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## **A Study on Fertility and Mortality among Vishwakarma Population in Mysore District of Karnataka State**

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### **Abstract**

The present study “A study on fertility and mortality among Vishwakarma Population of Mysore District” is undertaken to understand the biological maintenance and survival index of the Vishwakarma population in Mysore district of Karnataka state. The data were collected from 514 families of Vishwakarma Population of Mysore District, Karnataka State, India. Fertility is measured by the average number of livebirths and mortality by the foetal deaths, neonatal deaths, infantile deaths, child mortality and deaths after six years of age. The means of fertility and mortality in consanguineous, non consanguineous mating and both matings of different age groups of Vishwakarmas are portrayed in the present study.

**Key Words:** Fertility, Mortality, Vishwakarma, Consanguineous

### **Introduction**

Human fertility and mortality is influenced by biological as well as socio - cultural factors. The biological factors include heredity, general health conditions, age, location, birth interval, pregnancy wastages, sex drive, fecundability, disease and sterility. The socio-cultural factors include age at marriage, absence of spouse, widowhood or widow remarriage, polygamy and postpartum sexual abstinence during certain seasons or ceremonies and temporary and permanent celibacy etc. The impact of social and economic changes on the reproductive behaviour is mediated through the cultural settings. The long term trends in fertility are not determined by these factors independently but by the process of society, of which these factors form only a part.

Pressures for high fertility take diverse forms. Among these there is an articulation of religious goals, doctrines and beliefs with fertility behaviour. Prolific reproduction, as a goal may be specifically supported and imposed by religion, as in the case with cults and gods of fertility or a religion on focus. `

Most of the Indian studies from India reported that the age at marriage, educational level, economic status and women's work participation have an effect on fertility. The age at cohabitation determines the reproductive life span of a woman and has a direct bearing on fertility and the later age of marriage reduces fertility<sup>1,3,4,7,8,14</sup>. In India education is associated with decrease in marital fertility<sup>6</sup>, although the relation may be curvilinear because there is a slight rise in fertility with education and then a decline. In south India the literacy rate is high among the females than in other parts of the country and there is an associated rise in age at marriage and correspondence decrease in fertility. Kerala is being a very obvious example. Depressing fertility is visible only among those who have persuaded their studies beyond the school level. Many assumptions have been put forward to explain the influence of educational status of wives fertility behaviour. Many studies in India indicate that nearly eight percent of women are not literate, so that this variable has

very little relevance in explaining the fertility behaviour among women in rural areas of India, it has been supported by study conducted on the population of Sikkim<sup>2</sup>.

India has witnessed an extraordinary record in the population so well during the past few decades mainly because of significant drop off in the mortality rates. The government of India has made a huge venture in improving the health status of women and children, sanitation and water supply which have contributed to the decline in the mortality rates<sup>9,5,13</sup>. The mortality rate is an indicator to reveal health status of women and children and also the socio economic condition of the population. It is used in analyzing and determining the demographic conditions as well as the prediction of possible changes in the mortality conditions in the future.

Higher fertility and mortality rates are found among the consanguineous mothers than the non consanguineous ones in India. As a result, the net fertility rate as measured by the number of surviving offspring is found to be less in related couples than in unrelated ones. Inbreeding is much less in Northern India than in South India<sup>11</sup>. Most of studies have been conducted on the effects of consanguinity on fertility in Andhra Pradesh<sup>12,10</sup>. These works revealed higher fertility and mortality rates in consanguineous than in non consanguineous couples. Genetic demography deals with the genetic aspects of a population. Its principal aspects are fertility and mortality, which are responsible for the biological maintenance and survival index of the community respectively. India owns diverse population groups that vary vastly on the basis on the region endogamy, religion, language and ethnicity etc. making available the chance to carry out research studies. The present study "A study on fertility and mortality among Vishwakarma Population of Mysore District" is undertaken to understand the biological maintenance and survival index of the Vishwakarma population in Mysore district of Karnataka state.

## **Materials and Methods**

The data were collected from 514 families of Vishwakarma Population of Mysore District, Karnataka State, India. The field work was conducted in the taluks of Mysore district (Mysore, Nanjungud, Hunsur, K R Nagar and H D Kote taluks). The interview schedule was prepared to obtain the required information such as type of marriage, age at first conception, age of wife at every conception, pregnancy outcomes and surviving offspring, age at death (mortality), family planning methods adopted etc., The vital events which occurred from the date of marriage were recorded sequentially from the respondents included abortions, stillbirths and live births. The collected data was tabulated, number and percentage were calculated. Descriptive statistics such as Mean, standard deviation, standard error and 't' test were calculated for the consanguineous and non consanguineous mothers related to total conceptions, pregnancy wastage, neonatal deaths, infant mortality, child mortality and surviving offsprings. Inbreeding coefficient which shows the probability that an individual possesses at a given genetic locus was also calculated and Coefficient of Variation (C.V.) was calculated to compare the extent of variability in quantitative characters in the present study.

## **The study area and population**

Karnataka State is in the southwestern part of India. Mysore is also known as one of the garden cities of India and is famous for the pomp and gaiety of its traditional Dasara festival. The district is surrounded by Mandya, Hassan, Kodagu, Chamarajnagar districts and Tamilnadu, Kerala States. The district comprises of 7 taluks namely Mysore, Najanagud, T.Narasipura. K.R.Nagar, Hunsur, H.D.Kote, and Periyapatna. Vishwakarma or Vishwabrahmin is a term used in India for castes comprising engineers, architects, sculptors, temple builders, priests and artists. Hence, the term

is applied to five sub-castes: Goldsmith, Blacksmith, Coppersmith, Carpenter and Sculptors. The Vishwakarma also called as Panchalas, they are largely found in Mysore district. The total population of Vishwakarma in Mysore district is estimated to be nearly 2.5 lakhs. Proper records are not obtainable to uphold the population estimation of the Vishwakarma castes and sub castes. In the year 1990 O. Chinnappa Reddy Commission published Karnataka backward classes third commission report, according to this report the Vishwakarma's total population was estimated to be 4,32,400 which constitutes about 2.28% of the total population of the Mysore state (2,11,47,300) in the year 1960 (Mysore was the name, by which Karnataka state was known prior to 1973). The community is spread widely throughout India and played a vital role in the village economy. Their socio-economic status varied from a very high level to the low level in different parts of India as they earned high wages in towns because of their factory employment and low in villages.

## Results and Discussion

Fertility and mortality as essential of genetic demographic aspects as responsible for the biological maintenance and survival index of the community respectively. Fertility is measured by the average number of livebirths and mortality by the foetal deaths, neonatal deaths, infantile deaths, child mortality and deaths after six years of age. The means of fertility and mortality in consanguineous, non consanguineous mating and both matings of different age groups of Vishwakarmas are portrayed in the following results and discussions.

The frequency and type of consanguinity among the Vishwakarmas are presented in table 1. From the table it is known that the frequency of non-consanguineous marriage type (78.60%) is relatively more than the consanguineous type (21.40%). Among the consanguineous marriages first cross cousin marriages are higher than the maternal uncle-niece marriages. The Patrilateral cross cousin marriages are more than the matrilateral cross cousin marriages in the first cross cousin. The mean autosomal inbreeding and sex linked inbreeding coefficients are 0.0195 and 0.0188 respectively.

The age at first conception among the Vishwakarma females is presented in table 2. The majority of the women in the consanguineous group (63.06%) had their first conception at the ages between 15-19 years and the mean age of first conception among them is found to be 17.38 years. More number of the women in the non consanguineous group (48.00%) had their first conception at the ages of 15-19 years with a mean age at first conception is noticed to be 17.73 years. The age at first conception among the consanguineous group (17.38 years) women is very slightly earlier than the non consanguineous group (17.73 years). The mean age at first conception among pooled group is found to be 17.66 years.

Table 3 shows the prevalence of family planning methods among the Vishwakarmas. Majority (68.48%) of them have adopted the family planning methods and 31.52% of the Vishwakarmas have not adopted the family planning methods. Majority of the Vishwakarma families have adopted family planning and a higher proportion (65.76%) of the women have undergone sterilization that is tubectomy, 1.17% of men have undergone vasectomy and 1.56% of the women have adopted copper T as a birth control method (table 4).

The conceptions reported by Vishwakarma married women of consanguineous and non consanguineous and both matings are presented in table 5. The total conception of 110 consanguineous, 404 non consanguineous and 514 both matings are 316, 1124 and 1440 women were considered respectively. The percentage of pregnancy wastage

including abortions and still births is lower in the consanguineous mating (9.49%) than the non consanguineous mating (12.63%) showing that the abortions and still births are higher among the non consanguineous mating than in consanguineous mating.

The proportion of livebirths including already dead and surviving offsprings is higher in consanguineous matings (90.50%) than in the non consanguineous matings (87.37%), showing the high fertility rate among the consanguineous matings than the non consanguineous matings. The percentage of the already dead including the neonatal deaths, infant mortality, child mortality and death after 6 years is higher in consanguineous matings (14.55%) than in the non consanguineous matings (8.54%) showing a high mortality rate in the related marriages than in the non related marriages.

The proportion of the surviving offspring is lower in consanguineous matings (75.95%) than in non-consanguineous matings (78.83%), showing a more number of surviving offspring in unrelated marriages than in related marriages. On the whole among the Vishwakarmas out of 1440 total conceptions 88.06% resulted in live births, 11.94% resulted in pregnancy wastage including abortions (9.72%) and still births (2.22%). Already dead consisted of 9.86% including neonatal death (2.36%), infant mortality (1.94%), child mortality (5.56%) and surviving offspring 78.19% constituted to total conceptions.

Table 6 shows the average measures of fertility and mortality and the 't' values calculated among the consanguineous and non consanguineous mothers of Vishwakarmas. The mean conception values among the mothers of consanguineous and non consanguineous matings are more or less same. The mean number of pregnancy wastage including abortions and still births shows that the mean abortion is slightly higher in non-consanguineous matings and mean still births are slightly higher in consanguineous matings. The mean values of the neonatal deaths are higher in consanguineous than the non consanguineous mating and same is observed in infant mortality and child mortality. The mean number of surviving offspring shows a slight increase in non-consanguineous matings. The 't' value calculated for the consanguineous and non consanguineous mothers related to total conceptions, pregnancy wastage, neonatal deaths, infant mortality, child mortality and surviving offsprings show no significant differences.

The percentage distribution of Vishwakarma women by age and number of conceptions in consanguineous, non consanguineous and both mating is presented in table 7. The number of conceptions ranges from 0-12 among the consanguineous and non consanguineous matings. 3.6% of the consanguineous and 7.9% of the non consanguineous mating are found to be without a single pregnancy. In both matings, the range of 1-6 pregnancies is higher. The highest frequency of consanguineous matings (36.4%) is of 3 pregnancies and in non consanguineous matings (27.7%) the highest frequency is of 2 pregnancies.

In both matings the highest frequency is seen between in 2 and 3 pregnancies. The overall mean number of the conceptions in consanguineous and non-consanguineous matings is more or less the same. At the age group of below 30 years 4.8% of the women in related couples and 16.7% of the women in unrelated couples are found to be not conceived. Though, these women are not sterile and they have possible chances of getting conceived in course of time till their reproductive span is completed. Some are newly married, some are suffering from diseases and a few of them are widows. Largely, women without pregnancy in the age group below 30 and 30-44 years in consanguineous matings

are 4.8% and 3.6% respectively, and in non consanguineous matings are 16.7% in the age of below 30 years and 2.1% in the age of 45 and above years. Thus, the number of conceptions is observed to be increasing with the increasing age.

The percentage distribution of the Vishwakarma women by age and pregnancy wastage including abortions and stillbirths in consanguineous, non consanguineous and both mating are presented in tables 8, 9 and 10 respectively. In all ages 110 women in consanguineous, 404 in non consanguineous and 514 in both mating were considered for the purpose. The pregnancy wastage among the consanguineous mating is relatively lower than that of non consanguineous mating. In all age groups 78.2% of the women in consanguineous matings and 74.3% of the women in non-consanguineous matings have never experienced abortions or still births. In both matings, women with one pregnancy wastage including abortions and still births are found with relatively higher frequencies than those of two pregnancies. The mean pregnancy wastage including, abortions and still births for consanguineous and non consanguineous mating are found to be 0.27 and 0.35 respectively, showing that abortions and still births are higher in unrelated marriages than in related marriages among the Vishwakarmas.

The percentage distribution of women by age and number of livebirths in consanguineous, non consanguineous and both matings is given in table 11. The number of livebirths in both matings ranges from 0-10 and above. In consanguineous matings the proportion of women (3.6%) without a single living child is lower than in non consanguineous matings (9.9%). In both matings the percentage with 2 livebirths is high. Among the consanguineous matings the percentage of 3 livebirths (38.2%) is more followed by 2 (30.9%) livebirths and in non consanguineous matings the percentage of 2 livebirths (34.7%) is high followed by 3 livebirths (25.2%). The mean number of children per women in consanguineous mating (2.60) is slightly higher than in non consanguineous matings (2.43) showing insignificant difference in fertility rate among the consanguineous and non consanguineous matings of Vishwakarma population. The number of livebirths increases with the increasing age of women in both matings.

The percentage distribution of Vishwakarma women by age and number of children dead including neonatal deaths, infant mortality, child mortality and deaths after 6 years to 15 years in consanguineous, non consanguineous and both matings are presented in tables 12, 13 and 14. All 110 women in consanguineous and 404 women in non-consanguineous matings have been considered, even though some women have no live births. The number of children dead ranges from 0-2 in both matings. When compared to the percentage of number of child deaths the percentage of one child deaths is found to be higher among both matings. The mean number of children dead including neonatal deaths, infant mortality, child mortality and death after six years to 15 years of age is found to be higher in the consanguineous matings (0.41) than in non-consanguineous matings (0.23). Over all the percentage of women having no child deaths is found to be 63.6% in consanguineous, 78.2% in non consanguineous and 75.1% in both matings.

Table 15 shows the percentage distribution of women by age and number of surviving offspring in consanguineous, non consanguineous and both matings. The number of surviving offspring ranges from 0-10 in both consanguineous and non consanguineous matings. 7.3% of women in consanguineous and 11.9% in non consanguineous matings have non surviving offspring. Majority of women in both matings is with 1-3 children followed by a few with 4-5 children. The overall average number of surviving offspring per women in consanguineous, non consanguineous and both matings is more or less same.

## Conclusion

In the present study of Vishwakarmas the proportions of the first cross cousin marriages including those of patrilateral and matrilateral types are higher than maternal uncle - niece type of marriage. The mean number of the conceptions in consanguineous and non consanguineous mating is more or less the same among the Vishwakarmas. The mean number of children dead including neonatal deaths, infant mortality, child mortality and death after six years to 15 years is found to be higher in the consanguineous matings than in non consanguineous matings and the number of surviving offspring are slightly lower in consanguineous than in non consanguineous matings.

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**Table 1: Frequency and Type of Consanguinity among the Vishwakarmas**

Relationship	Number	Percentage	Inbreeding coefficient	
			Autosomal ( $F_A$ )	Sex linked ( $F_X$ )
I. Non Consanguineous	404	78.60	-	-
II. Consanguineous	110	21.40	-	-
a. First Cross Cousin	60	11.67	0.0073	-
1. Patrilateral	38	7.39	0.0046	0.0000
2. Matrilateral	22	4.28	0.0027	0.0026
b. Maternal Uncle-Niece	50	9.73	0.0122	0.0122
Total	514	100.00	0.0195	0.0188

**Table 2: Distribution of Age at first Conception among the Vishwakarmas**

Age at 1 <sup>st</sup> Conception (in years)	Consanguineous Mating				Non-Consanguineous Mating				Both			
	No.	%	Mean $\pm$ S.E	S.D $\pm$ S.E	No.	%	Mean $\pm$ S.E	S.D $\pm$ S.E	No.	%	Mean $\pm$ S.E	S.D $\pm$ S.E
10-14	12	10.9	17.38 $\pm$ 0.42	4.42 $\pm$ 0.29	50	12.4	17.73 $\pm$ 0.29	5.94 $\pm$ 0.20	62	12.1	17.66 $\pm$ 0.24	5.65 $\pm$ 0.17
15-19	70	63.6			194	48.0			264	51.4		
20-24	24	21.8			132	32.7			156	30.4		
25-29	4	3.6			22	5.4			26	5.1		
30-34	00	0.00			06	1.5			06	1.2		
Total	110	100.0%			404	100.0%			514	100.0%		

**Table 3: Prevalence of Family Planning methods among the Vishwakarmas**

<b>Family Planning Method</b>	<b>Number</b>	<b>Percentage</b>
Adopted	352	68.48
Not Adopted	162	31.52
Total	514	100.00

**Table 4: Prevalence of Sterilization among the Vishwakarmas**

<b>Sterilization</b>	<b>Vasectomy</b>		<b>Tubectomy</b>		<b>Copper T</b>		<b>Total</b>	
	<b>No.</b>	<b>Percentage</b>	<b>No.</b>	<b>Percentage</b>	<b>No.</b>	<b>Percentage</b>	<b>No.</b>	<b>Percentage</b>
Adopted	6	1.17	338	65.76	8	1.56	352	68.48
Not Adopted	508	98.83	176	34.24	506	98.44	162	31.52
Total	514	100.00	514	100.00	514	100.00	514	100.00



**Table 5: Results of conceptions reported by 514 married Vishwakarma women**

Results of Conceptions	Consanguineous		Non Consanguineous		Both	
	Number	Percentage	Number	Percentage	Number	Percentage
Total conceptions	316	100.00	1124	100.00	1440	100.00
A. Pregnancy wastage	30	9.49	142	12.63	172	11.94
(i) Abortions	22	6.96	118	10.50	140	9.72
(ii) Stillbirths	8	2.53	24	2.14	32	2.22
B. Livebirths	286	90.50	982	87.37	1268	88.06
I. Already dead	46	14.55	96	8.54	142	9.86
(i) Neonatal deaths*	10	3.16	24	2.14	34	2.36
(ii) Infant mortality**	14	4.43	14	1.25	28	1.94
(iii) Child mortality***	22	6.96	58	5.16	80	5.56
(iv) Death after 6 years to 15 years of age	00	00	00	00	00	00
II. Surviving offspring	240	75.95	886	78.83	1126	78.19

\*(0-28 days), \*\* 28 days to 1 year, \*\*\* (1-6 years)

**Table 6: Distribution of Average Measures of Fertility and Mortality among the Consanguineous and Non Consanguineous Vishwakarma mothers**

Sl.No.	Results of Conceptions	Consanguineous			Non Consanguineous			't' value		
		No. of Women	Mean±S.E.	S.D.±S.E.	C.V.±S.E.	No. of Women	Mean±S.E.		S.D.±S.E.	C.V.±S.E.
	Total conceptions	110	2.87±0.13	1.39±0.09	48.57±1.74	404	2.78±0.08	1.68±0.05	60.68±2.13	-.516
A.	Pregnancy Wastage									
(i)	Abortions	110	0.20 ±0.04	0.44±0.03	22.25±0.50	404	0.29±0.03	0.65±0.02	22.33±0.07	1.394
(ii)	Stillbirths	110	0.07±0.04	0.42±0.02	58.03±1.91	404	0.05±0.01	0.25±0.01	43.22±1.52	-.413
B.	Livebirths	110	2.60±0.11	1.19±0.08	45.77±1.30	404	2.43±0.07	1.51±0.05	62.53±2.19	-1.081
I (i)	Neonatal deaths*	110	0.09±0.02	0.28±0.019	31.76±1.21	404	0.05±0.01	0.23±0.01	39.84±1.40	-1.178
(ii)	Infant mortality**	110	0.12±0.03	0.33±0.02	26.30±0.17	404	0.03±0.00	0.18±0.01	28.45±0.18	-3.841
(iii)	Child mortality***	110	0.20±0.04	0.48±0.03	24.23±0.16	404	0.14±0.01	0.39±0.01	27.24±0.09	-1.271
(iv)	Death after 6 years to 15 years of age	110	0.00±0.00	0.00±0.00	0.00±0.00	404	0.00±0.00	0.00±0.00	0.00±0.00	00.00
II.	Surviving offspring	110	2.18±0.09	1.03±0.06	47.35±1.31	404	2.19±0.06	1.37±0.04	62.90± 2.21	.080

\*(0-28 days), \*\* 28 days to 1 year, \*\*\* (1-6 years)

**Table 7: Percentage distribution of Vishwakarma women by Age and Number of Conceptions**

Number of conceptions	Consanguineous				Non Consanguineous				Both			
	Age in years				Age in years				Age in years			
	Below 30	30-44	45 & above	Total	Below 30	30-44	45 & above	Total	Below 30	30-44	45 & above	Total
0	4.80	3.60	0.00	3.60	16.70	0.00	2.10	7.90	14.40	1.10	1.90	7.00
1	14.30	10.70	0.00	10.90	17.80	3.10	10.40	11.40	17.10	5.40	9.30	11.30
2	23.80	25.00	0.00	21.80	38.90	21.90	14.60	27.70	36.00	22.80	13.00	26.50
3	52.40	25.00	33.30	36.40	18.90	37.50	14.60	23.80	25.20	33.70	16.70	26.50
4	4.80	25.00	50.00	20.00	7.80	20.30	25.00	15.80	7.20	21.70	27.80	16.70
5	0.00	7.10	0.00	3.60	0.00	15.60	14.60	8.40	0.00	13.00	13.00	7.40
6	0.00	3.60	0.00	1.80	0.00	0.00	12.50	3.00	0.00	1.10	11.10	2.70
7	0.00	0.00	0.00	0.00	0.00	1.60	2.10	1.00	0.00	1.10	1.90	0.80
8	0.00	0.00	16.70	1.80	0.00	0.00	2.10	0.50	0.00	0.00	3.70	0.80
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	2.10	0.50	0.00	0.00	1.90	0.40
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Total No. of women	42	56	12	110	180	128	96	404	222	184	108	514
	The mean number of conceptions for all age groups is 2.87				The mean number of conceptions for all age groups is 2.78				The mean number of conceptions for all age groups is 2.80			

**Table 8: Percentage distribution of Vishwakarma women by Age and Pregnancy Wastage in Consanguineous Matings**

Pregnancy Wastage														
Abortions					Stillbirths					Abortions and Stillbirths				
Age in years					Age in years					Age in years				
No	Below 30	30-44	45 & above	Total	No	Below 30	30-44	45 & above	Total	No	Below 30	30-44	45 & above	Total
0	85.70	82.10	66.70	81.80	0	100.0	92.90	100.0	96.40	0	85.70	75.00	66.70	78.20
1	14.30	14.30	33.30	16.40	1	0.00	3.60	0.00	1.80	1	14.30	17.90	33.30	18.20
2	0.00	3.60	0.00	1.80	2	0.00	0.00	0.00	0.00	2	0.00	3.60	0.00	1.80
3	0.00	0.00	0.00	0.00	3	0.00	3.60	0.00	1.80	3	0.00	3.60	0.00	1.80
Total	100.00	100.00	100.00	100.00	Total	100.00	100.00	100.00	100.00	Total	100.00	100.00	100.00	100.00
No. of women	42	56	12	110	No. of women	42	56	12	110	No. of women	42	56	12	110
Mean number of abortions for all age groups 0.20					Mean number of Stillbirths for all age groups 0.07					Mean number of abortions and Stillbirths for all age groups 0.27				

**Table 9: Percentage distribution of Vishwakarma women by Age and Pregnancy Wastage in Non Consanguineous Matings**

<b>Pregnancy Wastage</b>														
<b>Abortions</b>					<b>Stillbirths</b>					<b>Abortions and Stillbirths</b>				
<b>Age in years</b>					<b>Age in years</b>					<b>Age in years</b>				
<b>No</b>	<b>Below 30</b>	<b>30-44</b>	<b>45 &amp; above</b>	<b>Total</b>	<b>No</b>	<b>Below 30</b>	<b>30-44</b>	<b>45 &amp; above</b>	<b>Total</b>	<b>No</b>	<b>Below 30</b>	<b>30-44</b>	<b>45 &amp; above</b>	<b>Total</b>
0	81.10	81.30	70.80	78.70	0	97.80	92.20	91.70	94.60	0	80.00	73.40	64.60	74.30
1	15.60	15.60	16.70	15.80	1	2.20	7.80	6.30	5.00	1	15.60	23.40	22.90	19.80
2	3.30	1.60	6.30	3.50	2	0.00	0.00	2.10	0.50	2	4.40	1.60	4.20	3.50
3	0.00	1.60	4.20	1.50	3	0.00	0.00	0.00	0.00	3	0.00	1.60	4.20	1.50
4	0.00	0.00	2.10	0.50	4	0.00	0.00	0.00	0.00	4	0.00	0.00	4.20	1.00
Total	100.00	100.00	100.00	100.00	Total	100.00	100.00	100.00	100.00	Total	100.00	100.00	100.00	100.00
No. of women	180	128	96	404	No. of women	180	128	96	404	No. of women	180	128	96	404
Mean number of abortions for all age groups 0.29					Mean number of Stillbirths for all age groups 0.05					Mean number of abortions and Stillbirths for all age groups 0.35				

**Table 10: Percentage distribution of Vishwakarma women by Age and Pregnancy Wastage in Both Matings**

<b>Pregnancy Wastage</b>														
<b>Abortions</b>					<b>Stillbirths</b>					<b>Abortions and Stillbirths</b>				
<b>Age in years</b>					<b>Age in years</b>					<b>Age in years</b>				
<b>No</b>	<b>Below 30</b>	<b>30-44</b>	<b>45 &amp; above</b>	<b>Total</b>	<b>No</b>	<b>Below 30</b>	<b>30-44</b>	<b>45 &amp; above</b>	<b>Total</b>	<b>No</b>	<b>Below 30</b>	<b>30-44</b>	<b>45 &amp; above</b>	<b>Total</b>
0	82.00	81.50	70.40	79.40	0	98.20	92.40	92.60	94.90	0	81.10	73.90	64.80	75.10
1	15.30	15.20	18.50	16.00	1	1.80	6.50	5.60	4.30	1	15.30	21.70	24.10	19.50
2	2.70	2.20	5.60	3.10	2	0.00	0.00	1.90	0.40	2	3.60	2.20	3.70	3.10
3	0.00	1.10	3.70	1.20	3	0.00	1.10	0.00	0.40	3	0.00	2.20	3.70	1.60
4	0.00	0.00	1.90	0.40	4	0.00	0.00	0.00	0.00	4	0.00	0.00	3.70	0.80
Total	100.00	100.00	100.00	100.00	Total	100.00	100.00	100.00	100.00	Total	100.00	100.00	100.00	100.00
No. of women	222	184	108	514	No. of women	222	184	108	514	No. of women	222	184	108	514
Mean number of abortions for all age groups 0.27					Mean number of Stillbirths for all age groups 0.06					Mean number of abortions and Stillbirths for all age groups 0.33				

**Table 11: Percentage distribution of Vishwakarma women by Age and Number of Livebirths**

Number of Livebirths	Consanguineous				Non Consanguineous				Both			
	Age in years				Age in years				Age in years			
	Below 30	30-44	45 & above	Total	Below 30	30-44	45 & above	Total	Below 30	30-44	45 & above	Total
0	4.80	3.60	0.00	3.60	20.00	0.00	4.20	9.90	17.10	1.10	3.70	8.60
1	14.30	10.70	0.00	10.90	17.80	3.10	14.60	12.40	17.10	5.40	13.00	12.10
2	33.30	35.70	0.00	30.90	45.60	29.70	20.80	34.70	43.20	31.50	18.50	33.90
3	47.60	28.60	50.00	38.20	16.70	42.20	18.80	25.20	22.50	38.00	22.20	28.00
4	0.00	17.90	33.30	12.70	0.00	18.80	18.80	10.40	0.00	18.50	20.40	10.90
5	0.00	3.60	0.00	1.80	0.00	4.70	12.50	4.50	0.00	4.30	11.10	3.90
6	0.00	0.00	0.00	0.00	0.00	0.00	4.20	1.00	0.00	0.00	3.70	0.80
7	0.00	0.00	16.70	1.80	0.00	1.60	2.10	1.00	0.00	1.10	3.70	1.20
8	0.00	0.00	0.00	0.00	0.00	0.00	2.10	0.50	0.00	0.00	1.90	0.40
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10 & above	0.00	0.00	0.00	0.00	0.00	0.00	2.10	0.50	0.00	0.00	1.90	0.40
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Total No. of women	42	56	12	110	180	128	96	404	222	184	108	514
	The mean number of livebirths for all age group is 2.60				The mean number of livebirths for all age group is 2.43				The mean number of livebirths for all age group is 2.46			

**Table 12: Percentage distribution of Vishwakarma women by Age and Number of Children Dead (Already Dead) in Consanguineous Matings**

No	Children Dead																			
	Neonatal death				Infant mortality (below 1 years)				Child mortality (1-6 years)				Death after 6 years				Both			
	Age in years				Age in years				Age in years				Age in years				Age in years			
	Below 30	30-44	45 & above	Total	Below 30	30-44	45 & above	Total	Below 30	30-44	45 & above	Total	Below 30	30-44	45 & above	Total	Below 30	30-44	45 & above	Total
0	90.50	92.90	83.30	90.90	90.50	89.30	66.70	87.30	90.50	82.10	66.70	83.60	100.00	100.00	100.00	100.00	71.40	64.30	33.30	63.60
1	9.50	7.10	16.70	9.10	9.50	10.70	33.30	12.70	9.50	10.70	33.30	12.70	0.00	0.00	0.00	0.00	28.60	28.60	50.00	30.90
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.10	0.00	3.60	0.00	0.00	0.00	0.00	0.00	7.10	16.70	5.50
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of women	42	56	12	110	42	56	12	110	42	56	12	110	42	56	12	110	42	56	12	110
The mean number of neonatal deaths for all age group is 0.09				The mean number of infant mortality for all age group is 0.12				The mean number of Child mortality for all age group is 0.20				The mean number of Death after 6 years for all age group is 0.00				The mean number of all deaths for all age group is 0.41				



**Table 13: Percentage distribution of Vishwakarma women by Age and Number of Children Dead (Already Dead) in Non Consanguineous Matings**

No	Children Dead																			
	Neonatal death				Infant mortality (below 1 years)				Child mortality (1-6 years)				Death after 6 years				Both			
	Age in years				Age in years				Age in years				Age in years				Age in years			
	Below 30	30-44	45 & above	Total	Below 30	30-44	45 & above	Total	Below 30	30-44	45 & above	Total	Below 30	30-44	45 & above	Total	Below 30	30-44	45 & above	Total
0	94.40	92.20	95.80	94.10	97.80	92.20	100.0	96.50	92.20	85.90	79.20	87.10	100.0	100.0	100.0	100.0	84.40	70.30	77.10	78.20
1	5.60	7.80	4.20	5.90	2.20	7.80	0.00	3.50	7.80	12.50	16.70	11.40	0.00	0.00	0.00	0.00	15.60	28.10	16.70	19.80
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.60	4.20	1.50	0.00	0.00	0.00	0.00	0.00	1.60	6.30	2.00
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of women	180	128	96	404	180	128	96	404	180	128	96	404	180	128	96	404	180	128	96	404
The mean number of neonatal deaths for all age group is 0.05				The mean number of infant mortality for all age group is 0.03				The mean number of Child mortality for all age group is 0.14				The mean number of Death after 6 years for all age group is 0.00				The mean number of all deaths for all age group is 0.23				

**Table 14: Percentage distribution of Vishwakarma women by Age and Number of Children Dead (Already Dead) in Both Matings**

No	Children Dead																			
	Neonatal death				Infant mortality (below 1 years)				Child mortality (1-6 years)				Death after 6 years				Both			
	Age in years				Age in years				Age in years				Age in years				Age in years			
	Below 30	30-44	45 & above	Total	Below 30	30-44	45 & above	Total	Below 30	30-44	45 & above	Total	Below 30	30-44	45 & above	Total	Below 30	30-44	45 & above	Total
0	93.70	92.40	94.40	93.40	96.40	91.30	96.30	94.60	91.90	84.80	77.80	86.40	100.0	100.0	100.0	100.0	82.00	68.50	72.20	75.10
1	6.30	7.60	5.60	6.60	3.60	8.70	3.70	5.40	8.10	12.00	18.50	11.70	0.00	0.00	0.00	0.00	18.00	28.30	20.40	22.20
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.30	3.70	1.90	0.00	0.00	0.00	0.00	0.00	3.30	7.40	2.70
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of women	222	184	108	514	222	184	108	514	222	184	108	514	222	184	108	514	222	184	108	514
The mean number of neonatal deaths for all age group is 0.10				The mean number of infant mortality for all age group is 0.10				The mean number of Child mortality for all age group is 1.14				The mean number of Death after 6 years for all age group is 0.00				The mean number of all deaths for all age group is 0.27				

**Table 15: Percentage distribution of Vishwakarma women by Age and Number of Surviving Offspring**

Number of Surviving offspring	Consanguineous				Non Consanguineous				Both			
	Age in years				Age in years				Age in years			
	Below 30	30-44	45 & above	Total	Below 30	30-44	45 & above	Total	Below 30	30-44	45 & above	Total
0	9.50	7.10	0.00	7.30	24.40	0.00	4.20	11.90	21.60	2.20	3.70	10.90
1	9.50	10.70	0.00	9.10	13.30	7.80	14.60	11.90	12.60	8.70	13.00	11.30
2	57.10	46.40	50.00	50.90	56.70	32.80	25.00	41.60	56.80	37.00	27.80	43.60
3	23.80	32.10	16.70	27.30	5.60	51.60	18.80	23.30	9.00	45.70	18.50	24.10
4	0.00	3.60	16.70	3.60	0.00	3.10	25.00	6.90	0.00	3.30	24.10	6.20
5	0.00	0.00	0.00	0.00	0.00	3.10	8.30	3.00	0.00	2.20	7.40	2.30
6	0.00	0.00	16.70	1.80	0.00	0.00	0.00	0.00	0.00	0.00	1.90	0.40
7	0.00	0.00	0.00	0.00	0.00	1.60	2.10	1.00	0.00	1.10	1.90	0.80
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	2.10	0.50	0.00	0.00	1.90	0.40
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Total No. of women	42	56	12	110	180	128	96	404	222	184	108	514
	The mean number of surviving offspring for all age group is 2.18				The mean number of surviving offspring for all age group is 2.19				The mean number of surviving offspring for all age group is 2.19			

