

Prevalence Of High Risk Pregnancy In Rural Dharwad

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Abstract:

High risk pregnancy is broadly defined as one in which mother, fetus or newborn is or will be at increased risk for morbidity or mortality before or after delivery. Although only 10-30% of the mothers seen in antenatal period can be classified as high risk they account for 70-80% of perinatal mortality and morbidity. Aim of the study is to know the prevalence of high-risk pregnancies and its association with socio-demographic factors in rural field practice area, which are attached to Department of Community Medicine, SDM College of Medical Sciences and Hospital, Dharwad. Pregnant women who are attending health centers in that particular area are the participants of the study. Data was collected from 1st August – 31st October 2013. A pre-designed, pre-tested proforma was used to collect information regarding socio-demographic characteristics and obstetric history. Height, weight, BP was recorded, general physical and systemic examination was done. Haemoglobin estimation was done by Sahli's method. The prevalence of high risk pregnancy was found to be 37%, comparatively higher than study done in rural Haryana. Hypertension was seen in 10.8% of high risk pregnancy cases in current study as compared to 22% reported in a study done in rural Haryana.

Key words: Girl's education, High risk pregnancy, Prenatal mortality and morbidity, Rural Karnataka, Socio-economic status.

I. Introduction

High-risk pregnancy is defined as one which is complicated by a factor or factors that adversely affect the pregnancy outcome-maternal or perinatal or both ^[1]. Among the mothers seen in antenatal period, only 10-30% of mothers are been classified as high risk, Out of those mothers, 70 -80% end up with perinatal mortality or morbidity ^[2]. One of the most important public health issues in the developing countries is perinatal mortality ^[3]. Recent studies have shown that still perinatal mortality and morbidity is high in India ^[4]. It shows high risk pregnancy is one of the leading causes to increase the perinatal mortality and morbidity. While assessing the risk of any pregnancy some of the medical history like age, parity, social class and past obstetric history etc should be taken into account. Early detection of high risk pregnancy followed by special intensive care will show a significant change in the perinatal outcome ^[5]. Treating high risk pregnancies with extra attention and proper care will give a significant decrease in the maternal mortality and morbidity ^[6].

According to SRS survey the perinatal mortality of urban India 17, in urban Karnataka 20, where as in rural India it is 31, and in rural Karnataka it is 40 per 1000 live births and still births ^[6]. Above data was reveals that perinatal mortality rate is much higher in rural than the urban. The main objective of the study is to know the prevalence of high risk pregnancy and to find its association with socio demographic factors like education and socio economic status in rural field practice area of SDM College of medical sciences and hospital, Dharwad.

II. Material And Methods

2.1 Study area: Rural field practice area of SDM College of Medical Sciences and Hospital, Dharwad.

2.2 Study period: 1st August 2013 – 31st October 2013.

2.3 Study design: Cross-sectional

2.4 Sample Size: Assuming prevalence of high risk pregnancy as 50% and relative precision as 20% of p at level of significance of 95%, using formula for sample size $n=4pq/l^2$, a sample of 100 eligible subjects were taken into consideration.

2.5 Study Population: All pregnant women who were residing in the study area since 6 months and registered in 5 sub-centers located of rural field practice area at that point of time were included. All participants provided written informed consent.

2.6 Data Collection Method: A pre-tested, semi-structured proforma was used for interviewing the study subjects. The proforma included information on socio-demographic profile, relevant obstetric & medical history.

Physical examination of pregnant women was done and parameters like weight, height and blood pressure were recorded. Hemoglobin estimation was done by using Sahli's method. A few days prior to the first visit to each sub-center, the health worker was contacted and was asked to prepare a list of all pregnant women from their records. She was told to inform the pregnant women to come to the sub-center on a pre-fixed date and time for the check-up.

2.7 Inclusion criteria: Pregnancy was considered as high risk if any one of the following criteria was met. Age > 30 years, height <140 cm, parity beyond 4, obstetric history poor such as two or more previous abortions, previous still birth, previous preterm birth, previous history of birth with congenital anomaly, previous caesarian section, hypertension in pregnancy and history of chronic medical disorders like severe anaemia, diabetes, thyroid disorders [7].

Statistical Analysis Data thus collected were compiled & analyzed using IBMSPSS version 20.0. Categorical data was presented as percentage (%). Pearson's chi square test was used to evaluate differences between groups for categorized variables.

III. Results And Discussion

Table 1: Distribution of the study participants by socio-demographic characteristics (N=100)

Socio-demographic characteristics	No. of study participants (%) (n=100)
Age (years)	
≤ 20	22(22)
20-25	62 (62)
25-30	14 (14)
30-35	0 (0)
> 35	2 (2)
Education	
Illiterate	1 (1)
Primary	39 (39)
Higher education	43 (43)
secondary education	12 (12)
Graduate and above	5 (5)
Socioeconomic status (modified B.G Prasad classification)	
Upper class	1 (1)
Upper-middle class	13 (13)
Middle class	24 (24.)
Lower-middle class	35 (35)
Lower class	27 (27)

The prevalence of high risk pregnancy was found to be 37% comparatively higher than a study done in Rural Haryana.

Socio-demographic characteristics of the study participants [Table 1] revealed that majority of study participants (62%) belonged to age group 20- 25 years. Less than 2 percent of study participants were in the age group of >35 years. Around 43 study participants were studied up to 10th class (higher education). Out of the total, 1% of study participants were illiterate. Most of the study participants were housewives. Majority of the study subjects belonged to lower middle class (35%) and lower class (27%).

Table 2: Quantitative parameters of study participants (N= 100)

Parameters	Mean (SD)
Age [In years]	23.08(±3.1)
Height [In cm]	150.99(±6.1)
Weight [In kilogram]	46.84(±7.7)
Systolic blood pressure [in mm of Hg]	108.60(±7.2)
Diastolic blood pressure [in mm of Hg]	70.50(±7.7)
Hemoglobin [In gm/dl]	10.48(±1.1)

Mean age, height & weight of study participants were 23.08 years (±3.1), 150.99 cms (±6.1) & 46.84 kgs (±7.7) respectively. Mean systolic & diastolic blood pressure were 108.60 mm of Hg (±7.2) & 70.50 mm of Hg (±7.7) respectively. Mean hemoglobin was 10.48 gm/dl (±1.1) (Table 2).

Table 3: Distribution of High-risk pregnancies by risk factors (N=37)

s.no	Type of the risk factor	No of study participants (N=37)
1	Age> 30	2 (5.4%)
2	Parity>4	2 (5.4%)
3	Height<140 cm	15(40.5%)
4	History \geq 2 abortions	11(29.7%)
5	History of still birth	3(8.1%)
6	H/O Preterm delivery	5(13.5%)
7	H/O Cesarean section	5(13.5%)
8	H/O Birth with congenital anomalies	2(5.4%)
9	Hypertension in pregnancy	4(10.8%)
10	H/O chronic medical disorders	4(10.8%)

Among 37 high risk pregnancies [Table 3], most common risk factor seen was history of ≥ 2 abortion 11(29.7%) followed by height < 140 cm 15(40.5%), hypertension in pregnancy 4(10.8%), history of chronic medical disorders 4(10.8%), Parity ≥ 2 (5.4%), history of pre-term birth 5(13.5%), history of still birth 3(8.1%), history of caesarean section 5(13.5%), history of birth with congenital anomaly 2 (5.4%), and age > 30 2 (5.4%), In the present study, among high risk pregnancies, hypertension was seen in 10.8% of cases as compared to 22% reported in a study done in rural Haryana. The risk of high blood pressure, and gestational diabetes were higher among pregnant women who are more than 35 years of age. If pregnant women had preterm birth, baby with birth defects, previous abortion(s), previous stillbirth, and previous caesarean section in here previous pregnancies they are more likely to have a same problem in subsequent pregnancies^(8, 9, and 10)

Table 4: Association of High risk pregnancy with education status

s.no	Education Status	High risk pregnancy	Non high risk pregnancy	TOTAL
1	Up to higher school	26(46.4%)	30(53.6%)	56(100%)
2	Secondary and above	11(25.6%)	32(74.4%)	43(100%)
	Total	37	62	99

$X^2=4.516$, df =1, p= 0.0336-significant.

Prevalence of high risk pregnancy [Table 4] was found significantly more in pregnant women who studied up to 10th class 26(46.4%) when compared to those who had secondary and above educational status (25.6%). This result was consistent with findings from study in rural Haryana. It is known that education of women plays an important role in taking nutritious diet, spacing between children, proper antenatal check-ups and early recognition of symptoms of complications and seeking medical care. Educated women build a better rapport with health professionals and are motivated for safe motherhood^[11].

Table 5: Association of high risk pregnancy with socioeconomic status

S.NO	Socioeconomic status	High risk pregnancy	Non high risk pregnancy	TOTAL
1	Lower(iii+iv+v)	28(45.2%)	34(54.8%)	62(100%)
2	Upper(i+ii)	9(23.6%)	29(76.3%)	38(100%)
	Total	37	63	100

$X^2=4.516$, df =1, p= 0.0308-significant.

In present study prevalence of high risk pregnancy in the lower socio-economic group 28(45.2%) was found significantly higher than the upper socio-economic group 9(23.6%) (Table 5). These findings were similar to the rural Haryana and Gujarat studies where high risk pregnancy was more in low socioeconomic status^(6, 12). These results show that low socioeconomic status is an important factor for high risk pregnancies. This may be because; they are less likely to consume a healthy diet and access to appropriate medical care.

IV. Conclusion

Our study shows that approximately 4 out of 10 pregnant women in the rural area of Karnataka had one or more risk factors for high risk pregnancy which affects the maternal and fetal outcome. Prevalence of high risk pregnancy was found significantly higher in lower education group and lower socio-economic status. Knowledge regarding risk factors gives proper awareness of the population. Educating the girls can be one of the effective interventions to reduce the prevalence of high risk pregnancies. Active involvement of health care professionals is essential in motivating pregnant women for safe motherhood. Early diagnosis and treatment through regular antenatal checkup is a key factor to prevent high risk pregnancy and its complications. Therefore a sound screening and comprehensive strategies are necessary to find out high risk pregnancy cases and prevent maternal and child complications. A systematic approach is required to reduce the prevalence in high risk pregnancies from the policy makers.

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