



ISSN : 2350-0743

www.ijramr.com



International Journal of Recent Advances in Multidisciplinary Research

Vol. 06, Issue 02, pp.4653-4656, February, 2019

RESEARCH ARTICLE

ROLE OF MATERNAL EDUCATION WITH REFERENCE TO CHILD HEALTH AND SURVIVAL IN PAKISTAN

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ARTICLE INFO

Article History:

Received 24th November, 2018

Received in revised form

29th December, 2018

Accepted 25th January, 2019

Published online 28th February, 2019

Keywords:

Maternal education, Malnourished, Mortality, Morbidity, PDHS.

ABSTRACT

Acute Using data from the Pakistan and health demographic survey (PDHS)2102-2013 we examine the effect of mother's education on 3 markers of child health including mortality, malnourishment and common child hood morbidities mainly acute respiratory infection and diarrhea these illnesses are common among children. Extensive PDHS survey in Pakistan shows strong correlation between maternal education and markers of child health. Maternal education has a significantly impact on mortality, morbidity and children height for age and weight. Education is an important determinant of health status in both the developed and developing world.

INTRODUCTION

Education plays a significant role in the development of a nation; specifically when it comes to the education of women, it become more important as women play an imperative role in training as well as educating the younger generation. Primary care of a child is been taken care of by mother who is the principal care provider of her child and therefore the kind of care she delivers to depends; a large extent on her own knowledge and understanding of certain essential aspects of basic nutrition and health care. If a mother is educated, she will be able to bring her children for any sort of treatment in health care centers in a timely manner and will also continue the recommended treatment for a longer time period. (Caldwell, 1979). The overall literacy rate in Pakistan in the age group of 15-45 years is 49%, out of that the literacy rate of females is 43%.(Pakistan Demographic and health survey. 2012-13) However, it has been noticed that maternal literacy had a strong impact in child's growth and cognitive development in various developing nations such as Pakistan. (Bhutta *et al.*, 2004) Likewise, a cross-sectional study was conducted in Nigeria which included 300 children who were less than 5 years of age. Out of total children, 31% were stunted, 29% were underweight, 7% were wasted. Many mothers i.e. 65% had no formal education. A statistically significant association was present between maternal literacy and occurrence of malnutrition specially stunting; among the children studied. (Bashir and Umar, 2012). Similarly, previous literature also explored factors that led to the under nutrition of children which was found associated with maternal education as a major preceding factor(Burchi, 2012; Mallard *et al.*, 2014; Wolde, Berhan, and Chala, 2015).

Maternal education has a highest impact on health of the children between the ages 0-2 years. Children who are very young are mostly sensitive to appropriate health choices and practices related to health care (Barrera, 1990). The children of more educated mothers were found to be much healthier because such mothers have better knowledge about health care and nutrition; they adopt healthier behavior and also provide more hygienic and harmless environments to their children. (Behrman and Anil, 1988). The effect of education of father on infant and child mortality are found to be about one half that of mother's education (Cochran SH *et al.*, 1982). Those mothers who are educated are better able to move away from the tradition to use recent ways of safeguarding their own health as well as the health of their children. Their voice is being heard in health decision of family. (Sandiford, *et al.*, 1997, Smith, Lisa, *et al.*, 2000).

Moreover, she would have a strong influence with regards to the decision making and control of resources in family (LeVine *et al.*, 1991; Bhuiya *et al.*, 1986; Bhuiya *et al.*, 1986; Gladstone *et al.*, 2008). Educated women are better able to utilize for their benefits, the resources that exist in the community (Caldwell, *et al.*, 1983). In contrast maternal education remains statistically significant for children's immunization status in about one-half of the countries even after individual-level and community-level controls are introduced (Desi and Soumya, 2008). With more schooling, women tend to have fewer children and have more spaced births, these attitudes also reduce child mortality and it has direct impact on child health (Brown *et al.*, 2010). Literature also suggest an established association between the education level of mother and child health outcomes. (Vikram *et al.*, 2010). Higher years of schooling in mothers are reported with lower incidence of illness, better vaccination, and healthier nutritional position and improved scores of cognitive tests among children (Vani Borooh, 2000). There are several

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pathways in which maternal education positively affects child health; educated mothers are more active in implementing good health practices and have greater access to information.

Objective: To evaluate the impact of maternal education on nutritional status, child health and survival.

MATERIALS AND METHODS

Data used for the current study were derived from the PDHS 2012-13, undertaken by National Institute of Population Studies. The PDHS was a household survey which used a stratified, multistage cluster sampling method. An interview was conducted with married women of reproductive age. This survey provided detailed information on maternal socio-economic characteristics and child care survival status. The recent PDHS obtained nationally representative data from standardized tool. Education was measured as a 4-category variable representing no education, primary, secondary, middle and higher. We assessed the impact of maternal education on three health indicators i.e. mortality, malnutrition and common childhood morbidities including acute respiratory infection (ARI) and diarrhea these illnesses are major cause of death in under five children in Pakistan(DHS, 2013) According to this survey education of mother influenced positively for the child health and survival.

Following child health indicators were taken for this paper

- Child mortality
- Malnutrition measured through stunting (low height-for-age) and wasting (low weight-for-height) and under-weight(low weight for age)
- Common childhood morbidities including diarrhea and ARI

RESULTS

Mortality

Mortality is the term used for a number of people who died within a population .Child mortality, also known as under-5 mortality, refers to the death of infants and children under the age of five. This indicator is important to measure deprivation of country in term of socio economic and health status. Pakistan currently ranks 26th in the world for higher under 5 mortality rate (under five mortality estimates range from 3-182 per 1000 live births) (Levels and trends in child mortality 2013).Child mortality information were taken from mothers usually. All rates are expressed as deaths per 1,000 live births. The recent PDHS showed that (Table 1.) mortality rates in all categories are higher in uneducated women and there are marked difference in mother’s educated. There are marked differences in child mortality by mother’s education. It is more than twice as high among women with no education (112 deaths per 1,000 live births) as among women with a higher education (36 deaths per 1,000 live births).

Malnutrition

The nutritional status of children under age 5 is an important measure of children’s health. Adequate nutrition is essential to children’s growth and development as well as important for optimal physical, mental and cognitive growth. The anthropometric data on height and weight collected in the 2012-13 PDHS permit the measurement and evaluation of the nutritional status of young children in Pakistan; these data allow the calculation of three indices: height-for-age, weight-for-height, and weight-for-age. Indicators of the nutritional status of children were calculated using growth standards published by the World Health Organization (WHO) in 2006.

Table 1. Childhood mortality status by maternal education

Mother’s education	Noenatal mortality	Postnoenatal mortality	Infant mortality	Child mortality	Under-fivemortality
No education	65	27	92	23	112
Primary	54	25	79	16	93
Middle	48	21	68	4	72
Secondary	47	8	55	2	57
higher	27	3	30	5	36

Source (Pakistan Demographic and health survey. 2012-13)(PDHS, 2012)

Table 2. Nutritional status of children by mother education

Nutritional status of children				
Mother’s education	Stunting	Wasting	Under-weight	
No education	55.3	13.5	38.7	
Primary	45.8	8.5	27.5	
Middle	30.8	8.0	17.8	
Secondary	20.9	7.3	14.2	
higher	20.7	5.6	9.9	

Source (Pakistan Demographic and health survey. 2012-13)(PDHS, 2012)

Table 3. Prevalence and care seeking of ARI and diarrhea

Acute respiratory infection		
Mother’s education	Prevalence	Care-seeking
No education	16.2	58.7
Primary	18.1	63.9
Middle	13.2	70.3
Secondary	12.9	82.1
higher	15.3	83.1
Diarrhea		
Mother’s education	Prevalence	Care-seeking
No education	22.9	55.9
Primary	25.0	65.8
Middle	22.6	71.9
Secondary	21.1	66.6
higher	16.4	70.8

The recent estimates by PDHS shows that (Table 2.) malnutrition status of children strongly associated with mother education. Children born to mothers with no education were more likely to be malnourished (55% stunting, 39% underweight and 14% wasting) as compared to children born to mothers with a higher education (21% stunting, 10% underweight and 6% wasting).

Child morbidity

Morbidity refers to the disease state of an individual, or the incidence of illness in a population. (ARIs), and diarrheal diseases are the leading causes of childhood deaths in Pakistan that are preventable with primary health care measures. According to PDHS 2006-07 data on child mortality, the leading causes of death during the postnatal period is diarrhea (27%) under nutrition, poor hygiene and deprived home environments making children more prone to these diseases. In the 2012-13 PDHS, information on diarrhea and ARI was gathered by asking mothers. There was no major variation in prevalence of ARI and diarrhea by mother's education however care seeking for both are affected if mother is more educated.

DISCUSSION

The education of mother has been established as one of the strongest and significant predictors of demographic behavior in Pakistan (Ali Mubashir, 2000). This study analyzed the effect of maternal education on child health and survival in Pakistan utilizing data from the PDHS 2013-13. The child health indicators which were examined in this study included Child mortality, stunting (height-for-age Z-scores), wasting (weight-for-height Z-scores), underweight (weight-for-age Z-scores) and Common childhood morbidities. Marked differences were obtained in child mortality by mother's education. Educated mothers were more likely to engage in health promoting behaviors. Malnutrition is extensive in Pakistan amongst all ages. The most irreversible damage caused by malnutrition occurs during gestation and also in the first 24 months of life (Beaton *et al.*, 1994). In order to attain and accelerate progress in such areas, the maternal and child under nutrition has to be dealt in Pakistan, as under nutrition is an underlying reason for childhood mortality (Caulfield *et al.*, 2004) and in almost half of all the under five deaths (Cheah *et al.*, 2005) (Cheah, Muda, and Zamh) (Cheah, Muda, and Zamh) (Cheah, Muda, and Zamh). Under nutrition puts children at greater risk of death from common infections, increases the frequency and severity of illnesses and delays recovery. Educated mothers had a significant edge over uneducated mothers regarding the nutritional status in terms of both weight and height and nutritional requirement of their children. Our fact is duly verified in literature. (Asha Arya and Rohini Devi, 1991, Bhuiya *et al.*, 1986). Our data shows no major variation in prevalence of ARI and diarrhea by mother's education however care seeking for both is affected if mother is more educated. In considering the determinants of health, it is important to realize that poor physical circumstances are not the only factors harmful to health. Lack of education, for example, can lead to reduced ability to find, understand and use health information. Thus, education is an important determinant of health status in both the developed and developing world. The high health returns to investing in the education of women are indisputable. Well educated

individuals experience better health than the poorly educated, as indicated by high levels of self-reported health and physical functioning and low levels of morbidity, mortality, and disability. In contrast, low educational attainment is associated with "high rates of infectious disease, many chronic noninfectious diseases, self-reported poor health, shorter survival when sick, and shorter life expectancy" (Feldman *et al.*, 1989). A universal positive association between maternal education and child survival are supported by the findings from numerous studies of infant and child mortality conducted in developing countries over the last decade (Cochrane *et al.*, 1980, Rutstein 1984, Cleland and van Ginneken. 1988, Cleland and van Ginneken, 1989). Education can modify women's beliefs about causation of disease and thus it can influence both practices related to child care and the utilization of modern healthcare services (Schultz, 1990). These facts reveal that women are important promoters of health education and practices within the home, and the benefits of their education extend to their children and others. According to a study, out of 482 children 38.38% were underweight whereas 46.06% had stunting. Prevalence of malnutrition was less in those children of educated mothers and had better nourishment as compared to illiterate ones. (Mittal, Singh and Ahluwalia, 2007).

Conclusion

Maternal literacy is an important factor in overall child health as wisely quoted that "educated mothers lead to educated nations". There is strong and consistent correlation between maternal education and child health. As expected higher maternal education has a positive influence on child survival because educated mothers alter their attitude and behavior concerning hygiene, preventive care and use of medical treatment. Current status shows Pakistan still lag behind to achieve millennium development goal (MDGs). To improve child health status needs urgent attention to focus on health related awareness programs for mothers. As our analysis showed strong association of maternal education with child health and survival. Pakistan needs to develop strategies for increasing literacy rate specifically for females this means to improve the health of the next generation and thus their quality of life in the long run.

Conflict of interest: All authors reviewed and approved the final manuscript and have no competing interests

Funding: The project had no funding.

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