

EFFECTS OF FEMALE'S LITERACY ON MATERNAL HEALTH: AN EMPIRICAL STUDY OF JAMMU AND KASHMIR STATE

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ABSTRACT

Women's health is the reflection of her individual biology and her socio cultural, economic, and physical environments. Maternal health is a key indicator of the quality of female's health. The present study is an attempt to assess the influence of female's education on various indicators of maternal health in J&K state. The variables of maternal health, selected for the purpose of the present study, are Tetanus Toxoid Vaccination, Iron and Folic Acid Tablets, place of delivery and assistance during delivery. There is a strong association between improvements in maternal health and increase in women's education. This relationship has been established empirically established with the help of data gathered from National Family Health Survey-3 (2005-06) and from the office of Directorate of Family Welfare, Jammu and Kashmir. Thus, the paper concludes that enhancement in the literacy level of women will automatically result into improvement in their maternal health.

KEYWORDS: Antenatal, Education, Literacy, Maternal Health.

INTRODUCTION

Women's life expectancy in India has increased from 55.7 years in 1981-85 to 66.9 years in 2001 (Government of India, 2001). In Jammu and Kashmir, it is 60.7 years for females. Today, the challenge is to make those extra years of life more healthy and productive. Women's health reflects both her individual biology and her socio cultural, economic, and physical environments. These factors affect both the duration and quality of her life (Stein, 1998). For example, women who have less than a high school education have shorter life spans, higher rates of illness, injury, disability, and death, and more limited access to high-quality health care services.

Maternal health is a key indicator of the quality of female's health. Its status is a function of number of variables which include, income, availability of health services, antenatal care, the literacy and education level (particularly, that of women), and many more (International Institute for Population Sciences, 2006). Present study is an attempt to assess the influence of female's education on various indicators of maternal health. There are many indicators of maternal health

like percentage of females receiving antenatal care, having Tetanus Toxoid Vaccination, Iron and Folic Acid Tablets, place of delivery and assistance during delivery. This study attempts to establish the relationship between improvements in maternal health and women's education. This relationship has been established with the help of data gathered from National Family Health Survey-3 and from the office of Directorate of Family Welfare, Jammu.

Maternal Mortality Ratio (MMR) in India points towards the gender imbalance. The State of Jammu and Kashmir recorded 332 pregnancy related deaths in 2000 out of which 218 deaths were from the rural areas and 114 from the urban areas (see Table No. 1). While analysing the Female Mortality Rates, it becomes obvious that the mortality ratio is higher during the reproductive years of females i.e. between 18 to 30 years. The main reason for high Female Mortality Rate is the problems or complications related to pregnancy and it has been observed that illiterate females are not aware of the precautions and problems/complications related to pregnancy. One of the major solutions to the problem is to increase female literacy along with enhancing the provision of health facilities. The relationship between female literacy level and maternal deaths in J&K is shown in Table No.1.

Table No. 1: Female Literacy Rates and Maternal Deaths in J&K.

	Female literacy Rate (2001)	Maternal Deaths (in the year 2000)
Total	41.82%	332
Rural	35.09%	218
Urban	62.22%	114

Source: Government of Jammu and Kashmir (2005), *Digest of Statistics 2004-05*, Directorate of Economics and Statistics Planning and Development Department, Jammu and Kashmir.

It is obvious from the Table that the Female Literacy Rate in the rural areas of J&K is 35.09% (in 2001) and maternal deaths in the rural areas are very high i.e. 218 deaths were recorded, whereas, the Female Literacy Rate in the urban areas of J&K is 62.22% (in 2001) and the maternal deaths are 114, which is almost half of that of rural areas. This shows that female's awareness towards their health requirements can be enhanced through making them literate.

There are different indicators to access maternal health/care among females and in the present study the selected indicators are antenatal care, Tetanus Toxoid Vaccination, consumption of Iron and Folic acid tablets, and, place of delivery and assistance during delivery. These indicators have been taken into consideration and linked with female's education in J&K state. This relationship has been further established by analyzing the data collected from the office of Directorate of Family Welfare for different districts of J&K. In the present study only four districts were selected, two from Jammu region and two from Kashmir region. Jammu district and Doda district have been selected Jammu region, which have highest and lowest levels if female's education respectively. From Kashmir region, Srinagar district and Kupwara district were selected, as the female literacy level is highest in Srinagar and lowest in Kupwara.

Antenatal care

Antenatal care refers to pregnancy-related health care provided by doctor or a health worker in a medical facility or home. A safe Motherhood Initiative proclaims that all pregnant women must receive basic but professional antenatal care. Ideally, antenatal care should monitor a pregnancy for signs of complications, detect and treat pre-existing and concurrent problems of pregnancy, and provide advice and counselling on preventive care, diet during pregnancy, delivery care, postnatal care, and related issues. The Reproductive and Child Health Programme recommends that as part of antenatal care, women receive two doses of tetanus toxoid vaccine, adequate amounts of iron and folic acid tablets or syrup to prevent and treat anemia, and at least three antenatal check-ups that include blood pressure checks and other procedures to detect pregnancy complications (International Institute for Population Sciences, 2006).

While studying female's literacy and percentage of females going outside their homes for antenatal check up and those having no antenatal check up in J&K, it has been found that as the educational status of the females rises, they become more aware of their maternal health requirements and thus, the percentage of females going outside their homes for antenatal check-up increases. Table No. 2 shows the percentage of females going outside home to doctors or other health professional for their antenatal check-up rises with their educational status whereas percentage of females having no antenatal check-up and going to traditional birth attendants decreases with increase in their educational status.

Table No. 2: Female's Education and percentage distribution of females going outside their homes for antenatal check ups and those having no antenatal check up in J&K.

Female's Education	Antenatal check up outside home from			No antenatal check ups
	Doctor	Other health Professional	Traditional birth attendant	
No Education	69.5	8.1	0.1	23.2
< 5 years complete	72.3	10.6	0.0	7.6
5-9 years complete	82.9	12.4	0.0	8.7
10 or more years	90.9	3.7	0.7	1.7

Source: International Institute for Population Sciences, 2006. *National Family Health Survey 3: India*, IIPS, Mumbai.

Out of the total females with no education in J&K, 23.2% of them had no antenatal check up. Only 69.5% of illiterate females went to qualified doctors for their antenatal check up, whereas among the females who had completed 10 or more years of school education, 90.9% of them went to qualified doctors for their antenatal check up.

While analyzing data available from the office of Family Welfare Department, it was found that in 2005-06, 113.9% cases of antenatal care were registered in Srinagar district, out of the total estimated number who needed antenatal care services, whereas in Kupwara, where the female literacy is lowest among all the districts of Kashmir region, 49.9% cases were registered for antenatal care services.

Tetanus Toxoid Vaccination

In India, an imp cause of death among neonatal tetanus, which is caused by infection of the newborn (usually at the umbilical stump) with tetanus organisms. Neonatal tetanus is most common when the delivery place in an unhygienic environment and unsterilized instruments are used for cutting the umbilical cord. Tetanus typically develops during the first or second week of life and is fatal in 70 to 90 percent of cases. However, neonatal tetanus is preventable disease. Two doses of tetanus toxoid vaccine given one month apart during early pregnancy are nearly 100 percent effective in preventing tetanus among newborns and mothers. Immune protection is transferred to the baby through the placenta when the mother is immunized (International Institute for Population Sciences, 2006). There is also a relationship between number of tetanus toxoid vaccine and female's literacy as shown in the Table No. 3. In J&K, 27% of the females with no education did not get themselves vaccinated by teanus toxoide, while only 3.7% of the females with ten or more years of school education were not vaccinated. As the female's level of education increases, the awareness among them regarding their health also increases and thus more females get themselves vaccinated.

Table no. 3: Female's Education and percentage distribution of females having Tetanus Toxoid Vaccination in J&K State.

Female's Education	None	One	Two or more
No Education	27	1.1	71.9
<5 years complete	7.6	0.0	92.4
5-9 years complete	11.3	1.6	87.1
10 or more years	3.7	2.0	94.3

Source: International Institute for Population Sciences, 2006. *National Family Health Survey 3: India*, IIPS, Mumbai.

This relationship is also visible in the data related to different districts of J&K. In 2004-05, 78.2% of the total target was achieved in Jammu district, whereas 53.2% of the total target related to Tetanus Toxoid Vaccination was achieved in Doda district. In the data available for 2005-06, 69% of the total target was achieved in Jammu district as compared to 47.9% in Doda district, where the female literacy level is lowest among all districts of Jammu region.

Iron and Folic Acid Tablets

Proper maternal nutritional care is important for the healthy intrauterine growth of a baby and may affect the birth weight of a baby. Overall, around one-third of babies in India are low birth weight, suggesting a nutritional deficiency among many expectant mothers. However, it has also been shown that improvement in nutritional status coupled with improved health care in pregnancy have substantially improved birth weights. The provision of iron and folic acid tablets as a prophylaxis against nutritional anaemia among pregnant women forms an integral part of MCH activities in the Indian Family Welfare Programme. It is recommended that a pregnant woman should take 100 tablets of iron and folic acid (International Institute for Population Sciences, 2006).

In J&K, percentage of females given iron folic acid tablets and syrup also vary with the educational status of females. Table No.4 shows that there is direct relationship between the women's education and the percentage given iron folic acid tablets and syrup. A total of 57.7% females with no school education had iron and folic acid tablets, whereas, among literate females (i.e. ten years of school education or above), the number was 86.7%.

Table No. 4: Female's Education and percentage distribution of who were given Iron Folic Acid Tablets and Syrup (IFA) in J&K.

Female's Education	Females who were given IFA	Females who were given IFA for atleast 90 days
No Education	57.7	16.3
< 5 years complete	74.8	24.8
5-9 years complete	71.2	30.8
10 or more years	86.7	52.8

Source: International Institute for Population Sciences, 2006. *National Family Health Survey 3: India*, IIPS, Mumbai.

In 2003-04, Jammu district achieved 55.7% of the total target set by Directorate of Family Welfare in relation to providing iron and folic acid tablets to pregnant females, whereas 47.2% of the target was achieved in Doda district. While analyzing the two districts from Kashmir region, it was found that Srinagar district achieved 528.8% target while Kupwara district achieved 15.3% target related to provision of iron and folic acid tablets to pregnant females.

Place of delivery and assistance during delivery

Deliveries should take place in proper hygienic conditions under the supervision of trained health professionals. There is also a direct relationship between female's education and females going outside their homes to health institutions for their delivery and there is indirect relationship between female's education and females confining to their own homes or their parental homes for their delivery. This also indicates that education of females influence their maternal health decisions. Table No.5 shows that in J&K state, among females with no school education, only 36.9% of them went to the health institutions for their delivery and 63.1% of them confined themselves to their homes for delivery, whereas among those who had ten or more years of school education, 80.6% went to the health institutions and only 19.4% confined to their homes.

Table No. 5: Female's Education and percentage distribution of females with births delivered in Health Facility Institute and Home

Female's education	Health facility institution	Home
No Education	36.9	63.1
< 5 years complete	29.7	70.3
5-9 years complete	59.7	40.3
10 or more years	80.6	19.4

Source: International Institute for Population Sciences, 2006. *National Family Health Survey 3: India*, IIPS, Mumbai.

Table No. 6 depicts the educational status of females and the percentage of deliveries assisted by health personnel. This relationship again shows that as the level of education among women increases, the percentage of deliveries assisted by health personnel also increases.

Table No. 6: Female's Education and percentage distribution of females with deliveries assisted by health personnel

Female's education	Assisted by health personnel
No Education	42.1
< 5 years complete	43.8
5-9 years complete	67.4
10 or more years	86.3

Source: International Institute for Population Sciences, 2006. *National Family Health Survey 3: India*, IIPS, Mumbai.

In all districts of J&K, majority of females prefer domestic deliveries rather than institutional deliveries. Out of the total antenatal care cases registered in Jammu district 37.6% females had institutional deliveries whereas in Doda district only 17.5% had institutional deliveries. In Kashmir region, Srinagar district had 30.3% institutional deliveries as compared to 25.7% in Kupwara district.

Trends of women's health in India

India is one of the few countries where males significantly outnumber females, and its maternal mortality rates in rural areas are among the world's highest (World Bank, 2004). The maternal mortality ratio is maternal death per 100,000 live births in one year. WHO estimates show that out of the 529,000 maternal deaths globally each year, 136,000 (25.7%) are contributed by India (World Bank, 2004). This is the highest burden for any single country. Maternal health is a problem of serious proportions in India, which has an estimated maternal mortality ratio (MMR) of 540 deaths per 1,00,000 live births, which means one woman dying every five minutes and that too due to preventable causes.

Table No.7 shows percentage distribution of maternal health care indicators and female's literacy of selected Indian states. The relationship, as shown in the Table No.7, depicts that the states like Bihar, Rajasthan and Uttar Pradesh, where the percentage of female's literacy is very low, the percentage of maternal care indicators is also very low. The states like Kerala and Goa where the percentage of female's literacy is very high, the percentage of maternal care indicators have shown improvement.

Table No. 7: Female Literacy Rate and percentage distribution of different Maternal Health Care indicators in Indian States

States	Female Literacy (2001)	Females who received all types of recommended antenatal care	Females with births delivered in a medical institution	Females with deliveries assisted by a health professional
Bihar	33.6	6.4	14.6	23.4
U.P.	43.0	4.4	15.5	22.4
Rajasthan	44.3	8.3	21.5	35.8
Kerala	87.9	64.9	93.0	94.0
Goa	75.5	60.6	90.8	90.8

Sources: Indira Gandhi Institute of Development Research (2005) *India Development Report 2004-05*, Oxford University Press, New York.
 International Institute for Population Sciences, 2006. *National Family Health Survey 3: India*, IIPS, Mumbai.

CONCLUSION

The health status of women in general deteriorates when they remain illiterate and give birth to large numbers of children. The health is also affected by frequent abortions and poor intake of balanced and nutritious food. A wrong life style, poor hygiene, unhealthy superstitions and other cultural practices also cause many hazards to their health. This confirms the urgent need for regular health, nutrition and population education among all sections of women. Such education may form a part of school curriculum right from the third standard in view of the large-scale dropouts of girls from school.

Following conclusions can be drawn from the data related to J&K:

- ❖ Improvements in maternal health can be made through enhancing women's education.
- ❖ Maternal deaths are more in the rural areas as the female literacy levels are low as compared to urban areas, restricting their awareness regarding maternal health.
- ❖ Percentage of females going outside their homes to doctors or other health professionals for their antenatal check up rises with their educational status where as percentage of females having no antenatal check up and going to traditional birth attendants increases with low educational status.
- ❖ As the female's level of education increases, the awareness among them regarding their maternal health also increases and thus more females get themselves tetanus toxoide vaccinated.
- ❖ Percentage of females given iron folic acid tablets and syrup also increases with the improvement in their educational status.
- ❖ There is a direct relationship between female's education and female's going outside their home to health institutions for their delivery and there is indirect relationship

between female's education and females confining to their own homes or their parental homes for their delivery.

- ❖ Similar trends are visible if we compare the data of female's education and indicators of maternal health related to different districts of J&K state or even all other Indian states.
- ❖ It has also been observed that mothers who did not have any antenatal check-ups, almost one half of them felt that it was not necessary (49%). Five percent each felt that it was not customary to have antenatal check up or had lack of knowledge about it.
- ❖ These results suggest that there is need to educate women and families about the availability and benefits of antenatal check-ups to help overcome traditional attitudes and other hurdles that prevent them from seeking antenatal care for their pregnancies.

References:

Government of India. 2001. *Census of India 2001, District Census Handbook: Jammu District*, Director of Census Operations, Jammu and Kashmir, Srinagar.

Government of India. 2001. *Indian Census Report, 2001*, URL: [http:// www.censusindia.net/](http://www.censusindia.net/)

Government of India. 2002. *Women and Men in India 2002*, Ministry of Statistics and Programme Implementation, Central Statistical Organization, New Delhi.

Government of India. 2006. Ministry of Health and Family Welfare, *National Family Health Survey 3: 2005-2006*, URL: <http://www.nfhsindia.org/pdf/JM.pdf>.

Indira Gandhi Institute of Development Research (2005) *India Development Report 2004-05*, Oxford University Press, New York.

International Institute for Population Sciences, 2006. *National Family Health Survey 3: India*, IIPS, Mumbai.

King, Elizabeth and Hill, Anne (eds.). 1993. *Women's Education in Developing Countries: Barrier's, Benefits and Policy*, Johns Hopkins University Press, Baltimore.

Lopez and Ruziicka (eds.). 1983. *Sex Differences in Mortality*, Department of Demography, Australian National University, Canberra.

Mahadevan, K. 1989. *Women and Population Dynamics- Perspectives from Asian Countries*, Sage Publications, New Delhi

Rao, Digumarti Bhaskara, D.P.Latha. 1998. *International Encyclopedia of Women. Volume:4. Women and Family Health*. Discovery Publishing House, New Delhi.

Sapiro, Virginia. 1985. *Women, Biology, and Public Policy. Volume 10*. Sage Publications, USA.

Stein, Jane. 1998. *Empowerment and Women's Health: Theory, Methods and Practice*, Zed Books, London.

World Bank. 2004. *The Millennium Development Goals for health: Rising to the Challenges*, World Bank, Washington DC.