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Estimate of fertility among *Bidi Workers* of Central India

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ABSTRACT: *Introduction:* Fertility is generally used to indicate the actual reproductive performance of women or group of female individuals. But generally fertility indicates the number of children, which were produced by women. In every society fertility is very essential to find out the birth rate and other factors which influenced this rate. Fertility is very important indicators of any society and family structure have its own important in demographic studies and planning the many of programs.

Methods: In a cross sectional study, study the unit for anthropological demographical date was ever married women. A socio-economic demographical house to house survey method used for collection of data was conducted by interview 112 females belong to 119 household of district Sagar of Madhya Pradesh. by using a pretested semi structure interview schedule. In semi structure interview schedule collected demographical data viz. age, sex, age at first birth, fertility detail such as total numbers of live births, numbers of children died, number of child surviving pregnancy experienced by mothers, reproductive wastage. The fertility history was arranged and developed for Bidi workers via. using the demographical and fertility measurements. By using these variable and measurements to estimate the fertility rates and ratio such as Child women ratio. Crude birth rate, general fertility rate, age specific fertility rate, general marital fertility rate, gross reproduction rat, total fertility rate.

Results: That a largest proportion of mothers 66.2% were given births at 15-19 years of age and 33.03% at the age of 20-24 years of age. It is indicated the prevalence of early marriage among Bidi workers of district Sagar of Madhya Pradesh. The CWR has been found 361.5 and comparatively low with other population of central India.CBR among Bidi workers were computed to be 24.6 General fertility rate was 100 and General marital fertility rate was 138.2, whereas total fertility rate was 5.5 and Gross reproduction rate was 2.69.

Conclusion: Bidi workers of District Sagar of Madhya Pradesh, a part of central India are one of the known occupational groups of state. Bidi workers who are low wage earner and lagging behind in socio-economic, health status and demographical indicators. The most of the Bidi worker are illiterate and passionate under socioeconomically backward condition. Among them the female literacy rate is very poor, which directly or indirectly influenced their fertility mortality rate and their reproductive performance. They are also lagging behind in awareness of the sanitation and their living condition. Under all of these circumferences, there for is urgently need a program which tackle and improved these aspects problem.

KEYWORDS: GFR, ASFR TFR, Married Female, GRR etc.

1 INTRODUCTION

In every society Fertility is very essential to find out the birth rate and other factors which influenced this rate. Fertility is very important indicators of any society and family structure have its own important in demographic studies and planning the many of programs.

"Fertility is generally used to indicate the actual reproductive performance of a women or groups ofa female individual." But a generally fertility indicates the number of children, which were produced by a women.

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"Fertility is a positive force through which the population expands, counteracting the force of attainment caused by mortality." Bhende & Kannikar (1992).

Fertility is used to measure the rate at which population adds itself by births and is normally assessed by relating the number of birth to size of some selection of population. Lewis & Thompson (1930). The growth of any population or group of people in a society or country entirely depended on human fertility. Jain AK (2006). The fertility of women is totally depended on physiological function and socio economic, Cultural aspect and many biological characteristics such as heredity ,health and disease, age at menopause, age at menarche, marital status, reproductive performance reproductive life span, age at mothers first births, biologically age, physiological factors have considerable influence on fertility potential of a population. Fertility is a biological phenomena affected by many factors like as genetically factors, environmental factors political factors, Demographical factors, socio-economically factors, and culturally factors, etc. the socio-economic cultural variable like Education, occupation, and economically meeting and fertility and births controls methods and family planning have their perspectives spheres of influencing on fertility. Some demographers used the word "Natality" instead of fertility. Most of demographer usually reassures the fertility differences by demographical social measurement viz. education, occupation, women's income family type, age at menarche, age at menopause, age at first birth and etc. Fertility is also indicted, among population or groups of population in a society or country or any specific groups of individuals such as Bidi workers, the every aspects of life from birth to death is being influenced by the prevalence of customs ,beliefs and nation ,which have been practiced in their day to day life. On the hands fertility and its related aspects a number of studied have been conducted by various researcher viz. Dandekan & Dandekan (1953); Dandekan (1959); Ray & Burman (1961); Nag (1962); Das (1973); Thompson & Lewise (1965); Vidhyarti & Rai (1977), Sahu (1994); jain (2000); Jain(2000); Sharma and Jain (2004); Basu & kshuatriya (1989); Hassian (2005) amd Nand (2005) etc.

The Madhya Pradesh is one of the largest states in India the in term of area and 6 th position in the population structure. It is a part of Central India which surrounded by seven state ,Uttar Pradesh, Chattisghar, Mahrashtra, Gujrat, Rajishthan. The Madhya Pradesh is situated in central region or point of country and lies between $26^0$52' and 17^0 46' north latitude and $74^0$1' and $84^0$23' east longitude.(Fig.1). Present study is located in heart of India which is fully dense forest area and full of naturallty. Madhya Pradesh is known as growing state of India with a large number of populations 7, 25, 97,565 as per census (2011). The population of Madhya Pradesh is showing diversity due to different environment, cultural, socio-economic factors and others factors. In present study area Madhya Pradesh *Bidi* manufacturing is one of the well known organized and unorganized occupation because the Madhya Pradesh is rich with raw material of country cigarette know as *Bidi.* The raw which is used in manufacturing the Bidi is Tendu leaves and soon. Bidi manufacturing trends in Madhya Pradesh is established in last 16th century. The worker who are engaged in the manufacturing of *Bidi* , are known as Bidi workers, they are well known occupation groups of central India . There are the different category of Bidi workers viz. Collector Of Tendu Leaves, Bidi Roller, Sattedar, Roster, Steamer and Packagers. All of these are constantly exposed to tobacco dust, but out of them a large proportion of female workers and child are more exposed to tobacco dust, which result is showed by multiple disorder on their health, nutritional status and demographical indicators, such as changes in population structure, biological characteristics, reproductive performance, fertility and mortality rate, and etc. And Bidi workers are also affected in their socio-economic condition, level of education, Daily sustainable life standers and so on. The objective of presented study was to assess the fertility, performance among Bidi workers, because a large proportion of female workers and their fertility and reproductive performance may be directly or indirectly effected viz. manufacturing of *Bidi,* and tobacco dust. So for fulfill these objective the sample were drawn from a district of Sagar of Madhya Pradesh a part of Central India.

2 MATERIAL AND METHODS

For the present study the unit for anthropological demographical date was ever married women. A socio-economic demographical house to house survey method used for collection of data was conducted by interview 112 females belong to 119 household of district Sagar of Madhya Pradesh. By using pretested semi structure interview schedule. In semi structure interview schedule collected demographical data viz. age, sex, age at first birth, fertility detail such as total numbers of live births, numbers of children died, number of child surviving pregnancy experienced by mothers, reproductive wastage. The fertility history was arranged and developed for Bidi workers via. using the demographical and fertility measurements. By using these variable and measurements to estimate the fertility rates and ratio such as Child women ratio. Crude birth rate, general fertility rate, age specific fertility rate, general marital fertility rate, gross reproduction rat, total fertility rate. Among Bidi workers all the confidential information relating to specific women have been collected from wives, corroborating with the presence of their husband or head female of these families, and these all information regarding to marital status, age first births and age at marriage, number of child births, number of child deaths, ferity related performance, and number of abortion ,stillbirth, premature delivery, numbers of last year births, etc., have been collected by cross examine the statements of wife with their own age, current age and age at marriage, age at first births, etc.

After collection of all demographical data, it was estimated in Ms-excel work sheet and converted in SPSS V.16.0 for statistical treatment and analysis of data for computing result.

3 RESULT AND DISCUSSION

The demographical data related to the fertility is reported in table form. The age of mother at first birth is very important parameter in demographical indicators and fertility performance. The age at first birth is used to determine the possibility of actively reproductive period and fertility rate of any population and society. The collected demographical data about age of mothers at first birth is represented in Table-1. It is apparent from the Table that a largest proportion of mothers 66.2% were given births at 15-19 years of age and 33.03% at the age of 20-24 years of age. It is indicated the prevalence of early marriage among bidi workers of district Sagar of Madhya Pradesh. Although there is a wide gap between the potential level of fertility (Fecundity) and actual performance of the potentiality (Fertility), in readily it has to rely upon the latter method for measuring the actual fertility performance. For obtaining the level of fertility in a population a various fertility measurement have been calculated such as number of pregnancy experienced by mothers, numbers of live births, numbers of children surviving, child loss, foetal loss, and estimated fertility rates and ratio like as GFR,ASFR, TFR,CWR,CBR,GRR,GMFR and etc. These are helpful in understanding the relation between the general condition and fertility level of individuals. The measure of fertility indicators among bidi workers of district Sagar of Madhya Pradesh a part of central India .is represented in Table 2.

For the present study, the child women ratio is a commonly used measured of fertility calculated from the age-sex distribution. The child women ratio reflects only the number of surviving children of less than 5 years or 9 years of age. Child women ratio was denoted by CWR. It is apparent from the table that among Bidi worker the CWR has been found 361.5 and its comparatively low with other population of central India. such as CWR of Khandha 695.0, Sabat &Dash (1996) ; Juhar Bhotia 734.46 Chachra &Bhasin (1998) and Kamar 1141.31 Biswas et al. (2001).

Crude birth rate is another important rate of fertility indicators and denoted by CBR. It is apparent from the table2 that CBR among Bidi workers were computed to be 24.6 which comparatively less than Bhil 43.5,Chaudhary & Kumar(1976); Gonds 43.0,Parsuram and Rajan (1990); Abujhariya 39.9, Pandey & Goel (1990); And Sahariya 43.76, Biswas & Kapoor (2003); and other. The Crude birth rate of any population is influenced by standard of education, medical facility, communication system, environmental condition, family size etc. Davis & Blkae (1956).

The similarly over all age limited measured is general fertility rate (GFR). The GFR is indicated that the number of women 15-49 age groups is less than as compared to the total population is high among them. From the Table 2. , that's, the general fertility rate was computed 100,which is higher than Lohar Gadiyas 76.17,Yadav et al(2001), and the total of age specific fertility rate has been recorded from 112 mothers of Bidi workers was 1105.1.

The Age specific fertility rate (ASFR) with specific period was represented in Table 3. It is apparent from table that the ASFR of 15-19 years of age was computed 400 and 333.3 ASSFR for mothers of 20-25 years of age groups, followed by 214.2(25-29 years), 43.3(30-34 years), 66.6 (35.39) years and 47.6 (40-46)years of age groups. The highest ASFR among Bidi workers was reported in 15-19 years of age groups. On comparison of ASFR among Bidi workers with others population of Central India, it was noticed that among bidi workers the ASFR of 20-24 years is higher than the highest ASFR of Sahariya population (a tribe of Madhya Pradesh.) was 328.5,Biswas & Kapoor (2003).

The total fertility rate present a single index o f total fertility for each of a from 15-45 years. It is a more effective measure of summarizing the frequency of birth of particular years. Among Bidi workers from the table it is apparent that TFR was found 5.5. which is than when compared with Lohar Gadiyas 4.60,Yadav et al (2001). Whereas is lower than many of previous study population such as Sahariya 6.70,Biswas & Kapoor (2003).Halba 5.89 Basu & Kshatriya (1989).Similarly among Bidi workers the gross reproduction rate (GFR) reported viz. age specific fertility rate(ASFR) and TFR .It is apparent from the table gross reproduction rate was found 2.69. and that's value is slightly lower than Sahariya population of Madhya Pradesh. On comparing with previously studied it was noticed that the TFR of present study was found to be higher than Kandh1.44 Sabat & Dash(1996); Bhotia 1.34, Chachra & Bhasin (1998); Thoti 1.84,Elizabeth et al (2000) and etc. from present study the last but most important Firtility indicators general marital fertility rate (GMFR) has been computed 138.2 which lower than previously studied population such as Sahariya (248.29) fallowed by other studied these are Bhutia, 154.93 Bhasin & Bhasin(1990); Kandh 213.11, Sabat & Dash (1996); But its also higher than Marcha 119.44, Chachra & Bhasin (1998).

Table: 1 Distribution of mothers according to Age at first birth.

Age group	N	Percentage
15-19	72	64.2
20-24	37	33.03
25-29	2	1.78
30-34	1	0.89
Total	**112**	**100**

Table :2 Fertility rate & Ratio among population of district of Sagar (M.P.)

Child women ratio	361.5
Crude birth rate	24.6
General fertility rate	100
General marital fertility rate	138.2
Total fertility rate	5.5
Gross reproduction rate	2.69

Table:3 Age specific fertility rate among women of district of Sagar (M.P.)

Age group	Number of women	Number of birth in last one year	Age specified fertility rate
15-19	5	2	400
20-24	15	5	333.3
25-29	14	3	214.2
30-34	23	1	43.3
35-39	15	1	66.6
40-49	21	1	47.6
Total	112	13	1105.1

4 CONCLUSION

From the present study that's point out come, Bidi workers of District Sagar of Madhya Pradesh, a part of central india are one of the known occupational groups of state. Bidi workers, who are low wage earner and lagging behind in socio-economic, health status and demographical indicators. The most of the Bidi worker are illiterate and passionate under socioeconomically backward condition. Among them the female literacy rate is very poor, which directly or indirectly influenced their fertility mortality rate and their reproductive performance. They are also lagging behind in awareness of the sanitation and their living condition. Due to paucity of proper medical facility among them the percentage of still birth, infant mortality rate are noticed as very high. In context of family planning and other modern methods of births control devices, they are aware but rarely adopted by them, because many of myths. A large proportion of Bidi worker are female and little proportion of child bidi workers, who are engaged in manufacturing Bidi are directly exposed to Tobacco dust that result is out come in form of chaning rate of fertility and mortality among them. All of these above present attributes reason of influence in their child women ratio, crude birth rate, general fertility rate, general marital fertility rate, gross reproduction rate and etc. Under all of these circumferences, there for is urgently need a program which tackle and improved these aspects problem.

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