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Health Status of currently Married Rural Working Women in Informal Labor Market

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Abstract
Poverty is a multidimensional concept and usually it is defined by focusing narrowly on income poverty or broadly by including lack of access to opportunities for raising standards of living. Women in developing countries particularly poor working women is suffering badly from all these ills. Poverty induces them for working. Exposure to poor working conditions and poor health due to lack of money has serious repercussions on their pregnancies. The risk of miscarriages, premature deliveries and spontaneous abortions get increased. Questionnaire was developed to analyze and explain the relationship between working women's health related with household characteristics and environment at work place .A descriptive study was carried out in three neighboring villages of Bahawalpur. Binary logistic model is used. We explored that women's health is significantly influenced by availability/shortage of fundamental facilities which brings the household in poor group. Our main findings are that health of working women is strictly affected negatively by number of births, number of live children and hours of economic activity, while the provision of sanitation facilities, household income and family planning methods are positively affecting women's health.
Keywords: Women Health, Rural working women, Informal sector, Premature Birth.

1. Introduction

Traditional gender roles in Pakistan define the woman's place as in the home and not in the workplace, and define the man as the breadwinner. Consequently, the society invests far less in women than men. A woman in Pakistan suffers from poverty of opportunities throughout their lives. Female literacy in Pakistan is 43.6% compared to Male literacy at 68.2%, Female labor force participation rates in Pakistan are exceptionally low.

Poverty and gender disparity are two evils that women have to face in developing world particularly in remote areas where there is low literacy rate and lack of employment opportunities and other life amenities. The women roles in society are of special interest due to the ability of women to plan their reproductive behavior and their capacity to limit their fertility to a desired no of children.

Agriculture is the primary source of employment in rural areas. Women's participation in this domain of work is increasing. Women are vulnerable to particular health problems in the agriculture sector. Heavy workload during crop cultivation and harvesting can have a high incidence of stillbirths, premature births and death of the child or the mother. Some studies have showed that the workload of traditional " female' tasks, such as sowing out, picking out and clearing is a little higher than the workload of males due to the fact that the latter are associated by mechanical means during irrigation, ridging and farming (Gulli, 2006).

Exposure to poor working conditions has serious repercussions on pregnancy. The risk of miscarriages, premature deliveries and spontaneous abortions are considered to be related with working in greenhouses microclimates and exposure to pesticides. In developing countries nutrition and health is common problem which get severity in case of poverty. This situation provokes a vicious circle of low productivity, low wages, malnutrition, ill-health and low working capacity. The interaction between poor health and working conditions and poverty determines a distinctive morbidity-mortality pattern among agricultural workers, which is due to the combination of malnutrition, general and occupational diseases, and complications arising from undiagnosed or untreated diseases. Low working capacity is closely related to workers' malnutrition and poor health (Hakim and Aziz, 1998).Almost all the studies resolute their findings on defining a relationship between working women health status to prevailing working conditions and inconveniences at work. In this study we might find that work is only risky if working women is belonging to poor labor class having no access to proper nutritional food, having lack of health services, burden of children and other family issues.

Our objective in this study is to explore whether working women's health status is outcome of their working conditions or not? Why the informal sector working women has to face more difficulties as compared to formal sector?

2. Literature Review

The Work status of women is positively linked with empowerment which gives her command over allocation of resources within household, and enhance the capability to expose themselves to outside the world and to authority structure and other networks. (Yousaf, 1982; Mahumud and Johnston, 1994:, Dixon

Muller, 1993), but the negative impact of work on health status of women have also been documented by many studies.

Human capital theory proves that health and labor force participation are positively related. Increases in health capital lead to greater participation in the labor market (Grossman and Benham, 1974). Poor health is expected to lead to decrease labor force participation (Cai and Kalb, 2006; Waghorn and Lloyd, 2005). Grossman (1972) argues that health is an endogenously determined capital stock and there is causal relationship between health and labor force participation. In health production model, health capital can be maintained and enhanced through economic resources which affect participation and this in turn affects health.

The relationship between women's work and their health is shown by Role theories that provided three models stress and over load, health enhancement, and role integration. It has provided an important theoretical framework on women's work and health, (Turner, 1978). The primary assumption of stress and overload models is energy spent in one role diminishes the amount of energy available for others. The model emphasizes work as paid employment and reflects the belief that the workplace is a primary stress and contributor to women's ill health. Accordingly, the prediction is that as women enter the paid workforce outside the home, they also suffer negative effects of employment on their health (Baruch et al, 1987; Rodin 1991). Theories of stress and overload assume that stress and fatigue result from unsuccessful attempts to manage competing domestic and employment role. Both demand time and energy, and the result of such overload are higher levels of stress for women and adverse effects on women's health (Hall 1989; Leslie 1992).

In contrast to the role overload model, the health enhancement model presumes that health benefits are derived from participation in socially valued roles, such as marriage, parenthood, and gainful employment. More an individual participates in more valued activities, the better her health. However, the tendency among researchers using this model has been to consider employment as a more socially valued activity among women (Rodin, 1991). Hibbard and Pope (1985) hypothesized that employment may have a positive effect on women's health by providing opportunities for social support, self-esteem, and social identity, but stress related to job characteristics and the work environment may be harmful to health.

The role integration model (Baruch and Barnett,1986; Meleis, et al 1989; Turner, 1978) differs from the overload and enhancement models. It does not predict the direction of the effect of work on health but rather considers that the health effect depends on the "balance between role satisfaction and role stress within and between key roles" (Meleis, et al 1989). The persistence of gender wage differences may be evidence of the continuing responsibility of women for housework, (Becker, 1985). Studies have shown that for women, being married typically have negative effects on labour supply. For men, the effect of these factors on labor supply tends to be positive (Roberts, 1999; Carmichael and Charles, 2003). Marital status and gender are chosen as instruments for hours worked (Stern, 1989). Health conditions are highly correlated with health status (Cai and Kalb, 2006).

3. Methodology

Data are drawn from a questionnaire survey conducted on behalf of the authors.For our analysis, we relied on yes/no option. The "do not know" answers were considered as "no". The variables derived from the questions are shown in the result tables.

The initial sample for working women for our research was based the Bahawalpur Tehsil (Pakistan). Bahawalpur is considered as the one of underdeveloped and poor city of Pakistan. Data in this research has been collected with the help of questionnaire from chack No- 38, BC- 23 and BC- 13 of Bahawalpur Thesil for currently married working women. The purpose of selecting this area as a sample is mainly due to the poor indicators of health status of working women in this region..

A face-to-face interview was carried out. After collecting the data regarding our relevant variable we applied the Bivariate Logit model in order to analyze the characteristics probability of our variables for Health status. The model specification is given in the appendix.

3.1 Dependent Variable (Health status of women)

According to the constitution of world health organization (WHO), "Health is a state of complete physical, mental and social well-being ability to function, and not merely absence of disease or infirmity".

Health status is a composite of various factors such as genetic influences, cumulative life time exposures to risk factors and social factors affecting health, quality of life, and so forth. A women's health is affected by various factors operating throughout her life. These include biological, social, cultural, individual behavior and lifestyle as well as the status of health services. The foundations of health are laid during child hood and adolescence and many of the health problems of reproductive age may find their beginning from that time. A child's chances of survival, growth and development to a large extent depend on mother's nutritional and health status and the health care that she receives during pregnancy. Infant mortality rate is substantially higher among uneducated women, especially those living in rural areas and where births occur too frequently and they spend very long time in agricultural work and domestic work. Women's health is a binary variable. To evaluate women's health we have taken miscarriages, premature deliveries and spontaneous abortions a proxy of poor health.

If a woman delivers premature birth, or faces miscarriage, or give still birth or spontaneous abortion in her life at any time =1 ,otherwise 0

3.2 Independent variable

Table-1

Definition of Independent variables

Number of birth	To see the impact of deliveries on health status, the total number of births, which is expected to affect negatively the health status of a woman, has been treated as continuous variable.
The Number of live children	The number of live children requires time for taking care and badly affects the health of working women; we incorporated this variable as continuous.
Hours of Economic Activity	In order to see the impact of working hours on health status, hours of economic activity have been included as continuous variable.
Disease	To see the role of inborn or chronological disease on health status, we have included this variable as a binary variable. If a women has any chronic disease, =1, otherwise 0.
Household Income(monthly in rupees)	To find the impact of income on health status, household Income has been included as independent Variable and treated as continuous one, and expected to affect positively.
Expenditure of health	It is also continuous variable, which defines a positive relationship between health status and health enhancing precautions.
Expenditures on nutrition	To find the relationship between available food and health status of working women, we included this variable in our study as continuous variable.
Sanitation	In order to find the impact of sanitation on health we have included drainage and sewerage systems as a binary variable, if household has developed drainage and sewerage system, = 1, otherwise 0
Family planning	If women use any family planning method=1,otherwise0

4. Results & Discussion

The variable which seems to be sole determinants of poverty in developing countries can also be accountable for poor health status. The dependent variable is categorized as healthy and non-healthy and the model is estimated by using Maximum Likelihood technique. The results are shown in Table-2 .All the health determining variables of working women in rural sector are significant and show vital impact on health. The results indicate that the number of births and number of live children of rural working women increases the probability of the working women being unhealthy and it is significant at 5% level of significance. In the literature number of births is correlated with deteriorating health condition as women are getting weak on each delivery hence impacts health status negatively. Our results also validate this assertion. The increase in Number of births will leave negative impact on women's health. Secondly children spend as much as 80-90% of their time indoors, and if women have more live children she spends more time to take care of their children, do more work and have less time for rest that will affect her health negatively.

Table 2

Binary Model Results for Health status

Dependent Variable Health Status	Marginal Impacts	
Independent variables		
Number of Births	-0.1703**	(0.04)
Number of Live children	-0.557**	(0.03)
Hours of Economic activity	-0.137***	(0.08)
Diseases	- 0.490***	(0.07)
Sanitation	0.210*	(0.00)
Household Income	0.011*	(0.00)
Expenditure on Health	0.030*	(0.01)
Expenditure on food	0.0750*	(0.00)
Family planning method	1.129***	(0.09)
Log likelihood	-4302.6913	
Number of observations	450	

Probability of critical values are reported in parentheses

,**, Indicate significance at 1%,5%,10% level respectively**

Regarding the effect of hours of economic activity, estimates indicate that it is 13% less likely to be qualifying healthy as activity hour's increases and this variable is significant at 10% level of significance. This shows that hours of economic activity has negative effect on health status of working women. This is a general finding in literature. The estimated coefficient of the of diseases shows that it is 49% more likely to be unhealthy if working women has an old diseases and it is significant at 10% level of significance.

The variable "sanitation" shows that there is a positive correlation between health status and usage of developed sanitation system. The estimated coefficient shows that there is 21% less likelihood to be unhealthy. It confirms that, better the sanitation and health improving facilities, lower will be the chances of getting ill. This means that access to sewerage system is very vital for the well being of a household. Lack of sanitation facilities has negative effect via bad health and reduction in productivity. The variable 'household income" is significant at 1% level of significance and indicates that if income of household is high then working women are 1% less likely to be non-healthy , as compared to those households which have low household income.

The estimated coefficient of "Expenditure on Health" shows that household with higher spending ratio on health are more likely to be healthy and it is significant at 1% level of significance. This confirms the fact that health is maintained by taking care of it and spending more on precautionary measures. Expenditure on health and access to health care services has a crucial impact on their own health and that of their children; infant mortality is lowest where expenditure on health and access to health care services is easiest. Access means both physical availability of services, (convenient times, suitable personnel and medicines, trained birth attendants) and a cultural environment which allows women to use health services for themselves, in distinction to, or together with, their children. Health services must be consumer-friendly in order to encourage women to use them. The estimate of food expenditure shows that women are more likely to be healthy, if there is more spending on food.

The usage of family planning method is very decisive in maintaining the health status of working women. It is certain factor to improve the health status of both women and children and also to curb the rapidly growing population in Pakistan, which is of 2.9%. Family planning benefits the health and well-being of women and families throughout the world. Using contraception can help to avoid unwanted pregnancies and increase in space

births; protect against STDs, including HIV/AIDS; and reduction in maternal mortality by preventing high-risk pregnancies and reducing the need for unsafe abortions. Some contraceptives also improve women's health by reducing the likelihood of disease transmission and provide protection against cancer. But there are many other factors, which affect women,s health like heredity, environment, life-style, socio-economic conditions, and health and family welfare services, but we have not taken them due to our study limitations

5. Conclusion

This study validate our hypothesis about working women's health status, which is negatively effected by number of deliveries a women bears and number of live children and positively by family planning methods; etc but the first and foremost critical variable which effect the working women is poverty. Our statistical results shows that women's health is significantly influenced by factors which are result of low income level (poverty) e.g.; Expenditures on health, Expenditure on food, household income, and sanitation. The significance of these variable portray a apparent picture that if women are provided with facilities which are combating poverty then their health is improved and will not be effected by work. Our results in this study favors Health Enhancement Role model which states employment does not affect all women in the same way. Working women may have better mental and physical health than women who are homemakers. Government and civil society together can make an effective difference in the lives of the people by providing safe drinking water and basic drainage & sanitation. There is evidence that female education and fertility are negatively correlated, thus investing in female education would indeed be productivity enhancing, and working women health improving measure. There is a need to formulate women sensitive policies by enhancing resource allocation to health programs.

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Appendix

Bivariate Logit Model

$$y_i^* = \sum X_i' \beta' + u_i \qquad \text{..... (1)}$$

Where

$\beta' = [\beta_1, \beta_2, ..., \beta_k]$ and $X_i' = [1, X_{i2}, X_{i3}, ..., X_{ik}]$

In equation (1) Y^* is a latent variable and defined as

Y =1 if y* >0 and

Y= 0 otherwise ..... (2)

From equation (1) and equation (2) we can derive the following expressions.

$$\Pr ob(y_i = 1) = \Pr ob\left(u_i > -\sum x_i \beta\right)$$

$$= 1 - F\left(-\sum x_i \beta\right) \qquad \text{..... (3)}$$

Where F is the cumulative distribution function for u_i and

$$\Pr ob\left(y_i = 0\right) = F\left(-\sum x_i \beta\right)$$

The likelihood function can be given by,

$$L = \prod_{y_i=0} \left[F\left(-\sum X_i' \beta\right)\right] \prod_{y_i=1} \left[1 - F\left(-\sum X_i' \beta\right)\right] \qquad \text{..... (4a)}$$

This can be written as

$$L = \prod_{y_i=1}\left[F\left(-\sum X_i'\beta\right)\right]^{1-y_i}\left[1-F\left(-\sum X_i'\beta\right)\right]^{y_i} \quad \text{..... (4b)}$$

The functional form imposed on F in equation (4) depends on the assumption made about u_i in equation (1). The cumulative normal and logistic distributions are very close to each other. Thus using one or other will basically lead to some results (Maddala 1983).

We have specified the logit model for this study by assuming a logistic cumulative distribution of u_i in F (in equation (4a) and (4b)). The relevant logistic expressions are,

$$1-F\left(-\sum X_i'\beta\right) = \frac{e^{\sum X_i'\beta}}{1+e^{\sum X_i'\beta}} \quad \text{..... (5a)}$$

$$F\left(-\sum X_i'\beta\right) = \frac{1}{1+e^{\sum X_i'\beta}} \quad \text{.....(5b)}$$

X_i are the characteristics of the households/individuals and β_i the coefficients for the respective variable in the logit regression.

Having estimated equation (4) with Maximum Likelihood (ML) technique equation (5a) basically gives us the probability of being healthy women (prob (Yi=1)) and equation (5b) the probability of being un-healthy women conditional on their characteristics (prob (X_i =0))