



Determinants of Fertility In Rural Areas: A Case Study of Chatra District of Jharkhand

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Huge size and high rate of growth of population is the most powerful factor leading to poverty, unemployment, starvation and deprivation in India. Lowering of fertility rate particularly in rural areas is the best remedy for arresting the rapid growth of population. The present study is an attempt to scan and strike the most fragile part of those vulnerable factors which govern, influence and determine the fertility rate specially in rural sector, for the extirpation of poverty and achieving the twin objectives of economic development and distributive justice.

Key Word : Rural Health, Fertility Family Planing.

Introduction

Rapidly growing population is the most powerful force of obstructing the economic development of India and other developing countries. Out of the three determinant of population growth rate namely, birth rate, death rate and emigration, if falling death rate is the cause of population explosion reductions in birth rate will be the best remedy. Poverty, unemployment, starvation, malnutrition, non availability of health and education facilities are the consequences of huge size and high rate of growth of population. The main objective of the economic activities of all the countries of the world is to raise the economic welfare of citizens by raising their standard of living and making available maximum possible facilities to them. Therefore, mitigation in the rate of growth of population will be the best remedy for ensuring maximum welfare to the citizens by achieving higher rate of economic growth and distributive justice.

Fertility rate in urban areas is lower than that in rural areas because children are 'liabilities' in urban areas whereas they are assets, in rural areas. Expenditure to be incurred on health education and standard of living of children in rural areas is minimum or negligible. Many children in rural areas either start earning from early age or if they cannot earn they at least help the family in household and agricultural activities. That is why, fertility rate in rural areas is higher causing high birth rate and huge size of the population. This is the main reason that for decreasing the fertility rate in rural areas, analysis of the effects of the factors determining the fertility rate becomes very important from which it will be possible to control the rate of growth of population to achieve desired rate of development. Analysis of the determinants of fertility in rural areas will contribute to the formulation of population policy which will be a great achievement for the country. This is the reason that I have selected the subject "determinants of fertility in rural areas".

The main reason for the selection of the Chatra District is that I belong to Chatra District and secondly the Socio-economic and cultural condition of almost all the rural areas of

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jharkhand state are basically the same. This is the reason that I have selected Chatra District in my article.

Fertility rate in India at the time of independence was high which subsequently started falling which is evident from the following table.

Table : 1
Fertility Rate By Years

Year	Total Fertility rate
1	2
1951	6.0
1961	6.11
1981	4.5
1991	3.6
2001-2005	2.9
2006-2010	2.6
2011-2015	2.3
2016-2020	2.2
2021-2025	2.0

Sources :- Government of India, Ministry of finance, Economic Surrvey (1999-2000) P-173, and Report of Technical Group on Population Projections Quoted by Gourav Datt and Ashwini Mahajan. Bhartiya Arthvywastha (S.Chand)(2011) , Page - 40

In 1951, the Fertility rate in India was 6.0 which increased to 6.11 in 1961¹ Thereafter it decreased to 4.5 in 1981 and 3.6 in 1991. In the beginning of the century the fertility rate during the period from 2001 to 2005 was 2.9 which further fall to 2.6 during the period from 2006 to 2010 The fertility rate is expected to be 2.3 from 2011-2015 . It is further expected to fall 2.2 during the period from 2016 to 2020 which is likely to fall to 2.0 during the period from 2021 to 2025 when the growth rate of population of the country will become stationary or there will be a fall in the population.

Causes of High Fertility Rate In India

Inspite of the family planning programme launched by government of India, the country could not achieve a marked fall in the fertility rate. The main reason of the high fertility rate in India is that Indian economy is basically an agricultural economy where there is Predominance of agriculture. According to Rural Labour Enquiry Committee², during the busiest season of agriculture there becomes scarcity of labour force in the local areas which is compensated by child labour who start earning. The second cause of high fertility rate in rural sectors in the lower rate of urbanization in the country because in urban areas children become a 'liability' where as, in the rural areas children are considered to be "assets". Mehmood Mamdani ³ has rightly observed that person are poor not because the size of family is large rather size of the family is large because persons are poor. It means that the fertility rate⁴ of poor class is higher than the fertility rate of richer class because in rural areas the cost of living of the children of poor parents is low where as the economic and other benefits of the children are high. Therefore the large number of children is considered to be economically rational . Gunnar Myrdal ⁵ has also accepted that children are not burden in poor society rather they are the only sources of social security of the parents and others.

There are many social and religious factors responsible for high fertility rate because marriage is not only social and religious compulsion but it is considered to be the prime duty of parents. Prevalence of early marriage is another reason for high fertility rate. Prof. N.C. Das ⁶ is of the opinion that the fertility rate of the female whose age at marriage is from 20 to 24 years is equal to those marrying at the age below 20 years. When the age at marriage of females is above 25 years their fecundity becomes low.

Joint family system, lack of education, early marriage, unemployment, low income, social and religious superstitions limited knowledge and limited availability and use of contraceptive etc are many other reasons of high fertility rate in rural areas.

Impact of High Fertility Rate on Economic Development

Rapid increase in population adversely affects the land-man ratio. Density of population increases. Large part of the national income is spent on consumption. Burden of population on land increases, per capita available agricultural land decreases demand for necessities and comforts increase, giving rise to scarcity of goods and services as well as inflationary pressure. This leads to poverty, unemployment starvation, exhibiting Malthusian Horror. With respect to human development ⁷ the position of India in world economy was 119 whereas the position of China was 89 the Pakistan occupied 125th position in 2010.

Main Objective of The Study

The main objective of this article is to study and analyse the factors influencing or determining fertility rate in rural areas. We shall also search for the reasons of high fertility rate in the rural sector of Chatra District. We shall also find out the drawbacks of family planning programme of Government and shall put forth suggestions for reducing fertility rate.

Methodology

In our present article primary as well as secondary data have been used. The basic source of secondary data are economic survey, National family health survey, different five year plans, census reports of government of India etc. So far as Secondary data is concerned, out of 12 blocks 3 blocks have been selected randomly. Again two villages from each block have been selected by random sampling. The ratio of number of households to the size of the sample will be the same as the ratio of number of households to the total number of respondents in each village. Tested and pre-tested questionnaire has been prepared to elicit maximum information from the respondents relevant to our topic of the article regarding different variables determining fertility rate.

Basic Characteristics of The Respondents and The Villages

Following basic characteristics of the sample respondent and the villages are obtained by self investigation.

Poverty : There is wide spread poverty in Chatra District. Maximum 19% of the respondent had had the average income of less than Rs. 5000 per year coming to less than Rs 500 per months. Maximum income of Rs.50,000 and above per year was earned by 27 respondent families which was 9% of the total respondents.

Low Level of Education : Level of education is very low in Chatra district. Out of the total

respondents 53 constituting 17.66% husbands were illiterate and only 4 husbands constituting 1.33% of the total sample were post graduate passed. Maximum number of husbands 74 constituting 24.66% had received only primary education. So the median education of the husband was middle past and modal education was primary level.

So far as the level of female education is concerned evident that the level of education of wives in Chatra district is still lower. Out of 300 respondent 117 wives constituting 39 percent were illiterate and only one constituting 0.33% was post graduate passed. Median education of wives is primary and modal education is illiterate.

Early Marriage : Early marriage is an indication of under developed society. In Chatra District there were 52 respondent forming 17.33% were married during the age from 12.5 to 17.5 years. Maximum number of husband constituting 57% were married during the age from 17.5 to 22.5 years. Early marriage of girls in rural areas is more popular. It was observed during my investigation that 22 wives which was 7.33% of the total respondent were married below the age of 12.5 years. 130 wives constituting 43.33% were married during the year from 12.5 to 17.5 years. 130 wives which was 45% of the total respondent were married during the year 17.5 to 22.5 years. There were only 13 wives constituting 4.33% were married during the age from 22.5 to 27.5 years.

Joint Family System : Prevalance of joint family system is also an indication of backward society. out of 300 respondent 206 families constituting 68.66% were joint families and the rest 94 families constituting 31.34% were nuclears family.

Agricultural Sector : Rural economy is still agricultural economy. Out of the total 300 respondent main occupation of maximum number of families 182, constituting 60.66% was agriculture followed by 49 families constituting 16.33% where wage earners. This shows the backwardness of Chatra District.

Knowledge of Family Planning : Even after 60 years of launching of family planning programme by the government of India, out of 300 respondents 72 constituting 24% had no knowledge of family planning. But 76% numbering to 228 families had the knowledge of family planning.

Findings of The Study

In this article following variables determining fertility rate have been Studies intensively and analysed carefully with the help of primary data. On the basis of analysis of above variable some factors should be encouraged and some factors should be discouraged. To achieve the objective of mitigation fertility rate in rural areas. Reduction in fertility rate will lead to the reduction in population growth rate. We have studied and analysed the following factor influencing fertility rate.

Age At Marriage Of Wives

Early marriage of girls in rural areas is very common and late marriage is considered to be curse. Earlier the age of marriage large will be the fertility rate period resulting in high fertility rate. Following hypothesis is framed for testing.

Null hypothesis :

H_0 : "fertility rate close not depend on age at marriage of wives".

Alternative Hypothesis :

H_1 : "This is an inverse influence or negative correlation between the age at marriage of wives and their fertility rate".

Table : 2
Age Specific Fertility Rate by Age at Marriage of Wives
and Corresponding Number of Respondent.

Age at Marriage of Wives	Age Specific Fertility Rate	Number of Respondance
1	2	3
12.5-17.5	3.545	22
17.5-22.5	2.730	130
22.5-27.5	2.481	135
27.5-32.5	2.461	13

Sources :- Primary Data

In the above table 22 wives were such who married during the age from 12.5 to 17.5 years having fertility rate of 3.545.

Wives married in the age group of (17.5-22.5) Years.(22.5-27.5) years and (27.5-32.5) Years had the fertility rate of 2.730, 2.481 and 2.461 respectively with the corresponding number of respondent being 130, 135, 13 respectively.

Value of the co-efficient of correlation by product moment formulae came to (-) 0.86

1. On the basis of "t" significance test, it was found that at 5% level of significance and 2 degree of freedom we cannot accept the null hypothesis therefore we have to accept the alternative hypothesis that there is "inverse correlation between fertility rate and age at marriage of wives".

Age of Wives and Fertility Rate

It is common to assume that greater the age of wives larger the fertility period and consequently greater the fertility rate.

Null Hypothesis

H_0 : "Fertility rate is not related to the age of wives".

Alternative Hypothesis

H_1 : "There is a positive relationship between the age group of wives and their age specific fertility rate".

Following table exhibits the relationship between the ages of wives and their respective age specific fertility rate.

In the above table the females lying in the age group of (17.5-22.5) Years, (22.5-27.5) Years, (27.5-32.5) Years (32.5-37.5) Years (37.56-42.5) Years,(42.5-47.5) (47.5-52.5) Years had the age specific fertility rate of 1.575, 2.242, 2.812, 3.338, 4.043, 3.181 and 4.6 respectively.

The co-efficient of product moment formulae came to (+)0.91 which was significant 5% level of significance and 5 degree of freedom and hence we accept the alternative hypothesis of positive relationship between the ages of wives and age specific.

Table : 3
Age Specific Fertility Rate by the Ages of Wives and Number of Respondent

Age at Marriage of Wives age	Age specific Fertility Rate	Number of Respondent
1	2	3
17.5-22.5	1.575	66
22.5-27.5	2.242	66
27.5-32.5	2.812	64
32.5-37.5	3.338	65
37.5-42.5	4.043	23
42.5-47.5	3.181	11
47.5-52.5	4.6	05
Total		300

Sources :- Primary Data.

Education Of Wives : The most important factor determining fertility rate in rural areas is the education of wives but in rural areas most of the wives are un-educated and illiterate. Following table shows the relationship between education of wives and fertility rate.

Table : 4
Fertility Rate by Education of Wives and Their Corresponding Numbers

Education of wives	Number of wives	Specific fertility Rate
1	2	3
MA	01	00
Graduation	05	1.769
Intermediate	13	1.358
Tenth	49	1.769
Middle	34	2.323
Primary	81	3.629
Illiterate	117	2.765

Sources :- Primary Data.

The product moment co-efficient of correlation between education of wives and fertility rate was calculated to be(-)9.6 which was significant at 5% level of significant 5 degrees of freedom 't' test. This means there is high (-) correlation between education of wives and fertility rate.

Education of Husbands : It also plays an important role in determining fertility rate in rural areas. Following hypothesis are framed for testing. There is no relationship between education of husbands and fertility rate.

Null Hypothesis

H₀ : "Education of husbands does not influence fertility rate".

Alternative Hypothesis :-

H₁ : "There is negative correlation between education of husband and fertility rate".

Following table exhibits education of husband and specific fertility rate.

Table : 5
Specific Fertility Rate by Education of Husband and Number of Respondent.

Education of Husband	Number of Respondents	Specific Fertility Rate
1	2	3
MA	04	2.00
Graduation	20	2.10
Intermediate	16	1.875
Tenth	63	2.301
Middle	70	2.257
Primary	74	2.945
Illiterate	53	2.886

Sources :- Primary Data.

It is clear from the above table that level of education in rural areas is low. The rank co-efficient of correlation between education of husband and fertility rate was calculated to be (-) 0.82 which was significant at 5% level of significance and 5 degrees of freedom under 't' test. Therefore we cannot accept the null hypothesis. It means that there is high (-) correlation between the education of husband and specific fertility rate.

Conclusion and Suggestions

Following conclusions are drawn from deep study and careful analysis. of the study of the determinants of fertility rate in Chatra District on the basis of these conclusions some suggestions are also made to check fertility rate in rural areas.

India is the first Country of the world where since Independence family planning programme was launched by the government. There has been a fall in the fertility rate but the rate of fall is slower as the programme could be implemented strictly.

The main reason of higher fertility rate in rural areas is that children particularly sons are considered to be assets in rural areas although this view is changing.

Government of India is spending a very small part of the total expenditure on health and family welfare programme.

Most of the health centres particularly in rural areas are non-operational.

Chatra District is a backward district of Jharkhand state where 37.86% of the population are illiterate 39% of the respondent wives and 17.66% of the respondent husbands are illiterate. Out of the total respondent 68.66% were joint family and 31.34% were nuclear family.

Agriculture is the main occupation on which 60% of the population are dependent for livelihood and average income of the respondent is Rs.20,200 per annum.

There is high negative(-) correlation between the age at marriage and wives marriage of husband as well as at marriage of wives and age specific fertility rate.

There is inverse relationship between income of families and the fertility rate.

Greater the desire for son higher the fertility rate of the families.

The Fertility rate of the joint family is greater than the fertility rate of nuclear family.

The fertility rate of unemployed are greater than the fertility rate of working husband.

Government should implement family planning programme intensively incentive as well as disincentive measures should be adopted.

Proportion of expenditure on family planning programme should be increased.

Proper training facilities should be imparted to the concerned doctors and other official to improve the quality of services.

Family planning camps should be organised in almost all the villages where extra facilities and payments be made to the persons opting for terminal methods of family planning programme.

Education particularly female education should be encouraged in the rural areas so that every boys and girls goes to the school regularly.

Infrastructure facilities should be provided in the rural areas so that urbanization spread and employment opportunities widens.

Female employment should be encouraged on priority basis in rural areas.

The above measures will definitely reduce the fertility rate in rural areas to check the population growth rate of the country for accelerating the rate of growth of economy and ensuring distribute justice.

Notes

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