Original Research Article

DOI: http://dx.doi.org/10.18203/2394-6040.ijcmph20171359

Prevalence of high risk among pregnant women attending antenatal clinic in rural field practice area of Jawaharlal Nehru Medical College, Belgavi, Karnataka, India

Jaideep K. C.*, Prashant D., Girija A.

Department of Community Medicine, Jawaharlal Nehru Medical College, KLE University, Nehru Nagar, Belagavi, Karnataka

Received: 12 February 2017 Accepted: 06 March 2017

*Correspondence: Dr. Jaideep K.C.,

E-mail: chaubeyjaideep@gmail.com

Copyright: © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Background: In India about 20-30% pregnancies belong to high risk category, which is responsible for 75% of perinatal morbidity and mortality. Early detection and effective management of high risk pregnancy can contribute substantially to reduction in maternal mortality. Objective was to study the prevalence of high risk among antenatal women and also to know the socio demographic factors associated with high risk.

Methods: A cross-sectional study was carried out between Jan. to June 2016. A total of 600 pregnant women attending antenatal clinic in PHC Kinaye were interviewed using predesigned, pretested questionnaire.

Results: In present study, prevalence of high risk pregnancy was 30.7% and 59.8 were having bad obstetric history, 4% were having pregnancy induced hypertension, 5.5% were elderly gravida, 3.2% were Rh negative and 22.3% were having other risk factors. Factors such as education status of pregnant women, age at pregnancy and parity of pregnant women were found to be significantly associated with the prevalence of high risk.

Conclusions: Prevalence of high risk among pregnant women was found to be 30.7%. Detection of high risk in early stages will help in preventing maternal mortality.

Keywords: Prevalence, High risk, Pregnant women

INTRODUCTION

High-risk pregnancy is defined as one which is complicated by factor or factors that adversely affects the pregnancy outcome (maternal, perinatal or both). Although only 10-30% of the mothers seen in antenatal period can be classified as high risk but they account for 70-80% of perinatal mortality and morbidity. Every year nearly 529000 women die globally due to pregnancy related causes. For each death nearly 118 women suffer from life threatening events or severe acute morbidity. Perinatal outcome can be changed significantly by early detection followed by special intensive care of high risk pregnancies. All pregnancies should therefore be evaluated to know whether there are or will be risk

factors.³Age, parity, social class, Mothers who have a history of chronic disease (diabetes, hypertension, heart disease, etc.) or those with a history of previous pregnancy problems (abortion and still birth) and also multiple pregnancies, gestational age under 18 or over 35 years, pregnancy more than 4 times are some of the factors that should be taken into account while assessing the risk for any pregnant woman.⁴ Early age and frequent pregnancies compounded with close spacing and continuum of pregnancy after the age of 35 years contribute to higher fertility that lead to serve health consequences to both mother and child.⁵ Adequate antenatal care identifies, predicts and manages pregnancy complications to ensure acceptable maternal and perinatal outcomes.⁶ The objectives of the present study were to

study the prevalence of high risk among antenatal women and to know the socio demographic factors associated with high risk.

METHODS

A community based cross-sectional study was carried out in Kinaye village, which is the rural field practice area of Department of Community Medicine of Jawaharlal Nehru Medical College, Belagavi, Karnataka, India. All pregnant women attending antenatal clinic residing in the rural area of Kinaye PHC were enrolled for the study and they were interviewed using pre-tested, pre-designed questionnaire after obtaining written informed consent from the participants. Prevalence of high risk pregnancy was taken as 37%.² (A study conducted in rural Haryana) Sample size was calculated using the formula 4pq/d². (Where p = prevalence of High risk, q=100-p, d=therelative error). $N = 4 \times 37 \times 63/4 \times 4 = 582.75 = 600$. Study was carried out for a period of six months between January to June 2016. Data was analyzed by using statistical package of social sciences (SPSS) version 17.0.

RESULTS

Table 1: Socio-demographic profile of study population.

Parameters	Number (n=600)	Percentage	
Age group (in years)			
< 19	42	7	
20 – 29	528	88	
>30	30	5	
Religion			
Hindu	490	81.6	
Muslim	53	8.8	
Christian	25	4.1	
Others	32	5.3	
Type of family			
Nuclear	434	72.33	
Joint	98	16.33	
Three generation	68	11.33	
Socioeconomic class			
Class I	22	3.66	
Class II	39	6.5	
Class III	238	39.66	
Class IV	242	40.33	
Class V	59	9.83	
Total	600	100	

Total 600 pregnant women were included in study. Majority of participants i.e. 88.0% were in the age group between 20 to 29 years, followed by <19 years (7.0%) and least 5.0% were >30 years. According to religion, majority i.e. 81.6% belonged to Hindu religion, 8.8% Muslims, 4.1% Christian and 5.3% belonged to others. 72.33% belonged to nuclear family followed by joint family (16.33%) and three generation family (11.33%). Majority i.e. 40.33% belonged to IV socio-economic

class followed by III (39.66%) and least belonged to class I (3.66%) according to modified B.G. Prasad's classification (As shown in Table 1).

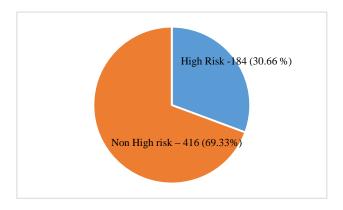


Figure 1: Distribution of pregnant women according to high risk.

			2		
Variabl	High risk	No high	χ² -	p -	
es	present	risk	value	value	
Age (years)					
< 19	17 (9%)	25 (6%)	15.53	0.0004	
20–29	149 (81%)	379 (91%)			
>30	18 (10%)	12 (3%)			
Literacy status					
Literate	159 (86%)	384 (94%)			
Illiterate	25 (14%)	32 (8%)	5.16	0.023	
Parity					
Primi	43 (23%)	221 (53%)	45.84	0.001	
Multi	141 (77%)	195 (47%)			
Age at marriage (years)					
< 19	103 (56%)	212 (51%)			
20 - 29	80 (43%)	204 (49%)	1.29	0.256	
>30	1 (1%)	00 (0%)			
Age at first pregnancy (years)					
< 19	49 (27%)	212 (51%)			
20 - 29	128 (69%)	203 (48%)			
>30	7 (4%)	01 (1%)	2.38	0.123	

In present study, the prevalence of high risk pregnancy was found to be 30.66%. A pregnancy was considered as high risk if any of the following criterions was met. Age >30 years, height <140 cm, bad obstetric history 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 anemia, diabetes and thyroid disorders (As shown in Figure 1).

In present study, significant association of high risk was found with age (p=0.0004) and parity of pregnant women (p=0.001). Whereas variables like literacy status (p=0.023), age at marriage (p=0.256) and age at first pregnancy (p=0.123) did not show any association (As shown in Table 2).

DISCUSSION

In the present study 88% were in the age group between 20 to 29 years, followed by <19 years (7%) and least (5%) were >30 years. Whereas in another study conducted in Egypt majority (44%) were in the age between 30-35 years.² About 82% belonged to Hindu religion, 8.8% Muslims 4.1% Christian and 5.3% belonged to others. 72.33% belonged to nuclear family followed by joint family (16.33%) and three generation family (11.33%). About 40% belonged to IV socioeconomic class followed by III (39.66%) and least belonged to class I (3.66%) according to modified B.G. Prasad's classification.^{7,8} Similarly another study conducted in rural Dharwad showed that majority of participants (35%) belonged to class IV followed by class III (25%) and least belonged to socio- economic class I (1.0%) according to modified B.G. classification. 1,7,9 In our study, majority of high risk pregnancy i.e. 86% were literate and 14% were illiterate. Similarly in another study done in rural Dharwad it was observed that 99% of participants were literate. While in another study done in South eastern Nigeria showed that 46.2% were illiterate, about 30% were studied till primary school, about 21% till secondary school and remaining 1% till post-secondary school.⁶ Level of schooling, as obvious, plays its role in reduction of high risk pregnancies, higher the education lower the proportion of high risk pregnancies. A study done in Eastern Nepal showed that, the proportion is three times higher in no schooling category as compared to more than 10 years of schooling of mothers.⁵ Age at marriage in more than half of women was <19 years, followed by 43% in 20-29 years and least were in >30 years age group (1%). Another study conducted in Egypt showed that in more than half (54%) of the women age at marriage was 20-25 years, followed by 39% in <20 years and least were in 26-31 years age group (7%). With regards to age at first pregnancy, majority (69%) were in age of 20-29 years, followed by in <19 years (27%) and least were in >30 years (7%). Prevalence of high risk pregnancy was higher i.e. 77% in multigravida compared to primigravida (23%). Another study done in Rohtak, Haryana showed that prevalence of high risk pregnancy was 13.7% in multigravida (four and above).3

CONCLUSION

The present study concludes that around 30.67% women were detected to be high risk. Age and parity of the pregnant woman were found to be significantly associated with the prevalence of high risk.

Recommendations

Education of female along with the motivation and efforts of the health professionals is essential for safe motherhood. Early diagnosis and treatment through regular antenatal check-up is a key factor to prevent high risk pregnancy and its complications. There is room for improvement in ensuring that women at risk deliver in hospitals where the most appropriate level of care can be provided.

ACKNOWLEDGEMENTS

We express our heartfelt gratitude to Late. Mr. M.D. Mallapur who helped us untiringly with the statistics of this study. We thank the staff of Primary Health Centre Kinaye for the extensive support in carrying out this research survey. Also like to acknowledge all the participants for their co-operation and support without whom this study would not have been possible.

Funding: No funding sources Conflict of interest: None declared Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

- Pradeep MK, Gnanadeep NV, Umesh RD, Pushpa SP. Prevalence Of High Risk Pregnancy In Rural Dharwad. IOSR Journal of Dental and Medical Sciences. 2015;10:29-32.
- Samar KH, Dorgham LS, Suheir AM. Profile of High Risk Pregnancy among Saudi Women in Taif-KSA. World Journal of Medical Sciences. 2014;11(1):90-7.
- 3. Bharti Vijay K, Amandeep K, Sumit C, Manisha M. Prevalance and correlates of high risk pregnancy in rural Haryana: A community based study. IJBAMS. 2013;3(2):212-7.
- 4. Firozi S. The rate of the prevalence of high-risk pregnancy and the results on pregnant mothers and the effect on parameters after the birth. IJPSR. 2012;3(10):3735-41.
- 5. Paudel IS, Singh SP, Jha N, Vaishya A, Mishra RN. High risk pregnancy and its correlates among the women of eastern Nepal. Indian J Prev Soc Med. 2008;39:3-4.
- 6. GO, Elizabeth UN, Peter NE. Assessment of the risk status of pregnant women presenting for antenatal care in a rural health facility in Ebonyi State, South Eastern Nigeria. N Am J Med Sci. 2011;3(9):424–7.
- 7. Dudala SR, Reddy KA, Prabhu GR. Prasad's socioeconomic status classification- An update for 2014. Int J Res Health Sci. 2014;2(3):875-8.
- 8. Park K. Text Book of Preventive and Social Medicine, Chapter 09, Preventive Medicine in Obstetrics, Paediatrics and Geriatrics. 23rd Ed. Jabalpur, Bhanot Publishers; 2015: 526-529.
- 9. All India Consumer Price Index (General) for Industrial Workers (Base 1982=100). Available from URL:http:// cyberjournalist.org.in/manisana/aicpinew.html. Accessed 03 November 2016.

Cite this article as: Jaideep KC, Prashant D, Girija A. Prevalence of high risk among pregnant women attending antenatal clinic in rural field practice area of Jawaharlal Nehru Medical College, Belgavi, Karnataka, India. Int J Community Med Public Health 2017;4:1257-9.