

Original Research Article

An observational study to assess obstetric services trends among pregnant women registered at a health centre of Chandigarh city

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ABSTRACT

Background: Maternal and child healthcare services are very important for the health outcomes of the mother and that of the child by ensuring that both maternal and child deaths are prevented. Present study has been planned to study the trend of utilization of antenatal care services among women registered at field practice area of Government Medical College & Hospital, Chandigarh.

Methods: Secondary data of pregnant women registered at field practice area of Government Medical College & Hospital, Chandigarh has been collected from records of respective health set up. Data has been analyzed to find out trend of different ANC service indicators like year of registration, season of registration, TT immunization, Parity, his risk behavior of pregnancy, JSY registration, MTP (medical termination of pregnancy), hemoglobin level etc.

Results: Out of all registration trend of registration of new pregnancy was almost similar during all four years (2013-2017). Although after careful analysis of data it more in rainy season (10.1%) in year 2013-14 whereas summer season reported more new pregnancies (10.4%) in the year 2016-17. out of total doses received of TT 1st dose among all reported pregnant women majority of doses (11.9%) received in summer season of year 2016-17 followed by 9.2% in rainy season of year 2013-14. Number of registration of pregnant women was almost equal among all years of registration.

Conclusions: It provides future direction to conduct more such studies to find out trend considering some public health related correlates. Simultaneously it also urges researchers to find out reasons of such trends in a bid to make results more applicable.

Keywords: Obstetrics service, Trend, Chandigarh

INTRODUCTION

Maternal and child healthcare services are very important for the health outcomes of the mother and that of the child by ensuring that both maternal and child deaths are prevented.¹

Many health programs have been launched in the country in last two-three decades for women and child health

care. Health care utilization overall, and for maternal health specifically, has improved in India mainly due to NRHM but Maternal mortality and morbidity continue to be high despite the existence of national programs which could be due to sub optimal levels of utilization of services especially amongst the rural poor and urban slum population.²⁻⁵ Studies have also found the need for such services is greatest, i.e., among disadvantaged populations.⁶⁻⁹ Various studies conducted worldwide and

in India have recognized socio-economic, demographic factors and service delivery environment as important determinants for the use of maternal health services.¹⁰⁻¹⁶

It is also a key priority in the new Sustainable Development Goals (SDGs), to be achieved through ending preventable maternal mortality (EPMM) strategies by 2030. The target is to reduce the MMR to less than 70 globally and to two-thirds from their 2010 baseline at national level.²

Antenatal care (ANC) is the essential preventive health care which allows regular check-ups to pregnant mothers by the doctors or midwives throughout the course of the pregnancy to achieve a healthy mother and healthy baby, thus reducing both maternal and infant mortality and morbidity.¹⁷ It is the endeavour of World Health Organization (WHO) and all national governments to provide the antenatal care to all pregnant women irrespective of their cast, creed and paying ability.¹⁸

Lot of research activities have been done by many authors to find out the various socio demographic factors which play a significant role in determining the determinants for utilization. Studies conducted by Roy, Danasekaran, Augus, Singh, Abosse, Edward, Viddler, Munuswamy, Gupta, Adhikari, Bhatia, etc. found that age, education, socio economic status, timing of registration, birth order, geographic areas, cultural factors, etc. have significant association with complete utilization of antenatal care.¹⁹⁻²⁹

In view of above, the present study has been planned to study the trend of utilization of antenatal care services among women registered at field practice area of Government Medical College and Hospital, Chandigarh.

METHODS

Study type: Observational secondary data based study.

Study area: Field practice area of Government Medical College and Hospital, Chandigarh.

Study duration

Study has been conducted from year 2013 to 2017.

Study population

Pregnant women registered at field practice area of Government Medical College and Hospital, Chandigarh.

Data collection and analysis

Secondary data of pregnant women registered at field practice area of Government Medical College and Hospital, Chandigarh has been collected from records of respective health set up. Data has been analyzed to find out trend of different ANC service indicators like year of registration, season of registration, TT immunization, parity, his risk behavior of pregnancy, JSY registration, MTP (medical termination of pregnancy), hemoglobin level etc. Predictor variable were year and season (rainy, winter and summer respectively) and rest all were dependent variables. All data has been analyzed using suitable statistical software.

RESULTS

Present study has tried to find out trend of TT immunization and new registration of pregnant females. Out of all registration trend of registration of new pregnancy was almost similar during all four years (2013-2017). Although after careful analysis of data it more in rainy season (10.1%) in year 2013-14 whereas summer season reported more new pregnancies (10.4%) in the year 2016-17.

On the other hand out of total doses received of TT 1st dose among all reported pregnant women majority of doses (11.9%) received in summer season of year 2016-17 followed by 9.2% in rainy season of year 2013-14. Majority of second dose of TT have been received in rainy season of year 2016-17 where majority of boosters doses were given in summer season of year 2013-14 (Table 1).

Table 1: Year wise and seasonal trend of TT immunization, new registration among all reported pregnant women.

TT immunization and new registration	Summer N (%)				Rainy N (%)				Winter N (%)				Total
	2013-14	2014-15	2015-16	2016-17	2013-14	2014-15	2015-16	2016-17	2013-14	2014-15	2015-16	2016-17	
New registration	223 (9.8)	163 (7.2)	192 (8.5)	235 (10.4)	229 (10.1)	174 (7.7)	171 (7.5)	167 (7.4)	191 (8.4)	178 (7.8)	173 (7.6)	158 (7.0)	2254
T.T. Ist dose	121 (8.4)	114 (7.9)	116 (8.0)	172 (11.9)	133 (9.2)	111 (7.7)	97 (6.7)	113 (7.8)	101 (7.0)	115 (8.0)	121 (8.4)	121 (8.4)	1435
T.T.IInd dose	83 (8.0)	69 (6.7)	109 (10.6)	129 (12.5)	79 (7.6)	59 (5.7)	82 (7.9)	103 (10)	66 (6.4)	77 (7.4)	86 (8.3)	86 (8.3)	1028
T.T. booster	46 (11.1)	31 (7.5)	37 (8.9)	34 (8.2)	34 (8.2)	28 (6.7)	26 (6.3)	34 (8.2)	36 (8.7)	36 (8.7)	42 (10.1)	28 (6.7)	412

Table 2: Year wise and seasonal trend among all reported pregnant women including parity and time of registration.

Parity and time of registration	Summer N (%)				Rainy N (%)				Winter N (%)				Total
	2013-14	2014-15	2015-16	2016-17	2013-14	2014-15	2015-16	2016-17	2013-14	2014-15	2015-16	2016-17	
Less than 12 wk	68 (6.5)	70 (6.7)	78 (7.4)	156 (14.9)	74 (7.0)	81 (7.7)	77 (7.3)	109 (10.4)	71 (6.8)	69 (6.6)	90 (8.6)	101 (9.6)	1044
Above 12 Wk	145 (12.09)	93 (7.7)	114 (9.5)	79 (6.5)	154 (12.8)	93 (7.7)	94 (7.8)	58 (4.8)	120 (10)	109 (9.0)	83 (6.9)	57 (4.7)	1199
Gravida Ist	79 (9.7)	44 (5.4)	59 (7.2)	73 (8.9)	115 (14.1)	82 (10)	66 (8.1)	58 (7.1)	50 (6.1)	69 (8.5)	60 (7.3)	57 (7.0)	812
Gravida IInd	73 (9.7)	39 (5.2)	53 (7.0)	47 (6.2)	90 (12)	66 (8.8)	70 (9.3)	57 (7.6)	60 (8.0)	66 (8.8)	62 (8.2)	47 (6.2)	748
Gravida IIIrd	47 (11.8)	17 (4.2)	39 (9.8)	21 (5.2)	43 (10.8)	38 (9.5)	25 (6.2)	43 (10.8)	26 (6.5)	21 (5.2)	36 (9.0)	41 (10.3)	397
Gravida IVth	15 (6.3)	4 (1.6)	12 (5.0)	72 (30.3)	48 (20.2)	13 (5.4)	8 (3.3)	9 (3.7)	16 (6.7)	11 (4.6)	16 (6.7)	13 (5.4)	237

Table 3: Year wise and seasonal trend among all reported pregnant women including JSY registration, hemoglobin level, MTP, high risk pregnancy and IUD insertion.

JSY registration, Hb level, MTP, High risk pregnancy, IUD	Summer N (%)				Rainy N (%)				Winter N (%)				Total
	2013-14	2014-15	2015-16	2016-17	2013-14	2014-15	2015-16	2016-17	2013-14	2014-15	2015-16	2016-17	
H.B.<7 gm	0 (00)	1 (7.6)	0 (00)	7 (53.8)	1 (7.6)	0 (00)	0 (00)	0 (00)	2 (15.3)	1 (7.6)	0 (00)	1 (7.6)	13
H.B.> 11 gm	100 (10.1)	70 (7.1)	103 (10.4)	56 (5.7)	149 (15.1)	88 (8.9)	73 (7.4)	61 (6.2)	37 (3.7)	96 (9.7)	96 (9.7)	52 (5.3)	981
Jsy registered	11 (10.57)	18 (17.3)	1 (0.96)	5 (4.8)	11 (10.5)	11 (10.5)	3 (2.8)	3 (2.8)	4 (3.8)	16 (15.3)	16 (15.3)	5 (4.8)	104
MTP >12 wk	0 (00)	3 (50)	0 (00)	0 (00)	1 (16.6)	0 (00)	1 (16.6)	0 (00)	0 (00)	0 (00)	1 (16.6)	0 (00)	6
MTP <12 wk	0 (00)	0 (00)	0 (00)	0 (00)	0 (00)	0 (00)	0 (00)	0 (00)	0 (00)	0 (00)	0 (00)	0 (00)	0
High risk	6 (3.2)	5 (2.7)	7 (3.8)	39 (21.1)	17 (9.2)	14 (7.6)	7 (3.8)	21 (11.4)	1 (0.5)	6 (3.2)	27 (14.6)	34 (18.4)	184
I.U.D.	0 (00)	0 (00)	0 (00)	0 (00)	0 (00)	0 (00)	1 (100)	0 (00)	0 (00)	0 (00)	0 (00)	0 (00)	1

Number of registration of pregnant women was almost equal among all years of registration, by far seasonal distribution is concerned majority of women (14.9%) less than 12 weeks reported in summer season of year 2016-17 and majority of women more than 12 weeks of pregnancy reported in rainy (12.8%) and summer (12.09%) season of year 2013-14. Majority of women registered in all years were primi gravida followed by multi gravida (gravida 2) (Table 2).

Majority of pregnant women were registered were having hemoglobin more than 11 gm/dL and around 104 women were also registered under JSY. Almost negligible pregnant opted for MTP (Medical termination of pregnancy). Out of all women around 184 women were having high risk pregnancy and majority of them were reported in year 2016-17 (Table 3).

DISCUSSION

Present study has been conducted to assess obstetric services trend among pregnant women registered at health centre of our field practice area.

Literature available across the world suggests that these factors can be identified as cultural beliefs, socio-demographic status, women's autonomy, economic conditions, physical and financial accessibility and health services issue.³⁰

Out of all registration trend of registration of new pregnancy was almost similar during all four years. It was more in rainy and summer season of year 2013-14 and 2016-17 respectively. Das et al found in their study that about 92.5% mothers got registered with Government

health centers which are little higher in comparison to 90% mothers as per NFHS-4 rural India.³¹ Studies have proven the more the women is educated, the more they are aware about their health, know more about availability of maternal health care services and use this awareness and information in accessing and availing the health care services.³²

Among all reported pregnant women majority of doses of TT 1st dose received in summer season of year 2016-17 followed by rainy season of year 2013-14. Majority of second dose of TT have been received in rainy season of year 2016-17 where majority of boosters doses were given in summer season of year 2013-14.

Das et al found 87.7% mothers had taken 2 tetanus injections which is similar to both NFHS-4 rural India.³¹ Deepak, et al found in their study that utilization of maternal health care services like ANC registration, Registration at Govt. facility, consumption of IFA (more than 100 tablets), at least one dose of tetanus toxoid is found to be better in our study in comparison to annual health survey (2nd update 2012-13).³²

Number of registration of pregnant women was almost equal among all years of registration, by far seasonal distribution is concerned majority of women of pregnancy less than 12 weeks reported in summer season of year 2016-17 and majority of women more than 12 weeks of pregnancy reported in rainy and summer season of year 2013-14. Patel et al found only 20% entered ANC before 12 weeks of gestation.³³ This was half the number reported in an Australian study in 2004 but similar to studies reported in parts of the developing world. The mean gestational age at the time of antenatal registration was still very high but somewhat lower compared to some studies from developing countries.³⁴⁻³⁶ These results indicate a poor appreciation of the importance of early registration as recommended by WHO.

Majority of women registered in all years were primi gravida followed by multi gravida. Patel et al found that 70.5% were parous and 29.5% were nulliparous. Antenatal care behaviour of nulliparous women is largely influenced by their mother who would discourage early antenatal care seeking behaviour.³³

Majority of pregnant women were registered were having hemoglobin more than 11 gm/dL. The low prevalence of anemia in the present study may be related to more frequent iron supplementation consumption. Since the women had more visits for prenatal care so in each visit they were encouraged to take their supplements. Therefore, it seems that iron deficiency anemia is relatively lower in this study in compared to other studies. Tabrizi et al demonstrated that the prevalence of anemia is 20.2% among Iranian pregnant women in Urmia. Other studies have shown a higher degree of anemia in pregnancy such as 87% in India, 58.6% in China, 50% in South Asia, and 43% in Turkey.³⁷

Hospital based study on all reported pregnant women were few of limitations of this study.

CONCLUSION

This study was an observational study to assess the trend of different obstetrics services and it more specifically focused on seasonal trend of services. It provides future direction to conduct more such studies to find out trend considering some public health related correlates. Simultaneously it also urges researchers to find out reasons of such trends in a bid to make results more applicable.

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Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

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