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IMPACT OF WOMEN EDUCATION ON CHILD HEALTH

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ABSTRACT

The Indian economy has experienced remarkable economic growth in the past few years along with emerging as a global player and achieving most of its Millennium Development Goals. Despite this, child malnutrition in India is still among the highest in the world and India's effort towards reducing child malnutrition has been rather slow. There are various factors contributing to child malnutrition in India such as lack of education, gender inequality etc. Various studies done so far have shown that education in general and female education in particular plays an important role in reducing malnutrition among children and thereby have a strong influence on reducing child morbidity and mortality. Using time series data starting from year 1991 to 2007-08, this paper examines the impact of women education on child health in India and shows that women education does play an important role in improving health and nutritional status of children. Thus efforts should be made towards strengthening literacy programmes, especially female literacy programmes in India for achieving sustainable development.

KEYWORDS

Economic Growth, Malnutrition, Millennium Development Goals, Sustainable Development, Women Education.

I. INTRODUCTION

Since its independence, India has made immense progress towards economic growth (achieved a growth rate of 8.6 per cent and 9.3 per cent respectively in 2009-10 and 2010-11 as per Economic Survey of India 2012-13 estimates), emerged as a global player with the world's fourth largest economy in purchasing power parity terms, and made progress towards achieving most of the Millennium Development Goals (World Bank: "India Country Overview 2011"). But even after so many years of economic development and industrialization, child malnutrition in India is still among the highest in the world. As per Braun et. al (2008), "India is home to 40 percent of the world's malnourished children and 35 percent of the developing world's low-birth weight infants. Every year, 2.5 million children die in India due to malnutrition, accounting for one in five deaths in the world. More than half of these deaths could be prevented if children were well nourished". The National Family Health Survey in 2005-06 (NFHS-3) reported that around 48 percent of children under age of five years were chronically malnourished while more than half that is 54 percent of the total deaths before the age of five years in India were found to be related to malnutrition. Apart from this, women with little or no education tend to have children whose nutritional status is lower than that of children whose mothers are more educated, even after controlling for other demographic and socioeconomic variables, suggesting that women's education and literacy programmes could play an important role in improving children's nutritional status (Mishra and Retherford, 2000). Various empirical studies done by IFPRI (International Food Policy Research Institute) have shown that the low female status in South Asian countries is partially resulting into low birth weights and high levels of child malnutrition in comparison with other countries. This is because the low female status prevents them from taking important decisions about their children's health and education along with their own health. This in turn implies poor nutritional status of women resulting into higher risk of delivering malnourished children and hence high child malnutrition.

Increasing women's access to education and reducing the gender inequality in education have been important targets in both academic and policy making. Higher educational attainment benefits women in terms of their autonomy, rights, labor market outcomes, and social status. These improvements take place due to increased human capital in the form of knowledge and skills which in turn contribute not only to greater labor market productivity but also to higher women's empowerment. An educated woman in turn benefits the society as a whole by taking appropriate decisions during pregnancy and child rearing which have positive impact on the nutritional status and survival of children (Miller and Rodgers, 2009). In fact various demographic studies which took place have shown that education in general and female education in particular greatly helps in reducing child morbidity and mortality (Govindasamy and Ramesh, 1997). Thus this paper aims at showing that women education plays a key role in determining nutritional status of child and hence child mortality reduction in India using a time series data starting from year 1991 to 2007-08 and taking female elementary gross enrollment ratio (GER) as an indicator of women education and under-five child mortality rate as an indicator of child health. Since women education is expected to have positive effect on child health and hence a negative relationship with malnutrition and mortality of child, the study emphasizes role and importance of educating women to improve child's nutritional status.

This paper is organized as follows. Section II consists of the literature review. Section III analyzes nutritional status of children in India. Section IV presents the analytical framework of this paper. In this section, the methodology, data and variables used for this study are described. Section V contains the regression results and section VI concludes.

II. LITERATURE REVIEW

Caldwell in 1979 brought into focus the importance of women's education for child health and survival. Caldwell pointed out that women's education is a crucial factor in determining child survival even after controlling for a number of other factors, such as education and occupation of the husband. As per Caldwell, there are several routes through which women's education might enhance survival of a child, which are: appropriate use of simple health knowledge; an increased interaction with medical personnel; and allowing the educated woman to take better and suitable health decisions for her children.

Apart from this, the World Fertility Survey (WFS) program and a United Nations study conducted during 1980s, which used both survey and census data, showed that higher levels of women's education were linked with greater probability of child survival in a wide range of developing countries. Similarly studies done by Hobcraft et al. in 1984, which covered 28 WFS surveys, and by Mensch et al. in 1985, which covered 15 countries, also confirmed this association between education of women and child survival, keeping other socio-economic variables such as education and occupation of husband constant.

A number of studies such as Hobcraft 1993, Boyle et al. 2006, Miller and Rodgers 2009, using data at household-level, have found that female's education is directly proportional to infant and child health and nutritional status. Yip et al. (1992) found that poor growth of children in Asia—as measured by low birth weight, low height-for-age, and low weight-for-height— was mostly due to poor nutritional status rather than genetic factors indicating that educating women in developing countries might help in reducing child mortality by improving their nutritional levels. According to Miller and Rodgers (2009), "Empirical work has also shown that education can serve as a means of adopting new health beliefs, gaining general knowledge, and applying specific knowledge about health and nutritional practices that promote child health (Glewwe 1999)". Another factor through which women education helps in improving child health is improved household income which comes with educated women working outside their homes thereby strengthening the financial ability of their households which in turn imply better nutritious food and health services for their children. This shows that the socioeconomic determinants such as income and household's wealth affect child health and nutritional status through some intermediary mechanisms that encompass household composition, dietary intake, medical treatment, and environmental contaminants (Miller and Rodgers, 2009).

Apart from socio-economic determinants there are demographic determinants of Child Health which constitutes the number of children in a household, female headed household and the age of woman at the time of first birth. Women who are less-educated generally have more children on average and are younger at the time they first give birth. Specifically, greater the number of children in a household the greater is the competition for scarce resources, which could badly affect children's dietary intake, reduce their access to medical treatment, and increase their chances of getting exposed to infectious diseases (Heaton et al. 2005).

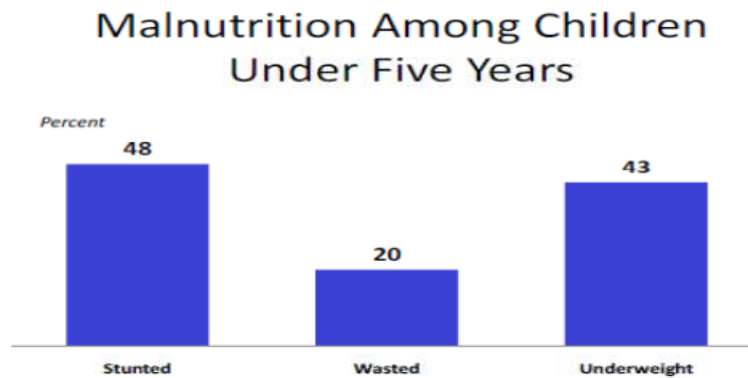
Lastly there are proximate determinants of child health which includes the biological mechanisms such as dietary intake, infectious diseases, and exposure to environmental hazards. Higher education for women operates through this mechanism since households with higher socio-economic status have greater chances to have better and improved facilities that can prevent or reduce the transmission of infectious diseases through these routes (Pongou et al. 2006).

Child nutrition and health has become an important indicator of economic development. Among the eight Millennium Development Goals (MDGs) which were adopted by the United Nations (UN) members in 2000, at least four are directly linked to child health or nutritional status. An idea about how the women education can affect the child health will help us to evaluate an important development policy which is the improvement of women's education. In fact, two goals of the MDGs directly target the education of women. Raising the education of females is also the priority of the World Bank. According to the World Bank, one primary reason for this priority is that raising the education of women can greatly improve the health of the next generation. Therefore with regard to the past literature, this paper uses child mortality rate (under age five) as a measure of child health and female elementary gross enrollment ratio (GER) as a measure of women education.

III. NUTRITIONAL STATUS OF CHILDREN IN INDIA

According to National Family Health Survey (NFHS-3) in India, 2005-06, almost half of children under age five years (48 percent) were chronically malnourished. In other words, they were too short for their age or stunted. A stunted child has a height-for-age z-score that is at least 2 standard deviations (SD) below the median for the WHO Child Growth Standards. Chronic malnutrition is an indicator of poor child health that results from not receiving adequate nutrition over a long period and may be from recurrent and chronic illness. Acute malnutrition, measured as wasting, results in a child being too thin for his or her height. A wasted child has a weight-for-height z-score that is at least 2 SD below the median for the WHO Child Growth Standards. Wasting again shows inadequate intake of nutrition and may be affected by diseases such as diarrhea and other acute illnesses. As per this survey, twenty percent children in India under age five years were wasted. Forty-three percent of children under age five years were underweight for their age. An underweight child is defined as one with a weight-for-age z-score which is at least 2 SD below the median for the WHO Child Growth Standards. All this is shown in following figure 1.

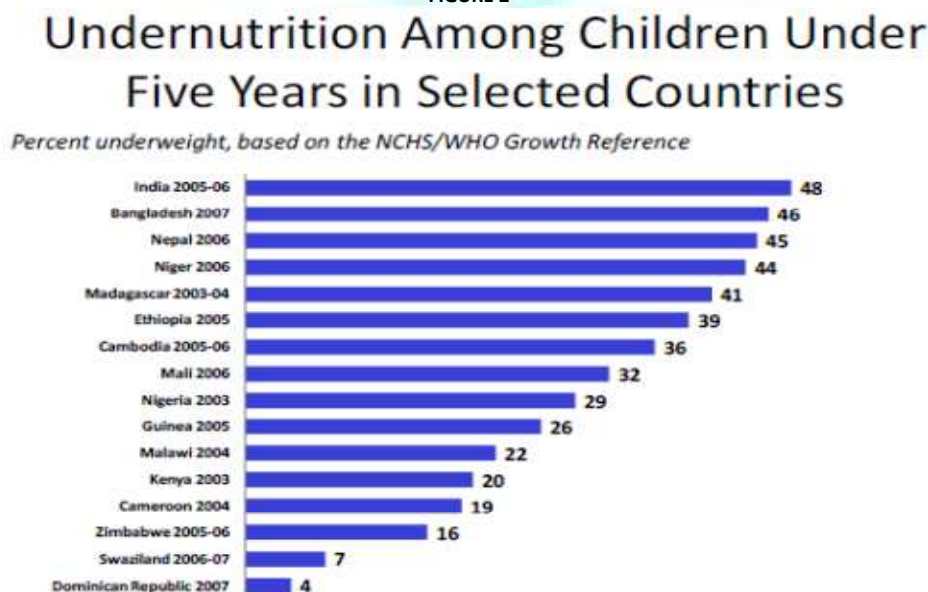
FIGURE 1



Source: National Family Health Survey (NFHS-3), India 2005-06

The Demographic and Health Surveys during 2003 and 2007 also measured the nutritional status of children under five years of age in 41 developing countries and it was found that the prevalence of underweight in children was higher in India than in any of the other 40 countries, but was only slightly higher than the prevalence in Bangladesh and Nepal (figure 2 as shown below). The prevalence of underweight in children in India (48 percent) was almost twice as high as the average prevalence for the 26 sub-Saharan African countries that had similar data (25 percent). Thus all these figures indicate that the level of child malnutrition in India is rather high.

FIGURE 2

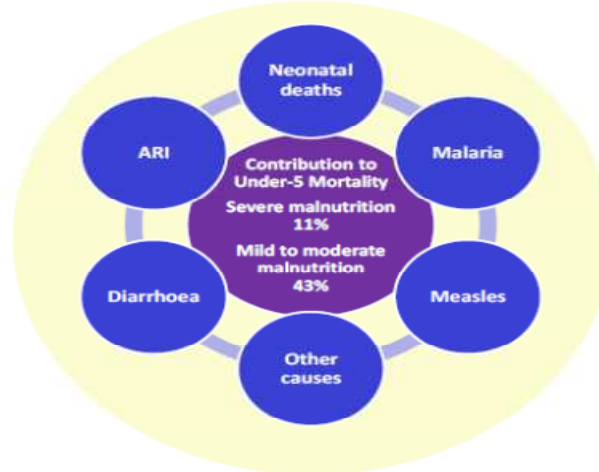


Source: National Family Health Survey (NFHS-3), India 2005-06.

Note: U.S National Center for Health Statistics (NCHS) and World Health Organization (WHO).

In India, two factors that are infectious diseases and neonatal deaths were found to be largely responsible for under-five child mortality. Under nutrition is an important factor contributing to the death of under-five aged children. If a child is malnourished, the mortality risk associated with acute respiratory infections (ARI), diarrhoea, malaria, measles, and other infectious diseases is increased. According to NFHS-3, more than half (54 percent) of all under-five child deaths were related to malnutrition and because of its extensive prevalence in India, mild to moderate malnutrition contributed to more deaths (43 percent) than severe malnutrition (11 percent) as shown in figure 3.

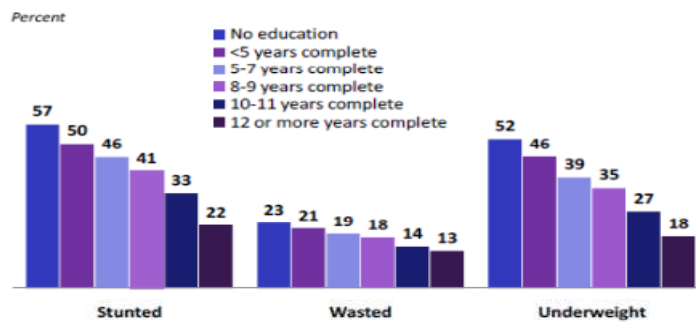
FIGURE 3
Poor Nutrition as a Contributing Factor to Under-Five Mortality



Source: National Family Health Survey (NFHS-3), India 2005-06.

This shows that if nutritional status of the child can be improved then this will contribute towards reducing the high child mortality in India. As already discussed, one of the factor that affect child nutritional status and hence child malnutrition is female education as educated females adopt better practices to improve their child health. As per NFHS-3, 49 percent of mothers of children of under five years of age had never attended school and only 9 percent have completed 12 or more years of schooling in India. Children whose mothers had less than five years of education were less likely to be stunted, wasted, or underweight than were children whose mothers were illiterate that is with no education (Figure 4). Children whose mothers had completed middle school or higher education were even less likely to suffer from malnutrition. The results presented in Figure 4 shows that as women’s years in education increases, the nutritional status of children improves and hence child malnutrition and child mortality declines. Thus women education has a strong inverse relationship with all three measures of nutritional status. For every measure of nutritional status, nutritional deficiencies decrease steadily with rising education of the mother. The percentage of children who were underweight is almost three times as high for children whose mothers had no education than for children whose mothers had completed at least 12 years of education, same holds for stunting.

FIGURE 4
Stunting, Wasting, and Underweight Among Children Under Five Years by Mother’s Education

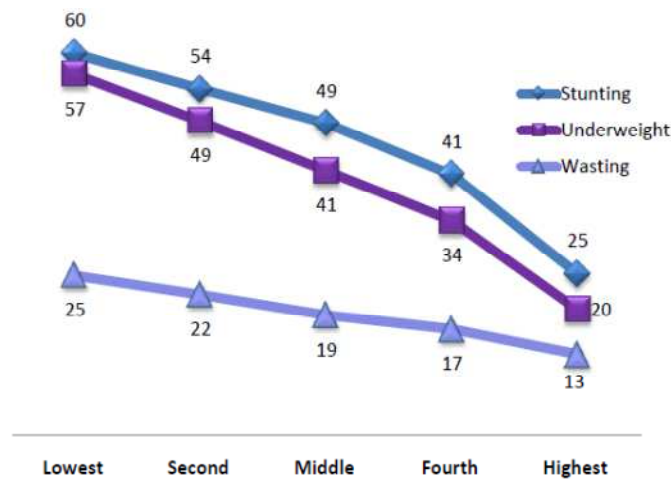


Source: National Family Health Survey (NFHS-3), India 2005-06

Also NFHS-3 shows that a strong direct association exists between mother’s education and children’s immunization and vaccination coverage. As per this survey, only 26 percent of children of mothers with no education were fully vaccinated while 75 percent of children of mothers who had completed 12 or more years of education were fully vaccinated, and the percentage of vaccinated children increased steadily with increasing levels of mother’s education. This could imply that mother’s education have a strong impact on child mortality.

Apart from mother’s education, there are other factors also that influence child nutritional status. According to NFHS-3, household wealth have a significant impact on child’s health, that is there is a negative association between malnutrition in children and the level of wealth of the households that they live because greater is the household income and assets, greater will be the household ability to purchase sufficient quantities of nutritious foods, clean water, clothing, adequately-ventilated housing, fuel for proper cooking, safe storage of food, personal hygiene items, and health services which helps in improving nutritional and health status of the child. This is shown in following figure 5.

FIGURE 5
Stunting, Wasting, and Underweight Among Children Under Five Years by Household Wealth

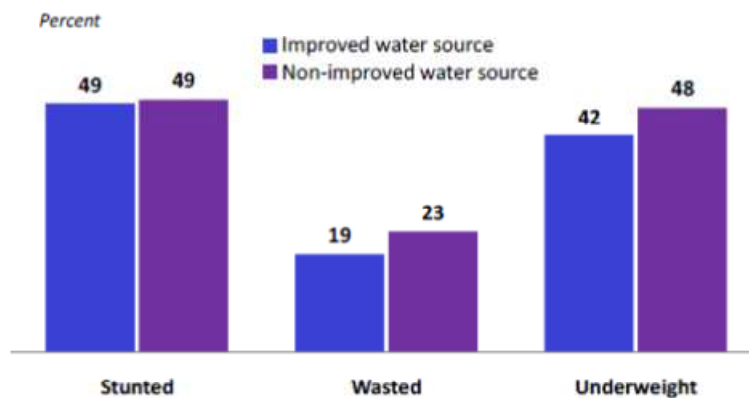


Source: National Family Health Survey (NFHS-3), India 2005-06

In the above figure it can be seen that six out of every 10 children living in the poorest (lowest wealth quintile) households were stunted and almost as many were under weight. However, even in the wealthiest (highest wealth quintile) households, one-fourth of children were stunted and one-fifth were underweight. The NFHS-3 survey also identified environmental factors which influence the child growth and development. For example, a household’s source of drinking water is often linked to its socioeconomic status. Poor households are more likely to obtain their drinking water from contaminated water sources such as surface water or unprotected wells where the children are at higher risks of food contamination, infectious diseases, and malnutrition as compared to children of a household which have access to an improved source of water (figure 6). As figure 6 shows children whose drinking water is from a non-improved water source are more likely to be underweight and wasted than children with access to an improved water source. However, the level of stunting does not change with respect to water source which may be related to the fact that stunting is an indicator of the long-term effects of malnutrition and so it does not change according to recent dietary intake or diarrhoeal disease (NFHS-3).

Thus, child malnutrition is a serious problem in India and women education does influence child malnutrition and therefore helps in reducing child mortality. This finding suggests that women’s education and literacy programmes could play an important role in improving children’s nutritional status and so efforts should be made towards strengthening women’s education and literacy programmes in India. The following sections of this paper shows analytical and empirical framework that substantiate the above argument.

FIGURE 6
Stunting, Wasting, and Underweight Among Children Under Five Years by Source of Drinking Water



Note:
Improved water source: piped into dwelling, piped into yard or plot, public tap or standpipe, tube well or borehole, protected dug well, protected spring, rainwater
Non-improved water source: unprotected dug well, unprotected spring, tanker truck, surface water

Source: National Family Health Survey (NFHS-3), India 2005-06

IV. ANALYTICAL FRAMEWORK

The main argument in this paper can be summarized as follows: women’s education have been crucial in improving the nutritional status of children across India, and this in turn has played an important role in reducing malnutrition among children, and consequently reducing child morbidity and mortality. Thus, argument is based on the following asserted relationships:

- A positive relationship between women’s education and children’s nutritional status in India;
- A negative relationship between children’s nutritional status and malnutrition among children ;
- A positive relationship between malnutrition and child mortality.

Thus there will be a negative relationship between women's education and child mortality and this paper is concerned to establish plausibility of this relationship.

DATA AND VARIABLES USED

This paper uses a time series data starting from year 1991 to 2007-08 to estimate relationship between women's education and child mortality in India using the following variables:

- Women's education (female_edu): It is measured by Female Elementary Gross Enrolment Ratio (GER) which is defined as the percentage of the enrolment of girls in the Primary/elementary school (classes I-VIII) to the estimated girl child population in the age groups 6 to below 14 years in India. This variable is the independent variable in the study. The source of this data is Selected Educational Statistics (SES), Ministry of Human Resource Development (MHRD), GOI.
- Child mortality rate (CMR): This variable is taken as an indicator of child health and is the dependent variable in this study. Under-five Child Mortality Rate is measured in terms of deaths of number of children in age group 0-5 years taking place per 1000 children (0-5 year's age) in India. The source of this data is Sample Registration System, Registrar General, India.
- Access to improved drinking water (drinking_water): This variable is measured by estimated percentage of households having access to improved source of drinking water (piped water, tubewell, etc.) and it is one of the explanatory variables in this study. The source of this data is World Health Organization (WHO) and UNICEF.
- Household wealth (HH_wealth): This variable is another regressor in this study. It is measured by Household final consumption expenditure (current US \$) because greater is the household wealth greater is its expenditure and this is defined as the market value of all goods and services, including durable products (such as cars, washing machines, and home computers), purchased by households. It excludes purchases of dwellings but includes imputed rent for owner-occupied dwellings. It also includes payments and fees to governments to obtain permits and licenses and source of this data is World Bank.

The purpose of the paper is to see whether women education in the period 1991-92 to 2007-08 is associated with lower child mortality rate *at the end of the period*, controlling for other variables that may affect child mortality or child health.

METHODOLOGY

This paper examines the relationship between child health and the women's education by using the following child health equation:

$$CMR_t = b_1 + b_2 * female_edu_t + b_3 * X_t + e_t$$

Where CMR is Under-five child mortality rate, female_edu is the women's education and X are other control variables that may affect child mortality (household wealth and access to improved drinking water in this case). In this equation, b_1 , b_2 and b_3 are the corresponding regression coefficients, and e is the residual. The subscript t denotes particular time period t . This study hypothesize that b_2 is less than zero, or the female's education has a positive effect on child health.

V. WOMEN EDUCATION AND CHILD HEALTH: REGRESSION RESULTS

In this section, the regression result of the empirical model is reported. The estimates of the empirical model are shown in **table 1**. When an Ordinary Least Square (OLS) regression of CMR on other explanatory variables was run, it was found that serial correlation among residuals was present. But by including a one year lag in CMR in the OLS regression removed this serial correlation and so $CMR(-1)$ is used as an additional explanatory variable in the model in order to counter the problem of serial correlation (as can be seen from the value of Durbin-Watson statistic in table 1). Also while carrying out white's heteroscedasticity test, it was found that there was no heteroscedasticity in the data.

In column (1) of table 1, results of an Ordinary Least Square (OLS) regression of child mortality rate on female elementary GER is shown. The results show a significant negative effect of female education on child mortality, i.e if female education increase by 1% then child mortality rate falls by 0.128%. Female education alone explains 93.2% of variation in child mortality rate. Also a significant and negative coefficient of square of female education shows that rising female education reduces child mortality rate but at a diminishing rate. This result is obvious in the sense that after a certain level of education is achieved, further increase in female education will not have greater effect on child mortality rate and hence on child health.

In column (2), drinking_water is also added. Coefficient on access to improved drinking water is statistically significant at 5% with expected negative sign which suggests that children are indeed healthier in better environments. The adjusted R-square is 94.1% which is very high and so these two explanatory variables explain a high proportion of variation in child mortality. The coefficient of square of female education is again negative and significant. The zero probability of F-statistics indicates that these two variables are jointly significant also. These results together suggest that it is true that better educated mothers raise their children in more hygienic environments and thus have healthier children which in turn reduces mortality rate among children.

Finally in column (3), Household wealth is included as an additional explanatory variable and an OLS regression of child mortality rate on female elementary GER, access to improved drinking water and household wealth is done. Coefficient on all the variables have the expected negative sign and all these coefficients are significant at 5%. The adjusted R-square is also very high which is 94.4% and this means that all these explanatory variables explain a high proportion of variation in child mortality. Again the coefficient of square of female education is negative and significant at 5%. The zero probability of F-statistics indicates that these explanatory variables are jointly significant also. The estimated coefficient of female education in this regression decreases only marginally, which suggests that the main effect of the female's education on child health is not through income.

It is interesting to note that in all these additional regressions, the coefficient on female education remains negative and significant at 1% in column (1) and (2) and 5% in column (3). This implies that female elementary education in the period from 1991 to 2007-08 had a strong significant negative impact on child mortality rate at the end of the period which is 2007-08.

To summarize, we find that the mother's education has a negative effect on child mortality and hence a positive effect on the health of the child. This effect is robust to different regression specifications that control for other variables that affect child mortality and hence child health. The findings suggest that the mother's education has an important influence on child health. Also it can be said that this effect of mother's education may also be attributed to more income of the household and better environments (improved drinking water here).

TABLE 1: ORDINARY LEAST SQUARES ESTIMATES OF THE EFFECT OF WOMEN'S EDUCATION ON THE HEALTH OF CHILDREN [DEPENDENT VARIABLE: UNDER-FIVE CHILD MORTALITY RATE (CMR)]

Regressors	(1)	(2)	(3)
Constant	15.614* (8.452)	108.4259* (60.235)	102.0528* (58.256)
female_educ _t	-0.128*** (0.0352)	-0.0397*** (0.0117)	-0.0359** (0.0112)
female_educ _t ²	-0.012** (0.0048)	-0.033** (0.013)	-0.054** (0.024)
drinking_water		-0.846** (0.323)	-0.954** (0.376)
HH_wealth			-0.00031** (0.000115)
CMR(-1)	0.908*** (0.18)	0.600** (0.24)	0.549** (0.239)
R-square	0.941	0.953	0.959
Adjusted R-square	0.932	0.941	0.944
Durbin-Watson statistic	2.360	1.846	1.985
F-statistic	104.321	82.077	64.379
Prob (F-statistic)	0.000	0.000	0.000
No. of observations	17	17	17

Note: parentheses in the table reports standard errors which are robust to serial correlation. * Significant at the 10% level, **significant at the 5% level, ***significant at 1%.

VI. CONCLUSION

This study examined the effect of the female's education on the health of children under five years of age in India using a time series data starting from year 1991 to 2007-08. The OLS regression showed that female's education has a significant negative effect on child mortality and hence a positive effect on the health of the child. This is because preventive health services are used to a greater extent by females with higher education than those with little or no education. Also, more educated women are more likely to have initiated immunization and even more likely to have ensured that their children are fully vaccinated. This implies that female's education is an important determinant of the health of children even after we control for household wealth, sanitation, and other socioeconomic variables. Child malnutrition is a serious problem in India and since women education has a strong influence on child malnutrition, the results of this analysis add emphasis to the many other arguments in favor of strengthening women's education and literacy programmes in India as this could play an important role in improving children's nutritional status in India.

From the development policy point of view, the conclusion reached in this paper certainly emphasize greater and continued investments in female education, which will not only help in reducing infant and child mortality and morbidity but will also help in improving children nutritional status, thereby implying a better quality and healthier next generations. However, public policies should not only focus on education alone, this is because there are other factors such as access to health care facilities, which also affect health-care utilization. In a scenario where female illiteracy is high, improving access to health facilities should go together with educating the women.

LIMITATION AND SCOPE FOR FURTHER RESEARCH

A limitation of this study is that the data pertains to till 2007-08. The results would be more accurate with the findings of the next survey which is NFHS-4. Apart from this, other factors influencing under-five child mortality rate apart from household wealth and access to safe drinking water could be included to examine their impact on child health which is left for further research.

REFERENCES

- Boyle, M., Y. Racine, K. Georgiades, D. Snelling, S. Hong, W. Omariba, P. Hurley, and P. Rao-Melacini (2006), 'The Influence of Economic Development Level, Household Wealth and Maternal Education on Child Health in the Developing World', *Social Science & Medicine* 63:2242-54.
- Braun, Joachim von et. al (2008), 'Accelerating Progress toward Reducing Child Malnutrition in India: A Concept for Action', International Food Policy Research Institute (IFPRI), series no. 12.
- Caldwell, J.C. (1979), 'Education as a factor in mortality decline: an examination of Nigerian data', *Population Studies* 33, 3:395-413.
- Family Welfare Statistics in India, 2011, Statistics Division, Ministry Of Health And Family Welfare, Government Of India.
- Fred Arnold, Sulabha Parasuraman, P. Arokiasamy, and Monica Kothari (2009), 'Nutrition in India', National Family Health Survey (NFHS-3), India, 2005-06. Mumbai: International Institute for Population Sciences; Calverton, Maryland, USA: ICF Macro.
- Government of India (2013), *Economic Survey 2012-2013*, Ministry of Finance, New Delhi.
- Govindasamy, Pavalavalli and B.M. Ramesh (1997), 'Maternal Education and the Utilization of Maternal and Child Health Services in India', National Family Health Survey Subject Reports, No. 5, International Institute for Population Sciences Mumbai, India.
- Heaton, T., R. Forste, J. Hoffmann, and D. Flake (2005), 'Cross-national Variation in Family Influences on Child Health', *Social Science & Medicine* 60(1):97-108.
- Hobcraft, J.N., J.W. McDonald and S.O. Rutstein (1984), 'Socioeconomic factors in infant and child mortality: a cross-national comparison', *Population Studies* 38, 2:193-223.
- Hobcraft, John (1993), 'Women's Education, Child Welfare and Child Survival: A Review of the Evidence', Health Transition Review Vol. 3 No. 2, 1993, Health Transition Centre, Australian National University.
- Joint Monitoring Programme for Water Supply and Sanitation (July 2008), 'Coverage Estimates: Improved Drinking Water, India', WHO / UNICEF, wssinfo.org.

12. Mensch, B., H. Lentzner and S.H. Preston (1985), 'Socioeconomic Differentials in Child Mortality in Developing Countries', New York: Dept. of International Economic and Social Affairs, United Nations (ST/ESA/SER.A/97).
13. Miller, Jane E. And Yana V. Rodgers (2009), 'Mother's Education and Children's Nutritional Status: New Evidence from Cambodia', *Asian Development Review*, vol. 26, no. 1, pp. 131–165, Asian Development Bank.
14. Mishra, Vinod K. and Retherford, Robert D. (2000), 'Women's Education Can Improve Child Nutrition in India', National Family Health Survey Bulletin, No. 15, International Institute For Population Sciences, Mumbai.
15. Pongou, R., M. Ezzati, and J. Salomon (2006), 'Household and Community Socioeconomic and Environmental Determinants of Child Nutritional Status in Cameroon', *BMC Public Health* 6:98.
16. Selected Educational Statistics (SES), Ministry of Human Resource Development (MHRD), GOI.
17. The World Bank (2011), *India Country Overview 2011*, Report of the World Bank, 2011.
18. Yip, R., K. Scanlon, and F. Trowbridge (1992), 'Improving Growth Status of Asian Refugee Children in the United States', *Journal of the American Medical Association* 267(7):937–40.



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