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IMPACT OF FEMALE EMPLOYMENT AND EDUCATION ON CHILD HEALTH CARE: A CASE STUDY OF PAKISTAN

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ABSTRACT

The majority of the females become a part of the labour force to share the burden of families in Pakistan, and they contribute to the cost of their children's health care. This issue is highlighted in this study. This research focuses on females' education and their involvement in the labour market and child health care in Pakistan. The activities that affect the health of children are analysed here by using time use survey data. The ordinary least squares regression technique is used to find an association of female related and household related variables and their child health care. The results reveal that female's age and employment affect child health care negatively. However, female's age square and child health care are positively related. Moreover, the mother's educational grade dummies, assets of family and family size positively affect the child's health care. The study concludes that mature females provide better care to their children's health. However, employed females have less time to care for their child's health. Those females who belong to the joint family system can better look after their children due to their share of household responsibilities. In addition, educated and financially strong females provide better health care to their children. The study suggests that lower-cost care centers can make the high participation of females in the labour market. Moreover, mothers should give too much time to their children for better care. There is a severe need for improvement of the higher education of females so that they can better utilize their education in caring for their children.

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INTRODUCTION

Population growth is high in Pakistan, and the share of women is half of its total population. Women's unpaid work share at home and participation in the labour market tends to increase day by day. Women's decision regarding work is based on possible job chances and experiences. Female involvement in the workforce is driven by economic, social and demographic aspects that are being considered. Women work to make a financial contribution to their families. Females from lower-income families possibly search for employment jobs in the labour market. However, financially strong families are less dependent on women's involvement in the

workforce and earning. The pull factors focus on more labour demand and incorporate the education level, training and experience, so females' work is boosted by striking job chances and high wage income. Neoclassical economists understand education as an important cause for the working of females in the market. There is a positive association of level of education and female's contribution to employment (Becker, 1965). Additionally, education might provide more chances to obtain a job for them. Human capital investment is a good source to enhance labour proficiency, which is a cause for higher labour earnings (Mincer and Polacheck, 1974).

Women's involvement in the workforce is helpful to generate income and to lessen poverty in society which enhances socio-economic development. Pakistan has lower women involvement in the workforce than other developed nations. Examining female's role in Pakistan's workforce along with the improvement of the economy is essential. Mincer (1962) emphasizes plans to develop countries more by making clear the labor supply theory and econometric advancement. Historically, much work on the female workforce has remained very slow (Chishti et al., 1989). Klesges et al. (1990) highlight that how parents make decisions regarding children's nutritional food. Findings reveal that mothers' food choice commendably influences the health of children and lessens the chances of selection decisions by children themselves about non-nutritious foods. Obesity in younger children is a prolonged disease that causes many risk factors. Mantel Haenszel method that involves mother's employment, limited lifetime outdoors, different eating conducts describes the reasons for youngsters' obesity (Takahashi et al., 1999).

A positive association between family meal patterns and obesity among children is estimated by using regression modeling. The emphasis on the risk associated with a person's life quality because of low spending by the government and unnoticed care of children by employed mothers is a result of childhood obesity quickly in diverse states of the world (Garcia et al., 2006). Chia (2008) showed that an increased mother's work involvement results in high ignorance of child health care and education, increasing child's obesity. Moreover, it is found that 26 million children will be overweight. For this, biological influences, parents' working hours, and social factors influenced child obesity greatly (Kosti & Panagiotakot, 2006). By using primary survey data, it is found that the cost of care of high quality is linked with obesity and results from employers' lower wages (Bhattacharya and Bundorf, 2009).

By using longitudinal data of 340 families in the US, it is found that temporal demand for mother employment is a good reason for well-being of children, but contrarily, mothers' work involvement lessens their emotional stress (Chee et al., 2009). Active mothers' involvement in community organizations positively affects their children. A positive association between females' working hours and child health was found for children with low financial conditions (Nobles and Frankenberg, 2009). In the US and UK, disturbing condition of obesity results in different diseases like diabetes, cancers etc. In addition, extra bodyweight negatively affects longevity, quality of life and productivity (Wang et al., 2011). Almani et al.

(2012) make primary data analysis and found no difference between children of employed and non-working females. However, a low association of employed women and their children is found due to low time allocation to them. The focus has been made on the obtainability of basic health services to kids or youngsters for their appropriate progression and health (Ishimine and Tayler, 2012).

The child early school leaving at the world level can be decreased by decreasing the reasons that cause the students absent from school to increase attendance (Brunello and De Paola, 2014). There is a positive relationship between females' jobs and child's school attend timing and their performance in school. Otherwise, mothers' job increases their power concerning taking choice in contradiction of the well-being of their kids for having high incomes and self-possession (Afridi et al., 2016). Zajacova & Lawrence (2018) have reviewed and critically assessed the current state of research on an association of education and health in the United States. They find that adults with higher education live healthier and longer lives than their peers with low educational backgrounds. Mensch et al. (2019) assessed the evidence for a causal link between education and maternal and child health in low and middle-income countries by reviewing studies. They find a negative link of years of schooling attained, particularly by women, and decreased maternal, infant and child mortality. Improvements in women's educational outcomes have unquestionably improved health in many settings.

Abreha et al. (2020) worked on the extent of women's empowerment. They examined its associations with the children's health status in Ethiopia by using Ethiopian Demographic and Health Survey data in 2016. The study results show that increased women's empowerment in the household regarding socio-economic status is linked with the decreased trend of children's being stunted or misused. Moreover, high women's empowerment regarding household decision-making power tends to link with the improved health status of children (i.e., children's experience of pneumonia and anemia). Besnier (2020) utilized data for 161 countries from 1990 to 2016 and showed that empowering women improves child health. The result showed the more benefit from women's political empowerment influence on child mortality. The impact of women's political empowerment on stunting is more substantial in middle-income countries; however, it influenced immunization in low-income and least developed countries. Raghupathi & Raghupathi (2020) studied the link of education and health indicators in 26 OECD

countries for 1995–2015. The study reveals the dual role of education as both a driver of opportunity along with inequality. The findings indicate that adults of highly educated peers have better health and lifespans than their less educated peers.

The male workforce rate has been observed as tending to decrease as compared to female workforce involvement. The rural labor force participation rate is greater than the urban workforce rate due to the high contribution of the agriculture sector. Working women are dependent on family associates or daycare centers to care for their children. Still, the quality of these alternatives is different based on the age and efficiency of the person having responsibility. The care can be of low quality as females depend on older family members or servants at home. In contrast, women earning provide extra income to the family that is helpful for better education of their children. Proper planning is necessary for the well-being and bright future of children. Children can spend more time in educational institutions and learn more when their mothers are busy at jobs. Different countries witnessed the role of mothers in the workforce and its effect on children's education and health care. Economists focus on education even though making conversation on human capital. Working women's job has an influence on the welfare of a child or not, and it is entirely based on the time used for looking after children regarding education. More educated mothers give more time to their children.

The study shows that the female labor force supply model highlights the mother's involvement in the workforce is influenced by market wage and enhancing

the sacrifice of the mother's time at home. However, family financial resources decrease the chance of workforce employment as the family can find the money for more leisure time. This study emphasizes on female education and employment and child health care in Pakistan care. The research realizes that working females contribute to determining the proper time for child health care. The study also examines the influence of working females' personal socio-economic and household characteristics on their children health care. This research has been done due to its importance in Pakistan.

METHODOLOGY

We have used data from time use Survey 2007 in this study, which consists of cross-section data of provinces of Pakistan. This data is used because of just its availability. The 6924 observations were used for this research. The behavior of employed mothers is to find out how they allocate time to take care of the health of their children. Moreover, all those activities that influence the health of their children are analyzed.

The child care model shows child health. OLS regression technique is used to examine the link of child health and female age, age square, educational grades, family size, family asset quintiles and region. Explanation of variables are given in Table 1.

$$CHCAR = a_0 + \beta_1AGM + \beta_2AGSQM + \beta_3GDIEDUM + \beta_4GDIIEDUM + \beta_5GDIIIEDUM + \beta_6EMPM + \beta_7FASIZE + \beta_8ASSTQI + \beta_9ASSTQII + \beta_{10}ASSTQIII + \beta_{11}ASSTQIV + \beta_{12}URBAN + ui \tag{1}$$

Table 1. Explanation of variables used in study.

Dependent variable	
Child care(CHCAR)	Working mother's time (minutes) spent for their child health care
Independent variables	
Mother's individualities (MOC)	
Age of mother (AGM)	Complete years
Age square of mother (AGSQM)	Complete years
Grade-1 Education of mother I(GDI EDUM)	Primary to middle (dummy variable)
Grade -II Education of mother (GDIIEDUM)	Matric to intermediate(dummy variable)
Grade- III Education of mother (GDIIIEDUM)	Degree to master (dummy variable)
Employment of mother (EMPM)	Female employment – 1 working -0 not working
Household characteristics (HHC)	
Family Size(FASIZE)	Family members
Asset Quintile1 (ASSTQI)	Dummy Variable-1 for asset quintile 1 and 0 otherwise
Asset Quintile II(ASSTQII)	Dummy Variable-1 for asset quintile II and 0 otherwise
Asset Quintile III(ASSTQIII)	Dummy Variable-1 for asset quintile III and 0 otherwise
Asset Quintile IV (ASSTQIV)	Dummy Variable-1 for asset quintile IV and 0 otherwise
Location	Dummy variable -1 if female belong to an urban areas and - 0 otherwise.

RESULTS AND DISCUSSION

Descriptive statistics are presented in Table 2, and the ordinary least square results are explained in Table 3. The low standard deviation of the variables is observed. It indicates that variables as age, age-square, family size, child care and child health are very close to the average. However, other variables such as educational grades, female employment, urban areas, and asset quintile index have high values of standard deviation. The study

results show that, on average, females having children are 30.55 %. The females having children of education grade-I, grade-II and grade-III are on average 12.2 %, 11% and 6.6 %. The average value of female employment level is 19.9 %. On average, urban dwelling females are 33 %. On average, females having family size is 7.151 %. The value of asset index-1, asset index-II, asset index-III and asset index-IV on average are 20.1 %, 20.3% and 20% respectively.

Table 2. Descriptive statistics.

Variables	Mean	Std. Dev.	Min	Max
Child health care	133.2582	13.0186	0	715
Age of Mother(complete years)	30.54737	7.066833	15	70
Age square of Mother(complete years)	983.0748	480.4841	225	4900
Grade-1 Education of Mother (primary to middle)	0.1227614	0.3281868	0	1
Grade-II Education of Mother (middle to intermediate)	0.110052	0.3129772	0	1
Grade-III Education of Mother (degree to master)	0.0668689	0.2498128	0	1
Employment of Mother	0.1994512	0.3229	0	1
Urban (urban=1, rural=0)	0.3304448	0.4704073	0	1
Family-size	7.151213	3.443749	0	41
Asset index I	0.2010399	0.4008067	0	1
Asset index Q11	0.2030618	.4023072	0	1
Asset index Q III	0.195985	0.3969857	0	1
Asset index Q IV	0.2000289	0.4000506	0	1

Table 3 shows the regression results of female's education and employment and its impact on child health care. The result shows that the coefficient of female's age is negative and statistically significant. At the same time, the variable of age square increases the child health care. The study results show that both the variable age and age-square are

statistically significant. It is also found that the coefficients of employed female's education levels (dummies) are statistically significant. This shows that female's higher education results in better child health care. The study result is inconsistent with Mensch et al. (2019), Raghupathi & Raghupathi (2020) and Abreha et al. (2020).

Table 3. Impact of mother's education and employment on child care in Pakistan.

Variables	Coefficients	T-Statistics
AGEM	-6.2071***	-6.78
AGESQM	0.03721***	2.58
GDIEDUM	19.45218***	5.10
GDIIEDUM	20.6284***	4.85
GDIHIEDUM	34.3650***	5.87
EMPM	-23.2232***	-8.78
FASIZ	0.9804***	2.91
ASSTQ1	14.8251***	3.23
ASSTQII	13.1897***	2.95
ASSTQIII	7.4087	1.70
ASSTQIV	4.1855	1.04
URBAN	1.0594	0.36
Constant	268.6504	15.38
R-Square	0.12	
F-Statistics	66.42	
Prob (Statistics)	0.0000	

Note: *** indicate statistical significance at the 1 percent levels, respectively.

The result also shows the female employment negatively affects child health care. The coefficient of

female's employment is negative and statistically significant. The study result is supported by Besnier

(2020). Finally, as family assets increases per index, it decreases the child's health. The result shows that female belonging to urban area increases the child health care, however, value of the coefficient is insignificant.

In Pakistan, most females are involved in the labor market, and this trend is increasing day by day. At the same time, females also provide time to their children for their overall well-being. Females also participate in the labor market due to financial issues in Pakistan. In this way, they contribute to family expenditures. But female labor market participation affects children's health, and child obesity among children under 18 years of age is also increasing. The employed, educated mothers bear educational expenses and costs of child care centers to look after their siblings during their working time. The study results highlight that the employment of mothers negatively affects child health care. Because employed mothers can give less time to care for their children, the reason may be that the mothers have less time to prepare food for their children. The positive relationship of age and family size and child health care shows that mature and married females are more conscious about their children's health than unmarried females and family members are cooperative in caring for the health of the children of employed mothers. The study results also found a positive relationship between the educational grades of the mother and the child's health care. The reason may be that educated mothers can better care for their children's health while doing some essential works in Pakistan. Provision of assets in the family also proves to be helpful for the better care of children's health in Pakistan.

CONCLUSION AND RECOMMENDATIONS

This study was aimed to find the impact of females' education and employment on child health care. It is found that mothers' employment has a negative impact on child health care and is a hurdle in looking after their children. So, it can be said that female labor market participation affects children's health and leads to many issues of child health. The educated mothers provide better health care to their children and bear educational expenses and costs of child care centers to look after their children during their working time. The study concludes that the female's age and employment results into low child health care. In contrast, females' education levels (grade 1 to grade III), family size, and family assets enhance child health care in Pakistan. The study suggests that employed females should give maximum time to care for their children's health based

on findings. They should involve themselves in cooking food and in house-related cleanliness activities. It will ensure the better health care of their children. The educated working mothers should also educate their children and should monitor their children properly. They should encourage their children for their performance to get better results. Moreover, working women must prefer higher education for the better well-being of their children.

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