International Journal of Medical and Pharmaceutical Research
Website: https://ijmpr.in/ | Print ISSN: 2958-3675 | Online ISSN: 2958-3683
NLM ID: 9918523075206676
Volume: 4 Issue:4 (July-Aug 2023); Page No: 310-313

Original Article

IJMPR

To Estimate Fertility Pattern and Service Utilization in Reproductive Age Group Women in Area Covered Under Jodhpur Urban Health Centre - A Descriptive Cross-Sectional Study

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ABSTRACT

Introduction: Assessing fertility on individual basis vs population basis is much different. Studying fertility behaviour of a given time gives shape to the future age-sex structure and studying fertility pattern can be used to plan various welfare programs, government programs. This study aims at estimating the fertility pattern of the study population and their various government services and program utilization in the area of Ranujanagar and Gokula was covered under Jodhpur Urban Health Training Centre. **Aims and objectives**: To estimate fertility pattern and various health care service utilization. **Methodology**: A descriptive cross sectional type of study design. From the sample frame of reproductive age group women a purposive random sampling of 250 participants was drawn. **Results**: Mean age of the study participants was 27.72 years with standard deviation of 8.56 years. 10.4% participants were illiterate, 6% were graduate and rest had achieved primary to secondary level of education. Out of 164 aanganwadi registered women bearing at-least 1 child 77 women (72%) were consuming IFA tablets. Most common reason for not consuming IFA tablets was unawareness of iron folic acid supplementation. Majority of study participants preferred going to private hospitals for availing various ANC related services. **Conclusion**: Significant proportion of early marriages and poor service utilization was reported among the study participants.

Key Words: *Fertility indicators, service utilization, urban health centre, early marriages, reproductive age women.*

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INTRODUCTION:

Interpreting population becomes very subjective. It is one of the aspects where a country thinks twice before wishing to see its name on the leader-board. Population in turn depends of wide array of factors. One such factor is fertility of the population. Assessing fertility on individual basis vs population basis is much different. Studying fertility behaviour of a given time gives shape to the future age-sex structure and studying fertility pattern can be used to plan various welfare programs, government programs related to RMNCHA+ programs and population related measures.

Total fertility rate of china decreased from 5.81 in 1970 to 1.30 in 2020. This in turn depends on age at marriage. Higher the age at marriage the fertility decreases [1].

Thus it is necessary to study the fertility pattern of a population which also helps in further planning of services and government programs. This study aims at estimating the fertility pattern of the study population and their various government services and program utilization.

Aims and Objectives:

-To estimate fertility patterns.
-To estimate different health care service utilization provided under various government schemes.
-To compare findings with national average.

Methodology:

This is a descriptive cross sectional type of study design conducted in the area of Ranujanagar and Gokula was covered under Jodhpur UHTC. From the sample frame of reproductive age group women a purposive random sampling of 250 participants was drawn.

A semi-structural questionnaire was prepared and responses were collected by doing house to house survey. Fertility pattern was assessed by calculatingLive Birth Rate,Abortion Ratio, Child : Woman Ratio, General Fertility Rate, Age Specific Fertility Rate, Total Fertility Rate and Gross Reproductive Rate. Service utilization questions were asked to respective beneficiaries of different services;ANC questions to all antenatal women and ever pregnant females, spacing questions to married women with 2 children and those with >2 children, aanganwadi related questions toall antenatal women ever pregnant and adolescents.

Prior informed consent was taken from every person and those who did not give the consent were excluded from the study.

Results:

Table-1: Sociodemographic Distribution:

	Factor	Range	Mean+/-Std deviation
1)	**Age(yrs)**	15-45	27.72+/-8.56
2)	**Income per Capita**	150-10000	3306.42+/-1662.34
3)	**BMI Grouping**		
	BMI Group	**Frequency**	**Percentage (%)**
	<18.5	58	23.2
	18.5- 24.99	105	42.0
	25-29.99	73	29.2
	29.99-34.99	9	3.6
	>34.99	5	2.0
4)	**Educational Level**		
	Education level	**Frequency**	**Percentage (%)**
	Illiterate	26	10.4
	Primary (up to 8 std.)	102	40.8
	Secondary	107	42.8
	Graduate	15	6.0
5)	**Age at marriage**		
	Age & marital status	**Frequency**	**Percentage (%)**
	<18years but married	43	17.2
	>18years and married	133	53.2
	Unmarried	74	29.6
6)	**Birth Spacing**		
		Frequency	**Percentage (%)**
	<3 years	54	21.6
	>3 years	69	27.6
	NA	127	50.8

The above table shows the sociodemographic distribution of study participants. Mean age of the study participants was 27.72 years with standard deviation of 8.56 years. Study participants were earning Rs.3306.42 with standard deviation of Rs.1662.34 per capita. 42% of study participants were having normal BMI, 23.2% with below normal BMI while 34.8% participants were found to have above normal BMI. 10.4% participants were illiterate, 6% were graduate and rest had achieved primary to secondary level of education. 17.2% participants were such that who were married below the legal age of marriage (i.e. <18 years of age). Adequate birth spacing (>3 years) was found in 27.6% of total participants.

Table-2: Fertility Pattern

1)	**Sex ratio**	776
2)	**General Fertility Rate**	92
3)	**Age specific fertility rate**	Rate (age group in years)
		0 (15-19)
		176.4 (20-24)
		139.5 (25-29)
		205.8 (30-34)

		25 (35-39)
		0 (40-44)
		0 (45-49)
4)	**Total Fertility Rate**	2.5
5)	**General Reproduction Rate**	1.08
6)	**Abortion : Live Birth Ratio**	7:25
7)	**Child : woman Ratio**	81:250

Service Utilisation:

Out of 68 Adolescent participants, 33.8% (23) girls were registered in Aanganwadi. Out of 23 registered adolescent, 16 (69.5%) were taking and using 'Take Home Ration' and only 1 utilizes the benefits of weekly aanganwadi program. Proportion of utilizations of Iron Folic Acid Tablets were 61.1%, 52.1%, 41.1% among School going girls, aanganwadi registered girls and those who were neither school going nor aanganwadi registered respectively. Most common reported reason for not consuming Iron Folic Acid Tablets was their unawareness regarding IFA tablets (45.4%) followed by 'not getting from aanganwadi (27.7%) and 'bad taste' and 'not feeling the need to consume it' (9% each).

Out of 164 aanganwadi registered women bearing at-least 1 child 77 women (72%) were consuming IFA tablets.

Table-3: ANC Checkup and Place of Delivery

ANC Check-up (among 143 women who were ever pregnant)		
	Frequency	Percentage
Government Sub Center	3	2.09
Primary Health Center	5	3.49
Government Hospital	43	30.06
Private Clinic	92	64.33
Place of Delivery (out of 163 women with at-least 1gravida current or past)		
Home	26	15.95
Government Hospital	48	29.44
Private Hospital	89	54.6

Above table shows that mainly Private hospitals were approached for ANC checkup (64.3%) and conducting delivery (54.6%).

Table-4: Services utilized by adult females

1)	**Services Utilization**			
		Pregnant women (out of 16)	Infants mother (out of 23)	Others (out of 128)
	Physical Examination	87.5%	82.6%	52.3%
	Weight Measurement	87.5%	91.3%	69.5%
	Measuring Blood Pressure	93.75%	73.9%	74.2%
	Laboratory Reports	100%	95.6%	74.2%
	Iron Folic Acid Tablets	75%	78.2%	82.8%
	TT Vaccine	87.5%	86.9%	85.9%
2)	**Advices Received**			
	Nutrition	11.2%	6.9%	34.3%
	Place of Delivery	3.75%	6.5%	3.1%
	Baby	3.75%	8.2%	36.7%
	Breast feeding	3.75%	4.3%	15.6%
	Complications	3.1%	4.3%	21.0%
	Kangaroo Mother Care	3.1%	2.6%	2.3%
	Breast Examination	3.1%	4.3%	6.25%
	Government Scheme	1.8%	3.4%	11.7%
	Family Planning	1.8%	1.3%	6.25%

From above table it is evident that service utilization of services like Physical Examination, Blood pressure measurement, Laboratory reports and TT vaccine was found proportionately more among Pregnant women as compared to Mothers of infants and other adult female.

Table-5: Utilization of government schemes

Sr. no.	Schemes	Overall eligible	Utilized by
1	Janani Suraksha Yojna	114	16 (14%)
2	CheeranjiviYojna	114	10(8.7%)
3	Bal Sakha	114	44 (38.6%)
4	MamtaSakhi/ghar	166	33(19.9%)
5	National Iron plus initiative	250	90(36%)
6	RashtriyaPariwarNiyojan	151	3(1.9%)
7	Mother Absolute Affection	166	72(43.4%)

Above table shows that Mother Absolute Affection (43.3%) and Bal Sakha (38.6%) are the first two maximally utilized schemes while Rashtriya Pariwar Niyojan (1.9%) is the least utilized scheme.

Among participants who had undergone only Primary level of education, inadequate spacing (<3 years) was found to be more prevalent (52.3%). While among rest of the educationally divided groups, proportion of adequate spacing of pregnancies was found to be more, 56.5% (22/39), 58.1% (36/62) and 100% (1 out of 1 participant) of illiterate, secondary education and graduate people. This result was found to be statistically insignificant when assessed by Chi square test.

DISCUSSION:

There is a healthy distribution of age specific fertility rate being higher in the middle age group as compared to very young or even adolescent and late middle age group.

Total fertility rate (2.5) found in the study population was found to be higher than the total national average (2.3) and urban national average (1.8)[2]. Talking about age specific fertility rate, across all reproductive age groups the rate was less than the national average except for age group 30-34 years (205.8 vs 63.9) and 35-39 years (25 vs 22.0) where it was found to be more than the national average. Age specific rate in the married female under legal age (15-19 years) was found to be '0' (28.1 national average) [2].

Majority of the study participants' inclination was towards private hospitals for ANC checkups (64.33%) and conduction of labor (54.6%) this could be due to urban setup of study participants. Person's area of living and health system can have an impact on their preference of opting government vs private health care which is reflected by findings of various studies; in one such study it was found that 92% of women living in tribal area in a south Indian district were using ANC services from the government source [3].

Prevalence of institutional delivery was found to be around 84% in this study which was significantly higher than the national average of 74% observed in one study done by using secondary data obtained from NFHS-4.[4]

CONCLUSION:

Poor sex ratio (776) than national average of 909 (in 2013). A significant proportion of early marriages were seen inspite of existence of laws against such acts. Still many pregnant woman had non-institutional deliveries. Utilization of different government programs was very less among the study participants.

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