

Impact of Mother's Employment on Child Vaccination (A Case Study of Bangladesh)

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Abstract The social status of people is concerned with the employment. This study has done to see the effect of mother's employment on child vaccination. Mother's Employment, Father's Education, Mother's Age at First Birth, Birth Order and Gender of Household Head were taken as independent variables. The dependent variable was in three categories so the multinomial logistic regression was applied to explain results. The results executed that the mothers who were unemployed had less probability to immunize their children. They had .588 less probability to partially vaccinate their children compared to the employed mothers of the country. The highly educated fathers had more likelihood to vaccinate their children compared to the uneducated fathers. Young mothers had fewer chances to vaccinate their children compared to the old mothers. The 1st born children had more chances to get vaccine compared to the children who had more than 4th -5th birth order. It was suggested that the male and female should give equal chances of employment in country.

Keywords: children, immunization, emoloyment, education

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1. Introduction

Employment is the key factor for the improvement of human life and for the growth of economy. When a person gets job according to his skill and knowledge then he is called as employed. In developed countries there exists lot of opportunities [1]. Every person gets job according to his skill and education. Whereas in developing countries people deprived of their rights. The situation becomes critical when most of the people do not have access to the basic necessities of life [2]. The social status of people is totally dependent on the level of employment. In developed nations there is income equality that create job oppurtunity [3]. The level of corruption is more in developing countries. People get jobs not according to their skill but according to their reference. So the right person deprives of right job [4].

Vaccination is a process that is generated inside body by injecting the dead cells of a disease. These dead cells create antibodies against that specific disease. So that vaccine has the power to reduce the chances of occurrence of that disease inside body [5]. Human body requires many minerals that can be obtained from food. The modern era demands that the male and female should work side by side [6]. They are provided by equal opportunities. This positive thinking enables females to earn for their family. Their earning helps those to provide their family without any problem [7]. They do not have need to take money from their husband for their children. So the situation of peace and calm increases in the family.

This also improves mental health of people [8]. People work more and generated more for the economy. As a result production increases. Production affects trade as a result of it export increases and imports decreases in the economy. So the growth of country automatically increases [9]. Employment is an important factor that affects vaccination. Working mother has the ability to get more awareness. She has a social circle where she can move and interchange her views with other educated persons of the society [10]. This awareness makes her conscious about the health of her child and motivates to take the children at vaccination center [11].

Father's education is concerned with vaccination. The educated male has a sense that enables him to allow his wife to take his children at vaccination center [12]. Education has the ability to make a person positive. He has the courage to allow his wife to do job. Due to the equal earning of female the tension of money will remove. They spend a good life [13]. Educated father will give equal right to all his children for vaccination. This will create gender equality [14].

In educated families females are considered as the head of family. If a female is head of family then she has more control over the family decisions. She takes care of her children and vaccinates them equally whether they are baby boys or baby girls [15]. Young mothers that get marry at early ages sometimes become careless and give less attention to vaccination. People give more importance to the first born child and less to the others. Parents completed the course of injections only in their 1st born children and not in the others [16].

Bangladesh is a high populous country. First it was a part of Pakistan later it got separation from it. The problem of unemployment is very high. Being a poor country it requires the work of both male and female for the growth and development. Bangladesh exports agricultural products. These are the primary products so does not have the ability to bring more money in country as the finished products done in developed countries [17]. The females work in fields to generate income for their family. The uneducated females work all the daylong in fields. They do over work to earn more and more. They become much busy in their routine life. Even they do not have time to look after their children and other family. Their children become weak and pale. As they do not have access to the basic necessities of life. Necessary food is not available for them. Due to poverty they have no access to the vaccine center of their native area [18]. The objective of this paper is to address the issue of female unemployment and how it affects the child vaccination in Bangladesh.

2. Literature Review

Patra (2007) worked in India and found negative relationship between child immunization and birth order. He concluded that in India people give equal attention to all children without considering their birth order. Tinkew and Gordon (2005) elaborated a significant relationship between child immunization and birth order.

Babalola (2008) worked on the household survey of Nigeria and found a positive and significant relationship between child immunization and mother's age. Inof, et al., 2007 executed that the old mothers were more sensible so they increased the probability of immunizing their children.

With contrast to it Amin, et al. 2010 illustrated that the old mothers had less chances to immunize their children compared to the young mothers of the country. Biswas, et al. (2001) explained that there were positive and significant relationship between mother's age and child vaccination.

Babalola (2008) explained that the families where the females were considered as head had less chances to immunize their children compared to the families where the males were head.

Patra (2006) illustrated a positive and significant relationship between child immunization and father's education. As the fathers were highly educated the probability of immunizing the children increased. Siddique, et al. (2007) concluded that in Pakistan there was a positive relationship between child immunization and father's education.

Chahbara (2007) worked in data collected from India and executed that the father's education had no significant effect on child vaccination. Amin et al, (2007) explained that the fathers who were involved in skilled and unskilled labor had more chances of getting vaccination compared to the fathers who were associated with agriculture sector.

3. Materials and Methods

Data have been collected from the DHS (Demographic and Health Survey) of Bangladesh year 2007-2008. Child

immunization was taken as dependent variable. The main independent variable that was addressed to see the effects was mother's empowerment. The mothers who had the permission to go out for working were considered as more powerful. This variable was in two categories (1) Working out (2) Not working out. The other independent variables were Mother's age at first birth, Sex of Household head, Birth order and Father's education. The best suitable technique to check the results was multinomial logistic regression.

$$Y_{(a,b)i} = \ln \frac{\Pr(Y = a, b)}{\Pr(Y = c)} = \alpha_{a,b} + \sum_{j=1}^J \beta_{(a,b)j} (Z)_{ij}$$

$$Y = \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4$$

Here Y is the dependent variable that was child immunization. β were the coefficient of variables and X reflected the independent variables that were described above. Different hypothesis were constructed here to see the expected results of variables. Hypothesis were constructed below

4. Results and Discussions:

Table 1 Results for Partial Child Immunization in Bangladesh

Variables	Categories	Coefficient	Odd Ratio
Father's Education	No education	-.273	.759
	Primary	-.242	.788
	Secondary	-.103	.901
	Higher	0	
Mother's Employment	Not employed	-.535	.588
	Employed	0	
Gender of Household Head	Male	-.055	.947
	Female	0	
Age at First Birth	A_1 st 1	85.052	1.154
	A_1 st 2	85.074	1.129
	A_1 st 3	85.251	9.474
	A_1 st 4	0	
Birth Order	BO 1	.938	2.556
	BO 2	.919	2.505
	BO 3	.775	2.172
	BO4	0	

Results obtained by applying multilogistic regression analysis were explained in Table 1. In Bangladesh father's education had a significant impact on child immunization. Uneducated fathers had less awareness so they could not take their children to the immunization centre. The highly educated fathers had more attention towards immunization. They also motivated their females to immunize their children. The probabilities of father's education to immunize their children were .759, .788, .901 respectively. In another study done in Pakistan Bhandari et al (2007) found similar results that the illiterate fathers had more chances to avoid from immunization of their children. Study revealed the mothers who were working out of their homes had strong financial power so they got the right to participate in family decision. So they completed the course of immunization in their children. Unemployed mothers had .588 less chances to immunize their children compared to the employed mothers. Similar results were found by Pearce et al (2008). He concluded that the females who were house wives had less capability to

immunize their children as compared to the females who were doing job.

Table 2. Results for Full Child Immunization in Bangladesh

Variables	Categories	Coefficient	Odd Ratio
Father's Education	No education	-.931	.393
	Primary	-.782	.457
	Secondary	-.586	.558
	Higher	0	
Mother's Employment	Not Employed	-.398	.672
	Employed	0	
Gender of household head	Male	.312	1.364
	Female	0	
Age at first birth	A_1 st 1	-11.612	9.071
	A_1 st 2	-11.439	1.074
	A_1 st 3	-10.306	3.342
	A_1 st 4	0	
Birth order	BO 1	1.399	3.669
	BO 2	1.165	3.202
	BO 3	.983	2.673
	BO4	0	

Table 2 revealed that the uneducated fathers had .393 less probability to immunize their children as compared to the highly educated fathers. Primary educated fathers had .457 more chances to immunize their children compared to highly educated fathers of Bangladesh. Secondary educated fathers had .558 less probability to immunize their children compared to the highly educated fathers. In contrast to that Chhabara et al, 2007 found no significant relationship between father's education and child immunization. The study further elaborated that the mothers who visited out for jobs had .672 less likelihood to immunize their children compared to the employed mothers of the country. Pearce et al 2008 elaborated that the unemployed mothers had less likelihood to immunize their children compared to the employed mothers. It was also noticed that the families whose household head was male had 1.364 more chances to immunize their children compared to the female heads of the family. It was also executed from the study that the young mothers had 9.071 less likelihood to immunize their children compared to the old mothers of Bangladesh. Similarly Samba et al 2007 found positive relationship between mother's age and child immunization. The first born children had 3.669 more chances to immunize their children compared to the children whose birth order was more than 4th-5th. The study also explained that the 2nd born children had 3.202 more probability to get immunization as compared to the children whose birth order was more than 4th-5th. The children who were at 3rd number had 2.673 more chances to get immunize as compared as compared to the children whose birth order was more than 4th 5th. In another study² explained that the mothers whose birth order was high had less chances to get immunization compared to those who had less birth order.

5. Conclusion and Suggestions

The study concluded that the educated fathers had more ability to vaccinate their children. The employed females

had less time to look after their children so they will vaccinate their children less compared to the unemployed females. As in developing countries the females get marry early so that the young females had less ability to vaccinate their children compared to the old mothers. People of Bangladesh give more attention to their first born children. It was suggested that Government should improve education level make sure the 100% primary education. This will improve both the employment level and vaccination inside the country.

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