

## A Binary Logistic Analysis of the Working Status of Mothers and Impact on the Health and Education of Their Children

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### Abstract

The present study investigates the impact of working status of the mothers on the health and education of their children. The results are based on observations obtained by the working women. The factors which were found significant in playing their role are joint family system, supportive husband, teaching children by themselves, using different sources to teach the children, allowing children to play outside, taunting the children, taking care of the health of their children by taking care of different factors, providing the proper medical and educational facilities, providing the proper time to them, attending the parents teacher meeting, checking the class work of the children regularly, keeping proper check on the children and the mental stress to them.

**Key words:** Working women; Social behavior; Cleanliness; Joint family system; Educational facilities; Binary logistic regression

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### INTRODUCTION

The care of the child is basically the caring and supervision of children and the age of children usually range from 6 weeks to 13 years. It is basically the skill

of looking after children by different methods like by mother, or day-care center and by babysitter, or other providers. It is a wide topic which covers the wide spectrum of context, activities which include both social and cultural conventions, and institutions. The causal assumption of these theoretical studies is that there must be some kind of negative impact of working mothers on children. However, there exists significant kind of inconsistencies in the results of these researches regarding of showing both positive and negative impacts of maternal work on the progress of children (Pleck, 1985; Thompson & Walker, 1990). Mother worked until 10 p.m. Mother works night shift and is home all day. Father takes care of the children if he works at night. If mother is working as teacher, she comes to the home and leaves it at the same time as children do it. The children of the age under 1 called who have got a good and sensitive care from their mothers are very much associated to them and they are most of the times able to get comfort from their mothers when needed. These infants use their mothers care as the secure base to explore their characteristics to the environment (Bowlby, 1969, 1982). Though in America, Children who attend childcare systems have a higher risk of externalizing the symptoms of negative social behavior, exhibiting these traits can directly correlate with their time spent in the center (Dewar, 2013). It has been found that early entry in the day care centers had an association with less social capability, but only in the case of those children who have the apprehensive attachments to their mothers (Bates et al., 1994). Previous research suggests that entry age at the day care centers may be as significant to mothers to their children. The age of their youngest kid is an important variable in the satisfaction of the women with paid work, and job during the first year of a life of the baby is sometimes satisfactory to the mother (Briscoe, 1996). The quality and the quantity of the contact and relationship between non residential parents and children, usually fathers, tend to come down over the period of

time (Amato & Booth, 1996; Baum, 2003). Most of the children under five years of age in the UK are cared by registered child minders than in any other day care arrangements, providing for several times care as many children under five as child care centers and nurseries (Owen et al., 1999). Study also shows that the mothers who are nonresident and fathers find it as difficult as to have frequent contact with their children (Stewart, 1999). Research was conducted to find the link between mother's work and child health. It has been observed that if mothers stay at the home for the caring of their sick babies, they lost the hours of work. It was then observed that the more the number of mothers who will miss the working hours due to care for their sick babies, the less productive activity will be in the economic progress. And finally it may affect the economic growth adversely. Therefore the status of the nutrition for the children not only depicts the country's level of development and progress but also it determines it in the long run (de Onis et al., 2000). The employment of the mothers may reduce the quality of interactions between mother and children by disturbing the making of critical mother-children attachments—as time spent in other shapes of child care increase, or by causing stress on the mothers (Waldfogel, 2002).

The mothers who are the proper resident may likely to feel stressed and overburdened by their life responsibilities which leads to the separation and divorce (Baum, 2003). The assumption of the mother employment has negative effect on the children and it has recently firmed the fears that family development suffers if mothers go out for the employment (Scott, 2008). In developing countries most of the studies have shown that young girls are not get admitted in the schools because they have to care younger brothers or sisters or to do other house work. That is the main reason for not getting admitted girls is regularly cited by respondents in ethnographic studies (Nieves, 1981; Safilios-Rothchild, 1980; Engle et al., 1985). Ray (2000) observed in a comparative study of the econometric analysis between Pakistan and Peru that in Pakistan more the woman's income the fewer rates of girls schooling and it also increases the contribution of girls in the labor force. This research also suggested that the rate of getting enrolled in the schools falls because of women's and girls' labor rather than replacement for the mother in house work. Family structure observes important and different changes which are associated with the urbanization because most of the families in urban areas are smaller and they have weaker connections to the large family. With less number of aunts, grandparents or other relatives living in the household or nearby, urban households have fewer alternative caregivers for the mothers who are working (Joekes, 1989). Hernandez-Pena et al. (1999) observed in his study that weight at time of the birth of children in Mexico has negative association with the pressure of work for the mothers during pregnancy. In the city of Mexico, Cerón-Mireles

et al. (1997) proposed in his research that the birth weight was fewer for the children whose mothers said that they have long working hours and they have different kinds of problems in the job.

There is low standard of the nutritional standards of the children if the women are forced to look for more income opportunities (Engle, 1991). After getting in control for social and economic status of the family, some research have shown that the income earned by the women during their job have positive effect on the children nutritional status as compared to the income earned by the men (Kennedy & Cogill, 1987; Johnson, 1988; Buvinic, 1992). Myers and Indriso (1987) also suggested in the study that food provided at the day care shows an important strategy of the nutrition for the poor children. In Latin America, Asia and Africa, expanded activities of the earning income and wealth are demanding the women to increase the care options of the children, which range from sibling care to enrollment in child care centers and crèches (Myers & Indriso, 1987; Leslie & Paolisso, 1989).

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## 1. METHODOLOGY AND DATA ANALYSIS

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This survey was based on the questionnaire technique and they were filled by the working mothers whose age ranges from 23 to 45. The survey was conducted in homes of sargodha city, Pakistan using the convenience sampling. In different kinds of social research, this technique is preferred over other sampling techniques because of large population size. A sample of 500 mothers was selected by using the online sample calculator and the information was collected using the questionnaire technique. The age of the child was established less than thirteen year, according to the international standard as most things are influenced under the age thirteen ([http://en.wikipedia.org/wiki/Child\\_care](http://en.wikipedia.org/wiki/Child_care)).

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## 2. BINARY LOGISTIC REGRESSION

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Mostly social and economic variables are categorical. Whenever dependent variable is categorical logistic regression analysis is performed. Binary logistic regression is used when response variable is a dummy variable and predictor variable is either categorical or continuous.

Arif and Naheed (2012) used logistic regression in their research work to examine the social and economic variables affecting person's health.

Binary logistic regression can be defined as follow:

$$\ln(ODDS) = \ln\left(\frac{p}{1-p}\right) = a + bX.$$

This is the model which is used to find the relationship between dichotomous categorically distributed dependent and independent variables. Working mother has been treated as response variable while predictors are joint

**Table 1**  
**Omnibus Tests of Model Coefficients**

	Chi-square	df	P-value
Step	188.294	15	.042
Block	188.294	15	.042
Model	188.294	15	.042

family, supportive husband, teach children by their self, use of any source to educate children before starting their formal education, allowing children to play outside, taunt their children, cut their nails and tie their hair for sake of children's health, ask children to take bath daily, separate servant for children, discuss children matters with husband, take actions to solve problems related to children, proper planning of children before conceiving, provide proper medical, educational and recreational facilities to children, attend PTM, check class work regularly, keep proper check on children, regularly

**Table 3**  
**Significance of the Variables**

Effects	B	p-value	Exp(B)
Joint family	0.407	0.046	1.503
Supportive husband	-0.102	0.093	0.903
Teach children by their self	0.150	0.032	1.161
Use of source to educate children before starting formal one	0.063	0.854	1.065
Allowing children to play outside	0.141	0.246	1.151
Taunt their children	0.189	0.040	1.208
Cut their nails for sake of children's health	-0.233	0.405	0.792
Tie their hair for sake of children's health	0.024	.083	1.025
Ask children to take bath daily	0.423	.044	1.527
Separate servant for children	-0.188	.017	.829
Discuss children matters with husband	0.212	0.405	1.236
Take actions to solve problems related to children,	0.058	0.231	1.060
Proper planning of children before conceiving	-0.606	0.024	0.545
Provide proper medical facilities to children	-0.049	0.039	0.952
Provide proper educational facilities to children	0.352	0.117	1.421
Adequate recreational facilities to children	-0.386	0.360	0.679
Attend PTM	-0.063	0.018	0.939
Check class work regularly	0.021	0.050	1.021
Keep proper check on children	0.342	0.015	1.408
Regularly give breakfast to children	0.028	0.034	1.029
Give lunch/pocket money	-0.053	0.032	0.948
Conscious about children's health	-0.153	0.045	0.858
Mental stress	-0.629	0.035	0.533
Constant	1.208	0.356	3.347

give breakfast to children, give lunch/pocket money, conscious about children's health and suffering from mental stress.

Omnibus test of model coefficients provides us with the information that the model in the presence of explanatory variables gives us better prediction or not. The model's *p*-value is statistically significant. So the variables included in the model are better.

**Table 2**  
**Model Summary**

Step	Nagelkerke R square
1	0.95

The value of  $R^2$  is 0.95, which can give the conclusion that 0.095 of the variation is well explained by the model and the rest is approximately 10%. The overall percentage is 86.1% which is showing the good variation.

Interpretations of the effects are as follows:

**Joint family:** Joint family system intended to increase to by 0.407 units. The  $p$ -value depicts that there is an association between joint family system and working status of mothers, as it is statistically significant.

**Supportive husband:** The value of supportive husband intended to increase to -0.102 units.  $P$ -value shows that there is no association between the working status of mothers and having a supportive husband.

**Teach children their self:** Mothers teaching their children intended to increase to by 0.150 units.  $P$ -value shows that there is an association between working status of mothers and mothers teaching their children themselves, as it is statistically significant.

**Use of other source to educate child before starting formal one:** Using other source to educate child before starting formal education intended to increase to by 0.063 units.  $P$ -value shows that there is no association between using of other source to educate child before starting formal education and working status of mother, as it is not statistically significant.

**Allow children to play outside:** Allowing children to play outside intended to increase to by 0.141 units. Explaining in terms of odd ratios exponential of 0.141 will be 1.151.  $P$ -value shows that there is no association between allowing children to play outside working status of mothers, as it is not statistically significant.

**Taunt their children:** Taunting children intended to increase to by 0.189 units. Explaining in terms of odd ratios exponential of 0.189 will be 1.208.  $P$ -value shows that there is an association between working status of mothers and taunting children, as it is statistically significant.

**Cut their nails for sake of children's health:** The value of cutting nails for sake of children's health intended to increase to -0.233 units.  $P$ -value shows that there is no association between cutting nails for sake of children's health and working status of mothers, as it is not statistically significant.

**Tie their hair for sake of children's health:** The value of tying hair for sake of children's health intended to increase to 0.024 units.  $P$ -value depicts that there is no association between tying hair for sake of children's health and working status of mothers, as it is not statistically significant.

**Children take bath daily:** The value of children taking bath daily intended to increase to 0.423 units.  $P$ -value shows that there is a relationship between children taking bath daily and working status of mothers, as it is statistically significant.

**Separate servant for children:** The value of having separate servant for children intended to increase to -0.188 units.  $P$ -value shows that there is a relationship between working status of mothers and having separate servants for children, as it is statistically significant.

**Discussion with husband regarding children:** The value of discussion regarding children with husband intended to increase to 0.212 units.  $P$ -value shows that there is no relationship between discussion regarding children with husband and working status of mothers, as it is not statistically significant.

**Actions taken for solving children's problem:** The value of actions taken for solving children's problem intended to increase to 0.058 units.  $P$ -value shows that there is no relationship between actions taken for solving children's problem conditions and working status of mothers, as it is not statistically significant.

**Proper planning before conceiving:** The value of proper planning before conceiving intended to increase to -0.606 units.  $P$ -value shows that there is association between proper planning before conceiving and working status of mothers, as it is statistically significant.

**Proper medical facilities provided to children:** The value of providing proper medical facilities to children intended to increase to -0.049 units.  $P$ -value shows that there is association between of providing proper medical facilities to children and working status of mothers, as it is statistically significant.

**Proper educational facilities provided to children:** The value of providing proper educational facilities to children intended to increase to 0.352 units.  $P$ -value shows that there is no association between of providing proper educational facilities to children and working status of mothers, as it is not statistically significant.

**Adequate recreational facilities provided to children:** The value of providing adequate recreational facilities to children intended to increase to -0.386 units.  $P$ -value shows that there is no relationship between of providing adequate recreational facilities to children and working status of mothers, as it is statistically significant.

**Attend parent teacher meetings:** The value of attending parent teacher meeting intended to increase to -0.03 units.  $P$ -value shows that there is association between working status of mothers and attending parent teacher meetings, as it is statistically significant.

**Check class work regularly:** The value of regularly checking class work intended to increase to 0.021 units.  $P$ -value shows that there is an association between checking class work regularly and working status of mothers, as it is statistically significant.

**Keep proper check on children:** The value of keeping check on children intended to increase to 0.342 units.  $P$ -value shows that there is association between working status of children and keeping proper check on children, as it is statistically significant.

**Provide breakfast daily:** The value of providing breakfast daily intended to increase to 0.028 units.  $P$ -value shows that there is a relationship between working status of women and daily providing breakfast, as it is statistically significant.

**Give lunch/money for school:** The value of giving lunch or pocket money for school intended to increase to -0.053 units. The *p*-value shows that there is association between giving lunch or pocket money for school and working status of mothers, as it is statistically significant.

**Conscious about children's health:** The value of being conscious about children's health intended to increase to -0.153 units. *P*-value shows that there is an association between working status of mothers and being conscious about children's health, as it is statistically significant.

**Suffering from stress:** The value of stress intended to increase to -0.629 units. *P*-value shows that there is association between stress and working status of mothers, as it is statistically significant.

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## CONCLUSION

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The significance value of joint family system, teaching children themselves, taunting children, asking children to take bath daily, having separate servant for children, proper planning before conceiving, providing proper medical to children, attending parent teacher meetings, checking class work regularly, keeping proper check on children, daily providing breakfast and lunch/money for school, being conscious about children's health and suffering from stress are the factors that are being influenced by working status of mothers, and have an impact on the health and academic performance of the children.

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