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## A study on obstetric profile of antenatal mothers in a community: Cross sectional study

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### Abstract

In most developed countries, pregnancies are planned, complications are few and outcomes are generally favourable for both mother and infant. Adverse outcomes are far more frequent in the developing world. The most severe adverse outcome of pregnancy is the death of the mother or her offspring. The adverse pregnancy outcome means those pregnancies which terminate causing high risk to the mother and child's health and life. Worldwide the number of neonatal deaths decreased from 5.1 million in 1990 to 2.5 million in 2017. However, the decline in neonatal mortality from 2000 to 2017 has been slower (41%) than that in post-neonatal mortality (60%) globally. This survey was carried out in the Kudathini Village, which is the rural field practice area situated 16 kms from VIMS Ballari. Ballari is a district in the southern part of Karnataka. There are 19.2% of study subjects who got married below the age of 18 years and the remaining 80.7% were married after 18 years of age. The percentage of consanguinity in marriage is 5.6% and rest 94.3% are non-consanguineous marriage. The duration of married life of most of the study subjects' i.e, 48.6% belonged to 1-5 years duration followed by more than 5 years i.e, 28.2% and rest of 4.2% were married for less than a year.

**Keywords:** Obstetric profile, Antenatal mothers, Community

### 1. Introduction

Government of India also adopted the Reproductive, Maternal, New-born, Child and Adolescent Health (RMNCH+A) framework in 2013, It essentially aims to address the major causes of mortality and morbidity among women and children. This framework also helps to understand the delays in accessing and utilizing health care services. <sup>[1]</sup>

Based on the framework, comprehensive care is provided to women and children through five pillars or thematic areas of reproductive, maternal, neonatal, child, and adolescent health. The programmes and strategies developed by various divisions are guided by central tenets of equity, universal care, entitlement, and accountability to provide 'continuum of care' ensuring equal focus on various life stages. <sup>[2]</sup>

Following this strategy, the Maternal Health Division strives to provide quality services to pregnant women and their new-borns through various interventions and programmes, building capacity of health personnel and routine health systems strengthening activities <sup>[3]</sup>.

Even after giving the maternal and child health the prime importance in all the strategies, national programs, national policy, MDG and SDG, the maternal and child mortality figures remains on higher side, especially in the developing countries.

In most developed countries, pregnancies are planned, complications are few and outcomes are generally favourable for both mother and infant. Adverse outcomes are far more frequent in the developing world. The most severe adverse outcome of pregnancy is the death of the mother or her offspring. <sup>[4]</sup>

The adverse pregnancy outcome means those pregnancies which terminate causing high risk to the mother and child's health and life.

Worldwide the number of neonatal deaths decreased from 5.1 million in 1990 to 2.5 million in 2017. However, the decline in neonatal mortality from 2000 to 2017 has been slower (41%) than that in post-neonatal mortality (60%) globally.

Overall, to meet the target of neonatal mortality rate of 12 deaths per 1000 live births by 2030 for SDG, 52 countries need to put more efforts.

Reducing neonatal mortality in India is critical to achieving the 2030 Sustainable Development Goal of a global neonatal mortality rate (NNM) of no more than 12 per 1,000.

## Methodology

**Study setting:** This survey was carried out in the Kudathini Village, which is the rural field practice area situated 16 kms from VIMS Ballari. Ballari is a district in the southern part of Karnataka.

Kudathini primary health center caters a population of 52,000. Kudathini has a population of around 18,125 of which 9661 are males and 8554 are females as per population censuses 2011. The area of this is divided as Kudathini A and Kudathini B. There are total of 6 sub-centers under this PHC.

The daily number of out patients is around 150-200. It has an inpatient ward with 10 beds. It serves as rural health training Centre (RHTC) and field practice area for paramedicals, nursing, undergraduates, interns and post graduates.

## Study design

**A Cohort study:** All the Antenatal mothers who are residents of kudathini and had registered themselves at PHC during the first trimester between 1<sup>st</sup> October 2018 to 31<sup>st</sup> August 2019.

## Inclusion criteria

- All the Antenatal mothers residing at Kudathini Village during the study period.
- All the Antenatal mothers who had registered at PHC during 1<sup>st</sup> trimester.

## Exclusion criteria

- Who were not willing to participate.
- Pregnant mothers who could not be traced even after repeated visits.

**Sample size:** All the Antenatal mothers who had registered at PHC during the first trimester between 1<sup>st</sup> October 2018 to 31<sup>st</sup> August 2019.

The total number of study subjects were 286.

## Results:

**Table 1:** Mean age of menarche and the duration of cycle

Variable	Mean± Std. Deviation
Age at menarche	12.654±0.612
Duration of cycle	28.948±5.1245

Mean age of attainment of menarche is 12.6±0.6 and the mean duration of the cycle is 28.9±5.1.

**Table 2:** Distribution of the Antenatal Mothers based on their pattern of menstrual cycles

Menstruation	Frequency	Percent
Regular	144	50.3
Irregular	150	52.4
Total	286	100.0

When looked for the before conception menstrual status of study subjects 50.3% had regular cycles and 52.4% had irregular menstrual cycles.

There are 19.2% of study subjects who got married below the age of 18 years and the remaining 80.7% were married after 18 years of age. The percentage of consanguinity in marriage is 5.6% and rest 94.3% are non-consanguineous marriage. The duration of married life of most of the study subjects i.e., 48.6% belonged to 1-5 years duration followed

by more than 5 years i.e., 28.2% and rest of 4.2% were married for less than a year

**Table 3:** Distribution of Antenatal Mothers based on their age at marital history

Marital status	Frequency	Percent
<b>Age at Marriage</b>		
Less than 18	55	19.2
18 & Above	230	80.7
<b>Type of marriage</b>		
Consanguineous	16	5.6
non consanguineous	269	94.3
<b>Marriage duration</b>		
Less than 1 Yr	12	4.2
1yr to 5yr	193	48.6
More than 5 yr	81	28.2

**Table 4:** Distribution of Antenatal Mothers based on gravida

Gravida	Frequency	Percent
G1(Primi)	115	40.2
G2	106	37.1
G3	51	17.8
G4	11	3.8
G5	3	0.1
Total	286	100.0

It is seen that 40.2% mothers were primi gravida and 58.8% were multi gravida.

**Table 5:** Details about previous pregnancy maternal and fetal history and their outcome

Previous pregnancy	Frequency	Percent
<b>A. Maternal history</b>		
<b>Gestation age</b>		
a) Term	144	84.2
b) Preterm	22	12.9
c) Post term	5	2.9
<b>Mode of delivery</b>		
a) FTND	140	81.8
b) LSCS	31	18.2
<b>Abortions/still birth</b>	15	8.8
<b>B. Fetal history</b>		
<b>Cry</b>		
a) Immediately	138	88.4
b) Delayed	18	11.5
<b>Gender</b>		
a) Male	63	40.3
b) Female	93	59.7
<b>Weight of baby</b>		
a) Normal	150	96.2
b) LBW	5	3.2
c) VLBW	1	0.6

Antenatal mothers who are gravida 2 i.e., 171(59.7%), the previous pregnancy history is noted. 84.1% had term gestation, whereas 12.9% had preterm and 2.9% had post term pregnancy. Vaginal delivery was seen in 81.7% and 18.2% underwent caesarean section.

Among these previous pregnancies 8.8% got aborted/still born.

Live born babies were 156(91.2%). Among them 88.4% cried immediately after birth whereas 11.5% had delayed cry. Female babies were 59.7% followed by male babies 40.3%. Majority of the newborn weighed normal i.e., 96.2% followed by low birth weight i.e., 3.2% and then 0.6% were very low birth weight babies.

## Discussion

As per the 2011 census report, in India about 3.7% females are married below the age of 18 years and the remaining 96.3% were married after 18 years of age. The statistics of Karnataka tells that 3.8% of the females are married below the age of 18 years and rest of them i.e. 96.2% were married after 18 years of age.<sup>[7]</sup>

In the present study it is seen that 19.2% of study subjects got married below the age of 18 years and the remaining 80.7% were married after 18 years of age.

A study which was carried out in Madhya Pradesh, India, showed that 30% of women got married below 18 years of age and 70% were married above the age of 18 years.<sup>[8]</sup>

There is a difference in the trend of age at marriage.

According to NFHS 4 data, the consanguineous marriages were noted to be 26.4% whereas the remaining 73.6% were non-Consanguineous marriages.<sup>[9]</sup>

Whereas in the present study 5.6% of marriages are Consanguineous and 94.3% were non-Consanguineous type of marriage.

Consanguineous marriages are less when compared to NFHS data.

In the present study, it was seen that 40.2% mothers were primi gravida and 58.8% were multi gravida.

A study conducted in a tertiary care hospital of Himachal Pradesh showed that 57.7% were primi gravida and 43.3% were multi gravida.<sup>[10]</sup>

Another study which was conducted at a tertiary care hospital of northern India, the distribution study subjects of based on gravida was as follows, 39.8% were primi gravidas and the remaining 60.2% were multigravida, which is almost similar to the present study findings

In an article which considered the birth cohort of India, showed that 35.8% were primigravida and 64.2% were multigravida.<sup>[11]</sup>

In the present study among the 286 Antenatal Mothers, 136 i.e.47.5% antenatal mothers had high risk pregnancy. Most of the mothers i.e. 44.9% had anaemia as risk factor followed by hyperemesis gravidarum which was seen in 35.3% mothers, miscarriage was seen in 5.1%, multiple pregnancy in 2.9%, pregnancy induced hypertension in 2.2%, gestational diabetes mellitus and illness was seen with equal percentage of 1.5% and 0.7% accounted for hypothyroidism.

A study which was conducted in rural primary health centre in Puducherry, South India showed 18.3% prevalence of high risk pregnancy. Major cause for the high-risk pregnancy was maternal age in which 6.2% belonged to either younger primi (age <20 years) or elderly gravida (age >35 years), followed by hypertensive disorders i.e. 3.1%, 1.9% had gestational diabetes mellitus, 1.7% had severe anemia, 1.6% had previous history of lower segment cesarean section, twin or multiple pregnancy and hypothyroidism was seen equally in 1.4% mothers, 1.0% had Rh incompatibility, and 0.5% had bad obstetric history.<sup>[12]</sup>

Another study which was conducted at Madhya Pradesh, showed that the high risk pregnancy was present in 26% of mothers and 74% of mothers were non high risk.<sup>[8]</sup>

A study conducted at a tertiary care university teaching hospital in southern India, showed that 40.2% had high risk pregnancy, among them most common were thyroid disorders i.e. 27.3% followed by gestational diabetes which was 16.1%, bad obstetric history accounted for 12.6% and

10.7% were anemic.<sup>[13]</sup>

## Conclusion

- The mean age of attainment of Menarche was 12.6±0.6 and the mean duration of the cycle was 28.9±5.1 with 52.4% mothers having irregular cycles before the conception.
- In majority of the study subjects i.e. 80.7% the age at marriage was above 18 years. The Consanguineous marriage was seen in 5.6% of the mothers.
- Most of the antenatal mothers i.e.58.8% were multigravida.

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