS

The participants were divided into four age groups, 58%were between 21-25 years, 25% were between 26-30 years, 11% were between 16-20 years and 6% above 31 years respectively. Majority of women (90%) practised Hinduism followed by Islam (7.4%) and Christianity (3.3%).Literacy rate was 88% but only 14% had access to higher education.Most of them were married off (83%) between 18-24 years, 6% were married off before reaching 18 years revealing wide spread practices of child marriage. However consanguinity was not widely practiced and hardly 15% had consanguineous marriage.71% of the participants were either house wife or unemployed, 26% were engaged in farming and 3% in service sector.As 91.4% of spouses were in unorganized sector it was not surprising that 59% belonged to class IV and V and none to class I according to Modified B.G. Prasad's classification for

socioeconomic status.Nearly two third of the participants lived in pucca or semi-pucca house and in a nuclear type of familyarrangement. None of them were exposed to passive indoor smoking indicating lower prevalence of smoking among spouse and greater awareness of its ill effect.Even though 82.6% of the study population belonged to pre obese and normal BMI category, anaemia was reported in 70% of them which had to be further studied.The present shows that, the chi-square homogeneity test was found to be significant with the p value <0.001 for the above table. 14.8% of the pregnant women were underweight, 11.9% were pre-obese followed by 1.6% were obese and 71.7% of the women were belongs to normal BMI category in the study population. 5.4% of the women were found to be hypertensive, 21.3% were in thepre-hypertension stage and the remaining 73.3% were normotensive. Among the study population 39.3% had conceived for the first time, 43.4% for the second time only 0.4% were found to be grand multipara indicating the acceptance of small family norms. Access to state owned health facility was found to satisfactory with 89% of the participants confirming their pregnancy and receiving complete ANC services exclusively from there. Nearly 5% utilized exclusively private health facility and 5.7% utilized both government and private health facility. 60.2% women registered her pregnancy in the first trimester and 36.5% in second trimester and 3.3% of women registered late in the third trimester.Level of utilization of health care facility was high with 97% of women receiving three or more ANC visit, 99.2% receiving at least one dose of T.T/ booster dose and 76.6% receiving 100 or more IFA tablets.

4. DISCUSSION

The present cross sectional study was maternal characteristics of pregnant women residing in Bahour commune panchayat. In the present study, majority of women (83.2%) were between the age group of 21- 30 years while 11.1% was between 16-20 years indicating the presence of child marriage however it was lower than the finding of District Level Household Survey-3 (DLHS-3, 2007) survey[3],which showed that 22.1% of girls got married before they reach 18 years. This may be attributed to better education among the study population[4].Most of them were Hindus reflecting the predominant religion of the country. Nearly 71% of women were housewives and 67.2%of them lived in nuclear type of family revealing patriarchal mindset and the disintegration of joint family system. 35.2% of women in the study area are living in kutcha type of houses as compared to 49.8% in rural areas of Pondicherry according to District Level Household Survey-3**.** Literacy rate of women participated in this study was found to be 87.7% whereas it was only 84.72% among females in Pondicherry according to 2011 census[5].This may be attributed to increase in awareness and enrolment since then. According to Modified Prasad classification based on the All India Wholesale Price Index for January 2013, 39.8% of women belonged to socio-economic class IV followed by 27.4% to class-III. 18.9% to class V and 13.9% to Class-II respectively.The mean number of children born to women who participated in this study was 1.13 as compared to 1.8 children per women in Tamil Naduaccording to National Family Health Survey-3 (NFHS). A larger percentage of the women were blessed with female babies (52.9%) than males (47.1 %).There was 100%antenatal care registration of which 60.2% was done in first trimester, 36.5% in second trimester and 3.3% in the last trimester. The level of registration was better than the   Metgudet al[6]2009 study conducted inShindolli village of Belgaum district where it was 92.31% and only 30% in first trimester.Registration of pregnancy is an extremely important criteria as those who register early tend to utilize the services early, which will help pregnant women to have safe confinement. Present study results do not indicate a near 100% registration in the first trimester, which is ideal. Hence, early

registration of pregnancy should be emphasised by the ANM/ Health care workers and other health care professionals in the study area.

The present study revealed that 97.1% of women had three or more ANC visits, 99.2% received full course of TT, 76.6% received more than 100 IFA tablets and 74.6% received full antenatal package. According to District Level Household Survey -3 report of rural Puducherry, 96.6% of mothers were found to receive 3 or more antenatal visits, 95.7% of them were found to get at least one Tetanus Toxoid injection and 45.6% of them reported to have consumed 100 tablets of Iron and Folic acid (IFA) regularly. Only 41.6% of women received full antenatal care package which is quite low as compared to our study[7].The National Family Health Survey-3 report showed that utilization of antenatal care services differs greatly by state in India; however, with a few exceptions, states that do well on any one indicator of antenatal care also perform well on the other indicators. Goa, Kerala, and Tamil Nadu rank as the top five states in the country in terms of their performance on almost all of the indicators. In these three states, mothers of 94-99 percent of births had at least one antenatal care visit, 94-96 percent had three or more visits, 75-92 percent had a visit in the first trimester of pregnancy, 87-96 percent received two or more tetanus toxoid injections, 87-96 percent received any iron and folic acid tablets or syrup, and 42-75 percent took IFA tablets for at least 90 days[4].The present study showed that 89.3% received full ANC services exclusively from government health facility, 4.9% of women utilized private health facility and 5.7 % utilized both government and private health facility whereas only 73% of women utilized government facility in Veeramatha CS[67]study conducted in urban slums of Bangalore. This showed greater penetration and acceptance of state owned health facilities.

5. CONCLUSION

The health of women and children has always been an important social goal of all societies.. The realization that, improved maternal health is the key to the ultimate objectives of a healthy mother and healthy baby at the end of a pregnancy had led to sustained effort improve maternal health. It also reflects the health care of the community by effective reductionof adverse pregnancy outcomes. Inspiteof having literacy rate above 88% and with greater access to health care facilities the high prevalence of Anaemia, pre hypertension and hypertension emphasis the need of further research

REFERENCES

[1]   Park K. Park's textbook of Preventive and social Medicine. 21th ed. Jabalpur: M/s BanarsidasBhanot; 2011.
[2]   Barker DJ. The developmental origins of adult disease. J AmerCollNutr2004 (Suppl); 23: 588-95.
[3]   3.National Family Health Survey NFHS-3 India 2005-2006, International Institute for population sciences, Mumbai, India. http;//www.nfhsindia.org/nfhs3.html].
[4]   International Institute for Population Sciences. District Level Household and Facility Survey-3. Mumbai: IIPS; 2007-08 [online] 2009 [cited 2011 Nov 15].Available from: URL: http://www.rchiips.org/state-fact-sheet-rch3.html.

[5]   Profile of the union territory of Pondicherry, Chapter: 4; Education. Available at http://ncw.nic.in/pdfreports/Gender%20Profile Pondicherry.pdf

[6]   6.Metgud CS, Katti SM, Mallapur MD, Wantemutte AS. Utilization Patterns of Antenatal Services Among Pregnant Women: A Longitudinal Study in Rural Area of North Karnataka. 23. Al Ameen J Med Sci.2009; 2(1):58-62

[7]   International Institute for Population Sciences. District Level Household and Facility Survey-3. Mumbai: IIPS; 2007-08 [online] 2009 [cited 2011 Nov 15].Available from: URL: http://www.rchiips.org/state-fact-sheet-rch3.html.

[8]   Veeramatha CS. Reproductive and Child Health Programmes in the urban slums of Bangalore city: A study on unmet needs for Family Welfare Services. Working paper 182, Institute for social and economic change, Bangalore; 2007: Available at http://www.isec.ac.in/ WP%20-20182.pdf.8

	frequency	percentage	P value
Age group			
16-20	27	11.7	
21-25	141	52.8	<0.001
26-30	62	25.4	
31-35	14	5.7	
Religion			
Hinduism	218	89.3	
Chirstianity	18	7.4	<0.001
Islam	8	3.3	
Education			
Illiterate	29	12	
Primary	27	11	
Middle	117	48	<0.001
HSC	37	15	
Diploma/degree	34	14	
Occupation			
House wife	173	70.9	
Daily labour	29	11.9	
Farmer	355	14.3	<0.001
Business	4	1.6	
services	3	1.2	
Age at marriage			
<18	15	6.1	
18-24	203	83.2	<0.001
25-29	25	10.2	
>30	1	0.4	
Husbands occupation			
Service	21	8.6	
Business	44	18	<0.001
Farmer	107	43.9	
Fisherman	29	11.9	
Daily labour	43	17.6	
Type of house			

Pucca	117	48	
Semi pucca	41	17	<0.001
kutcha	86	35	
Type of family			
Nuclear	164	67.2	<0.001
joint	80	32.8	
Socio occupational status			
ClassI	0	0	
ClassII	34	13.9	<0.001
ClassIII	67	27.4	
ClassIV	97	39.8	
ClassV	46	18.9	
Consanguinty			
Consanguinous	34	13.9	<0.001
Noo consanguinous	210	86.1	
Passive indoor smoking			
Present	0	0	<0.001
absent	244	100	
Confirmation of pregnancy			
Government facility	217	88.9	<0.001
Private facility	27	11.1	
Period of registration	147	60.2	
First trimester	89	36.5	<0.001
Second trimester	8	3.3	
Third trimester			
Parity			
1	101	41.4	
2	125	51.2	<0.001
3	17	7	
4	1	0.4	
Body mass index			
<19.9	36	14.7	
20-24.9	175	71.7	
25-29.9	29	11.9	<0.001
>30	4	1.6	
Hemoglobin level			
>11	73	29.9	
10-10.9	40	16.4	<0.001
8-9.9	110	45.1	
<8	21	8.6	
Blood pressure			
Normotensive	196	80.3	
Pre hypertensive	37	15.1	< 0.001
hypertensive	11	4.5	
Utilization of health			

services			
I no. of ANC visits			
3 or more	237	97.1	
2 or less	7	2.9	
II tetanus toxoid			<0.001
Yes	242	99.1	
No	2	0.9	
III IFA tablets			
<50	4	1.6	
50-100	53	21.7	
>100	187	76.6	