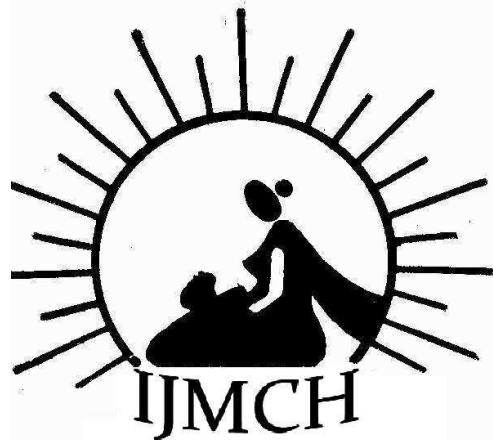


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**Socio-Demographic Determinants of Pregnancy
Wastage among Rural Women of Jammu**

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What is the association of pregnancy wastage with various socio-demographic determinants?

Socio-Demographic Determinants of Pregnancy Wastage among Rural Women of Jammu**Kumari Rashmi,* Mengi Vijay*******Demonstrator, **Professor & Head**

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Email: rashmi.kailu@yahoo.com**ABSTRACT****Research Question:** What is the association of pregnancy wastage with various socio-demographic determinants?**Settings:** 50 Aanganwari centres (AWCs) in rural field practice area of Department of Community Medicine, Government Medical College, Jammu.**Study Design:** Prospective study conducted for one year.**Participants:** 305 pregnant females registered with 50 AWCs living in rural area.**Methodology:** The sample was drawn by simple random sampling technique. The group was interviewed, physically examined and investigated. Pregnancy wastage was analyzed according to variables like maternal age, type of family; inter pregnancy interval, literacy, birth order and Socio Economic status (SES). Chi square test was applied to find out the statistical significance of association of these variables with pregnancy wastage.**Results:** Prevalence of pregnancy wastage was 14.1% with maximum wastage observed among extremes of ages, nuclear families, illiterate females, higher birth order and lower SES females.**Conclusion:** Socio-demographic factors play a major role in causing pregnancy wastage.**Keywords:** *Pregnancy wastage, socio-demographic factors.*

INTRODUCTION

Pregnancy outcome is influenced by maternal healthcare during pregnancy and management of complications during pregnancy and delivery. Most countries including India are spending large sums of money on MCH programs to improve the pregnancy outcomes. Of all the adverse outcomes, most serious is pregnancy wastage which includes abortions and still births. Pregnancy wastage is the most sensitive indicator of MCH services available in the country. This wastage could be avoided, if early recognition of such cases along with remedial measures are taken in time. Often in spite of good health care, such wastage may occur due to association of spectrum of various factors which mainly include socio-demographic factors. This study was designed to assess the association of these socio-demographic factors with pregnancy wastage.

MATERIAL AND METHODS

A rural health block, comprising of 8 zones and 24 sub centers, falling under Government Medical College, Jammu was selected for health care deliveries. The main town of R.S.Pura block was excluded from the study as it fell in category of urban unit. A sample of 50 Anganwadi Centers (app. 25%) out of all the 191 AWCs was drawn by simple Random sampling giving due representation to all the zones.

A prospective study was conducted for one year (Nov. 2006- Oct. 2007), among 305 pregnant females who were already registered with these AWCs. The group was interviewed, physically examined and investigated according to the pre- structured and pre-tested proforma. These females were registered during first four months of study period (Nov. 2006 to Feb. 2007) and then followed for their entire pregnancy to study the outcome. They were contacted twice or thrice depending upon the period of gestation at the time of registration.

RESULTS:

Overall pregnancy wastage was found to be 14.1 %. Maximum number of women (82.2%) was in the age group of 20-29 years and minimum (2.95%) in adolescent group. Mean age of females was 25.68 ± 4.47 years.

Pregnancy wastage was observed to increase with maternal age as evident from Table I. It was observed that spontaneous abortions were responsible for wastage in adolescent age group but as the age advanced, mothers voluntarily opted for termination of pregnancy. Distribution of still births showed no relation with age. Pregnancy wastage was twice in nuclear families as compared to joint families and the difference was found to be statistically significant ($p < 0.01$) as shown in Table II.

Distribution of pregnancy wastage according to literacy is given in table III. This shows that literacy of females has a direct bearing on pregnancy outcome, as maximum wastage was observed among illiterate females (21.2%) with least wastage among females educated above secondary level (4.3%). The association was found to be statistically significant ($p = 0.03$)

TABLE: I DISTRIBUTION OF PREGNANCY WASTAGE ACCORDING TO AGE OF MOTHERS

AGE GROUP (YRS.)	TOTAL PREGNANCIES	LIVE BIRTHS	PREGNANCY WASTAGE			
			TOTAL	SPONTANEOUS ABORTIONS	INDUCED ABORTIONS	STILL BIRTH
<19	9	7(77.8%)	2(22.2%)	2	-	-
20-24	123	113(91.9%)	10(8.1%)	7	-	3
25-29	128	109(85.2%)	19(14.8%)	15	2	2
30-34	32	24(75.0%)	8(25%)	2	3	3
≥ 35	13	9(69.3%)	4(30.7%)	-	3	1
TOTAL	305	262(85.9%)	43(14.1%)	26	8	9

Chi square for linear trend= 7.80, p = 0.005, (Significant)

TABLE: II DISTRIBUTION OF PREGNANCY WASTAGE ACCORDING TO TYPE OF FAMILY

TYPE OF FAMILY	TOTAL PREGNANCIES	LIVE BIRTHS	PREGNANCY WASTAGE			
			TOTAL	SPONTANEOUS ABORTIONS	INDUCED ABORTIONS	STILL BIRTH
NUCLEAR	80	62(77.55%)	18(22.5%)	11	3	4
JOINT	225	200(88.9%)	25(11.1%)	15	5	5
TOTAL	305	262(85.9%)	25(11.1%)	26	8	9

Chi square= 6.32, p< 0.01, (Significant)

TABLE III: DISTRIBUTION OF PREGNANCY WASTAGE ACCORDING TO LITERACY OF FEMALES

LITERACY OF FEMALES	TOTAL PREGNANCIES	LIVE BIRTHS	PREGNANCY WASTAGE			
			TOTAL	SPONTANEOUS ABORTIONS	INDUCED ABORTION	STILL BIRTH
Illiterate	47	37(78.8%)	10(21.2%)	8	1	1
Primary	40	33(82.5%)	7(17.5%)	4	-	3
Middle	60	50(83.4%)	10(16.6%)	6	2	2
Secondary	112	98(87.5%)	14(12.5%)	8	3	3
Above	46	44(95.7%)	2(4.31%)	-	2	-
Total	305	26(85.9%)	43(14.1%)	26	8	9

Chi Square for linear trend= 4.43, P= 0.03, (Significant)

Risk of developing pregnancy wastage was 2.79 times higher in females with gravida 5 or more as compared to primi gravida. However least wastage was seen in second gravida females. The relationship between gravidity of females and pregnancy wastage was found to be statistically significant, as shown in table IV.

TABLE: IV DISTRIBUTION OF PREGNANCY WASTAGE ACCORDING TO GRAVIDITY OF FEMALES

GRAVIDA	TOTAL PREGNANCIES	LIVE BIRTHS	PREGNANCY WASTAGE			
			TOTAL	SPONTANEOUS ABORTION	INDUCED ABORTION	STILL BIRTHS
1	113	93(82.4%)	20(17.6%)	15	1	4
2	100	92(92.0%)	8(8%)	7	-	1
3	59	53(89.9%)	6(10.1%)	1	3	2
4	17	14(83.0%)	3(17%)	1	2	-
≥5	16	10(62.5%)	6(37.5%)	2	2	2
Total	305	262(85.9%)	43(14.1%)	26	8	9

Chi Square (4)= 12.44, P= 0.01, (Significant)

TABLE: V DISTRIBUTION OF PREGNANCY WASTAGE AS PER INTER PREGNANCY INTERVAL

INTER PREGNANCY INTERVAL (months)	TOTAL PREGNANCIES	LIVE BIRTHS	PREGNANCY WASTAGE			
			TOTAL	SPONTANEOUS ABORTIONS	INDUCED ABORTIONS	STILL BIRTH
< 12	5	3(60.0%)	2(40.0%)	2	-	-
12-23	65	56(86.2%)	9(13.8%)	4	3	2
24-36	57	51(89.5%)	6(10.5%)	3	2	1
>36	65	59(90.8%)	6(9.2%)	2	2	2
TOTAL	192*	169(88.1%)	23(11.9%)	11	7	5

Chi Square for Linear trend= 1. 57, $p= 0.20$, (Non significant), *113 were primi gravida

Pregnancy wastage when studied according to inter pregnancy interval, the difference was found to be statistically non-significant as shown in table V.

Out of 305 females studied, maximum (209) were in middle class of socio-economic status, with least number (39) in upper class. However, distribution of females among different classes of SE status did not show any significant association with pregnancy wastage.

TABLE VI: DISTRIBUTION OF PREGNANCY WASTAGE ACCORDING TO SES

SOCIO-ECONOMIC STATUS (SES)	TOTAL PREGNANCIES	LIVE BIRTHS	PREGNANCY WASTAGE			
			TOTAL	SPONTANEOUS ABORTIONS	INDUCED ABORTIONS	STILL BIRTHS
Upper class	39	34(87.2%)	5(12.8%)	2	2	1
Middle class	209	183(87.6%)	26(12.4%)	16	5	5
Lower class	57	45(79.0%)	12(21%)	8	1	3
Total	305	262(85.9%)	43(14.1%)	26	8	9

Chi Square (2) = 2.80, $p= 0.24$, (Non significant)

DISCUSSION:

Many studies have been conducted on pregnancy wastage in urban areas to find out the prevalence and associated risk factors but in glaring contrast, there is paucity of work in rural areas. The prevalence rate of pregnancy wastage has been reported to vary between 7.23%-35.4% by various authors from different parts of the country. However prevalence in present study was observed to be 14.1%, with abortions contributing to 80% of pregnancy wastage and rest still births.

Extremes of age have been shown to result in unfavorable outcome of pregnancies as maximum of wastage occurred in these age groups. These findings are in accordance with the findings of Banerjee Bratati⁽¹⁾ and various others authors. Abortions when considered individually, it was found that spontaneous abortions were maximum in females < 19 years of age as compared to adult women, which may be because of their physical immaturity.

Pregnancy wastage was almost twice in nuclear families when compared with joint families. The absence of physical, psychological, and economic support in nuclear families is thought to be one of the reasons. Chandershekar Shalini *et al*⁽²⁾ also reported similar findings.

Literacy rate in the present study was 84.6% which is much higher than national figures. The present study revealed that pregnancy wastage was directly related to literacy of females with maximum wastage among illiterate females (21.2%) as compared to literate ones. These findings are in collaboration with other studies conducted by Aggarwal DK⁽³⁾ and Sachar RK *et al*.⁽⁴⁾ However induced abortions were found more among literate women, the findings supported by Pallika davath Saseendran.⁽⁵⁾ This could be due to women's need to postpone births to meet demand of ongoing education or to take up or continue employment and desire to limit the family size.

More than one-third of pregnancy wastage was observed to occur in females with gravida 5 or more and almost equal wastage occurred in primi gravida females and females with gravida 4. The association was statistically significant and similar findings have been reported by various other authors.

Pregnancies spaced too close are of risk to mother as well as infant. It was observed in this study that maximum (40%) of the pregnancy wastage occurred among females with inter pregnancy intervals less than one year with a minimum wastage (9.2%) among females who conceived after 3 years of last child birth. Banerjee Bratati⁽¹⁾ also observed similar findings in their study. However Kumar and Singhi⁽⁶⁾ in their study reported that shorter inter pregnancy interval (<24 months) was not associated with increased risk of still births.

Risk of pregnancy wastage was found to be 1.8 times higher in lower class as compared to upper class. Similar findings have been reported by Domodar *et al*⁽⁷⁾ and Diana Y Hunag.⁽⁸⁾ Spontaneous abortions and still births were mainly seen in lower class females while females belonging to upper class experienced mainly induced abortions.

CONCLUSIONS:

Socio-demographic factors, most of which are preventable, play a major role in causing pregnancy wastage. Such adverse outcomes can be reduced by preventing “too many” or “too close” births in “too young” or “too old” mothers. Improvements in socioeconomic status will also ensure a healthy mother and a healthy new born at the end of each pregnancy.

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