

## **Role of Women Empowerment in Determining Children's Illness Rate: A case Study from two Districts of Manipur**

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### **ABSTRACT**

*This study examines the role of women in determining the children illness rate in two districts of Manipur. The analysis is based on a primary survey of 300 randomly selected married women having children with less than five years of age in Kakching and Chandel districts of Manipur. The study focuses on enabling factors of women as a measurement of women empowerment such as women's education, labor force participation, access to formal and informal credit, access to mass media and print media. Bivariate analyses find that there is significant variation in the reported illness among the children in relation to their mothers' socio-demographic indicators which include mothers' education, occupation, work status, age at marriage, region of residence and district. The logistic regression finds statistically significant impact of women's enabling factors such as access to media, access to microcredits and women's education level in determining children's illness rate. Thus, our regression analyses shed light on the importance of women empowerment in determining the children's illness rates. Our study also fills the gap in the existing literature by exploring the role of women empowerment in determining the morbidity or illness among children. Further, our findings prove that a positive change in gender relations can improve the health conditions of children which is a valuable insight, especially for economically backward states.*

**Keywords:** Manipur, Women Empowerment, Illness rate, Determinants, Causal Association

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## **Introduction**

Substantial studies have found clear evidence of association between women and development (Esther Duflo 2012; Rekha Mehra 1997; WDR 2012, Naila Kabeer 2005). Various policy documents have also demonstrated the importance of gender equality in achieving development goals. Women serve as a critical channel for improving the health and wellbeing of the members of their households. Empowering women can change developmental outcomes, especially in health outcomes of children. For instance, better education of mothers could bring better health outcomes for their children. Education of women has direct link with the socio-economic condition of the family, which could be an important determinant of child health. Various studies have found a clear correlation between women's education, earnings and child health (Hobcraft, 1993). In his study, Hobcraft found clear evidence of lower morbidity among children with educated mothers. Higher women's earnings could increase their children's years of schooling as well as financial autonomy of women. Studies conducted in South Asia and African countries have also provided strong evidence, where women's empowerment is found to have a significant relation with range of health outcomes (Jejeebhoy 1991; Murthi and Dreze 1995). Solomon et al. (2021) in their systemic review of the published literature that investigated the relationship between women's empowerment and children's health status, found evidence of a positive association between women's status and different children's health outcomes in Sub-Saharan countries. These findings underline the importance of empowering women in advancing the health status of the family, especially child's health.

As gender relations are rather a socially constructed value system, it is a difficult task to quantify and measure this complex phenomenon of women empowerment. The gender relations are shaped in the process of social interaction of individual's attributes and community level characteristics. Bina Aggarwal boldly writes:

*“The complexity arises not least from the fact that gender relations (like all social relations) embody both the material and ideological. They are revealed not only in the division of labor and resources between women and men, but also in the ideas and representations - the ascribing to women and men of different abilities, attitudes, desires, personality traits, behavior patterns, and so on. Gender relations are both constituted by and help constitute these practices and ideologies, in interaction with other structures of social hierarchy such as class, caste and race”.*<sup>1</sup>

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<sup>1</sup> For details, refer Bina Aggarwal 1997, “Bargaining and Gender Relations: Within and beyond the Household” *Feminist Economics*, 3(1), p. 2.

As women empowerment is inherently complex, many authors have stressed the need for considering women empowerment as a multidimensional concept (Kabeer 1999; Kishor 2000; Mason 1998; Jejeebhoy 2000; Malhotra et al. 2002). Some of the dimensions which are commonly used in measuring women empowerment are women's decision making, women's autonomy, women's agency, labor participation, ownership of assets and domestic violence. As an empirical study, this study tries to explore some of the dimensions of women empowerment mainly focusing on enabling factors including women's access to banking and financial institution, women's access to informal credit, women's education, women's labor force participation, women's access to mass media and print media and women's access to modern technology such as computer and smart phones.

Empowering women can play a key role in attaining child nutrition (Kabir et al. 2020; Ruel et al. 2013; Solomon et al. 2020). Women empowerment can ensure better healthcare utilization, maternal care and better family planning, general health seeking behavior (AKM Mainuddin et al 2015; Bloom et al. 2007, Dyson and Moore 1983). Evidence has also been found that maternal education is a determining factor in reducing fertility rate and child mortality (Basu, Alaka 1994; Caldwell 1979; Jejeebhoy 1991). However, this author finds very few studies which try to explore the relationship between women's empowerment and children's morbidity level of children. The present study focuses on exploring the link between role of women empowerment in determining children's illness rate.

### **Materials and Methods**

The analysis is based on a primary survey conducted by this author in two districts of Manipur: a hill district and a valley district. Manipur is one of the Eight Northeastern States of India. Kakching district is a valley district predominantly inhabited by Meities while Chandel district is in Hill areas, mostly inhabited by Nagas and Kukis. The survey was conducted in May/June 2019 among 300 randomly selected married women with children aged below five years. The non probability sampling method, particularly purposive sampling was adopted. Since, the primary objective of the study is to link women empowerment with health of children, the study had identified married women in their reproductive age, who have below 5 aged children for the survey. Households were the primary units for the survey and the youngest eligible married women in the households were interviewed. All the interviews were conducted either in Manipuri or in English languages in both the districts. Data on basic socio-economic, demographic characteristics, health data and enabling factors of women empowerment were collected from the respondents. Health indicator used is children's illness rate in the past three months prior to the survey.

Bivariate analyses are performed to assess children's illness rate in relation to Mother's the socio-demographic characteristics. Then, the causal association between women empowerment and children's illness rate is explored using a multivariate logistic regression. Since the dependable variable is dichotomous, logistic regression is estimated to understand and analyze the role of women's enabling factors on the Illness rate of children.

### **Descriptive Findings**

Univariate analyses of the socio-economic indicators of the respondents are discussed in this section. Table 1 presents the socio-economic characteristics of the 300 married women who were interviewed by this author. On average, the age of the respondent was found to be 29 years at the time of the survey. Minimum age and maximum age observed were 22 years and 41 years respectively. Since the survey was designed for women in their reproductive age, the sample consists of a relatively younger population. The average age of the respondents at the time of their marriage was approximately 20 years, ranging from as young as 17 years to oldest at 28 years. Half of the sample (50.3%) had education level below higher secondary education while only 19.4% of them had graduate level-and-above education. Majority of them were in categories of secondary and higher education level. In term of years of education attended by the respondents, 44% of them had attended 6-10 years of education, 30.3% of them had attended 11-12 years of education and only 19.3% of them had attended 13 or above years of education. The study found all of the respondents to be literate who knew basic elementary writing and reading. Since, the sample is relatively younger in age; all of them had some basic education. Education level of the mothers is expected to be an important factor in determining the reported illness and health seeking behavior of the family. As per NITI Aayog (2020-21) North-East Region District wise SDGs report, Chandel district is placed at 2<sup>nd</sup> rank in quality education after Imphal West district. Ratio of female to male at secondary level (9-10) in Chandel and Thoubal<sup>2</sup> districts are 1.02 and 0.98 respectively, indicating higher female then male in Chandel. This is a very important achievement which will help in reaching the SDG 4.5 which aims to eliminate gender discrimination in education. Average annual dropout rate at secondary level is also much lower at Chandel district (4.03) as compared to Thoubal district (15.66) (NITI Aayog 2020/21). NHFS-4 estimates that there is almost universal school attendance (6-14 years) and no gender disparity in school attendance in Manipur. The two districts selected for this study find themselves among the top performers of NE districts in NITI Aayog District-wise ranking of quality education (SDG 4).

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<sup>2</sup> Since Kakching used to be a part of Thoubal district until up to 2016 and its important administration offices are still attached to Thoubal District, Thoubal district data from NITI Aayog ranking is cited for the purpose of inter-district comparison as the Kakching district was not included in the NITI Aayog district wise ranking.

**Table 1: Socio-Demographic Characteristics of Women: Survey Findings (n=300)**

Characteristics	Frequency	Percentage
<b>Education</b>		
Below primary	19	6.3
Upper primary	31	10.3
Secondary	101	33.7
Higher secondary	91	30.3
Graduate	47	15.7
PG and above	11	3.7
<b>Occupation</b>		
Housewife	86	28.7
Seasonal Agricultural wage labourer	71	23.7
<i>Keithel phambi</i> /Vegetables seller	50	16.7
Weavers/Artisans/Self-employed	33	11.0
Small business	20	6.7
Govt. Salaried Employee	31	10.3
Professional/ Managerial Job	9	3.0
<b>Work Status</b>		
No Work	157	52.3
Work	143	47.7
<b>Education in Years</b>		
1-5 years	19	6.3
6-10 years	132	44.0
11-12 years	91	30.3
Above 13 years	58	19.3
	(Mean)	(Range)
Age	29	22-41
Age at Marriage	20.35	17-28

Among the respondents, a little over a quarter of them (28.7%) were housewives, a just over a fifth of them (23%) were seasonal agricultural laborers, 16.7 percent worked as market vendors or vegetables sellers in *Ima market* (mother's market) and 11 percent of them were either self-employed or works as weavers. Just about 13 percent of the women interviewed were found to work either in government or professional job. Further, this study categorized the occupations of the respondents in working status and no working status. Those who were housewives and casual labors in seasonal agriculture sector were identified as having 'no work' and the rest of the occupations were counted as working. A little over half of the respondents (52%) were found to have no work and the rest of them were found to having work.

### **Children's Illness rate and Mothers' socio demographic indicators**

Table 2 shows the reported illness among the children and their mothers' socio-demographic indicators which include mothers' education, occupation, work status, age at marriage, region of residence and district. As can be seen from the Table 2, there is higher chances of children's illness among children of mothers who married at below 19 years as compared with those who got married above 19 years. Sixty five percent of women who married below 19 years reported some illness of their children while only 33 percent of women got married above 19 years reported illness of their children. A statistically significant  $\chi^2$  test shows that age at marriage of mother has a strong negative relationship with their children's illness rate.

Mother's education in years is observed to have negative relationship with their children's illness rate. Mother's education is considered to be a vital factor for improving child health as educated women are well informed about wide range of preventive health behaviors such as child care, importance of breastfeeding and actual utilization of health services. Thus, the study found that a little over a tenth (12%) of women with 13 or more years of education had reported some form of illness among their children, as compared to 84 percent of women with 1-5 years of education reporting some form of illness for their children.

In terms of education level, only a little over a tenth (11.5%) of women with graduate and above had reported to have some illness among their children. However, 73 percent of women with below primary education and 70 percent women with upper primary education reported some form of illness of their children. Working women reported less illness of their children as compared to non-working women. Only 35 percent of working women have reported some illness of their children while 56 percent of non-working women reported illness of their children. Chi square test shows a p value ( $<0.05$ ) indicating a statistically significant negative association. Working women have more freedom and autonomy in their decision making which enhance their skill-building and their competencies. Moreover, working women tend to be more active, socialized and participatory in their actions. These pathways potentially could be the

reasons for relatively less illness rate among children of working women. This observed pattern is clearly distributed across the occupation of the women. Highest rate of children’s illness was reported among the housewives (with half of them reporting some illness of their children), followed by those working as market vendors and agricultural wage laborers respectively.

**Table 2: Children's reported illness and Mother's Socio-Demographic Characteristics: Survey Findings (n=300)**

Variables	Any illness of the children in the last 3 months prior to the date of survey		
	Yes	No	Percentage
<b>Education</b>			
Below primary	14	5	73.68
Upper primary	22	9	70.97
Secondary	42	59	41.58
Higher secondary	22	69	24.17
Graduate	5	42	10.64
PG and above	1	10	9.09
<b>Occupation</b>			
Housewife	43	43	50
Seasonal Agricultural wage labourer	25	46	39.43
Market vendor/Vegetables seller	24	26	48
Weavers/Artisans/Self-employed	7	26	21.21
Small business/petty shop	3	17	15
Govt. Salaried Employee	3	28	9.68
Professional/ Managerial Job	1	8	11.11
<b>Work Status</b>			
No Work	89	68	56.69
Work	51	92	35.66
<b>Region</b>			
Rural	54	61	46.96
Urban	86	99	46.49
<b>District</b>			
Kakching	79	121	35.5
Chandel	27	73	27
<b>Education in Years</b>			
1-5 years	16	3	84.21
6-10 years	83	49	62.88
11-12 years	34	57	37.36

Above 13 years	7	51	12.09
Mother's age at Marriage			
Below 19 years	82	43	65.6
Above 19 years	58	117	33.14

However, our study does not observe any difference in the illness rates of children in rural and urban areas. But there is significantly higher rate of children’s illness in Kakching district as compared to the Chandel district. In Kakching subdivision, 35 percent of women reported illness among their children while only 27 percent of them in Chandel reported illness for their children.

**Results of Multivariate Logistic Regression Analysis**

A multiple logistic regression is run to explores the determinants of children’s reported illness in relation women’s empowerment. Enabling factors of women such women’s education in years, women’s occupation, and their accessibility to banking, informal credits, modern technologies, mass media and print media are used as predictors in this model. Women’s education levels are categorized in terms of years of education: 1-5 years, 6-10 years, 11-12 years and above 13 years.

As shown in the Table 3, women’s access to banking and financial services is not found to be a significant predictor. However, women’s access to informal credits is statistically significant at 5 % confidence level. Children of women who have access to microcredit facilities have approximately 70 percent less chance to report illness than those children of women who have no access to microcredit facilities. During the survey, it was observed that almost 60 percent of the women interviewed had access to local informal microcredits such as *nupi marup* (women’s credit rotary group) and *tender* while only 11 percent of them had access to formal banking financial services. Accessibility to modern technologies and mass media are found to be significant predictors for children’s illness. Odds ratios of all these two predictors are less than 1, indicating negative association. Women’s access to modern technologies such as smart phones, television and radio will reduce the chance of their children getting ill by approximately 80 percent. Similarly, women’s access to mass media reduces the likelihood of children’s illness by approximately 60 percent, controlling the effect of other factors. Access to print media is not found to be a significant predictor.

One of the most important predictors is the women’s education level in determining the children’s illness rate. As compared to women with less than 5 years of education (below primary), all the other three categories of women’s education levels are found to highly associated with the children’s reported illness. Since the odds ratios are all less than 1, higher is



the education of the mothers, lower is the chance of their children getting illness. Children of mothers with 6-10 years of education have 75 percent less chance of children getting ill (OR=0.248) and those with 10-12 years of education have approximately 80 percent less likelihood of their children getting any illness as compared with the children of their counterparts with below primary education. Similarly, children of women with graduate or above education have very less chance of getting ill (87% less likelihood) as compared to the children of women with below

**Table 3: Relationship between Children's reported illness rate and Mother's Enabling Factors**

Enabling factors	Children's Reported Illness rate in the last three months preceding the survey	
	p value	Odds ratio
Access to Banking and Financial Services		
No	.000	1
Yes	.740	.732
Access to local micro finance facilities like Nupi marup		
No	.000	1
Yes	.001	0.323**
Access to modern technologies such as smart phones and computers		
No	.000	1
Yes	.000	0.211**
Access to Mass media such as radio & television		
No	.000	1
Yes	.006	0.426***
Access to Print Media like local daily and national newspapers		
No	.000	1
Yes	.771	.834
Woman's Education in Years		
1-5 years	.000	1
6-10 years	.065	0.248***
11-12 years	.031	0.187**
> 13 years	.058	0.132***
Labor participation		

No participation	.000	1
Seasonal Agricultural labor/Daily wage earner	.404	1.382
Market vendors/ <i>keithel Phambi</i>	.677	1.220
Self-employed/weavers/artisan	.077	2.279***
Govt. Salaried Job	.747	1.345
Salaried professional/technical job	.619	2.041
<hr/>		
Adjusted R <sup>2</sup>		0.397

\*\* & \*\*\* indicate significant factor at 5 % and 10% confidence level respectively

primary education. Women’s labor participation is positively associated with children’s reported illness. However, all the occupation categories are not significant at 5 % confidence level. Only those who are either self-employed or weavers or artisans are found to be significant at 10 % confidence level. Among the 300 respondents, 28.3 percent of them were housewives, 25 percent of them engaged as seasonal agricultural laborers or daily wage earners, 16 percent of them were *keithel phambis* (women vendors) in *Ima* (mothers) market, 18 percent of them were self-employed and roughly 12 percent of them worked in either government sector or professional jobs. With Adjusted R<sup>2</sup> value of 0.397, the measured predictors explain almost 40 percent of variation in the dependent variable. Thus, the model predicted the 40 percent of the variability in children’s reported illness.

## Discussion

Women empowerment, as measured by enabling factors appears to be an important determinant of morbidity levels among children. The result shows women’s education, women’s access to informal credit, women’s access to modern technology and women’s access to mass media have significant influence in determining children’s illness rate. This finding is consistent with other studies which has explored the relationship between women empowerment and health outcomes of the household (AKM Mainuddin et al. 2015; Kabir et al. 2020; Ruel MT and Alderman H 2013; S Bloom et al. 2001). Importance of women empowerment in relation to child’s health has been established in several studies (Cunningham et al. 2015; Carlson et al. 2015, Ruel MT et al. 2013). Empowered women have the ability to exercise household expenditures which may improve the household’s food security and have more freedom in regard to child related matters. Murthi, Guio and Dreze (1995) found a positive correlation between women’s status and nutritional status of children in their study in Uttar Pradesh. Women empowerment can improve the health status of children through various ways in which women agency as intrinsic as well as instrumental values can influence the child health status. Similarly, Ibrahim et al. (2015)

identified a strong positive relation of women's decision-making power and child health status, measured by their nutritional and immunization status. Thus, these earlier evidences along with the findings of this study show that women empowerment is a major factor in determining the child health status.

The result from the logistic regression reveals that education level of mothers is highly associated with the child illness rate. With higher maternal education, there is lower chance of their children getting any illness. Similar negative association has been established in several studies in the literature (Basu 1999; Caldwell 1979; Hobcraft 1993). Boerman, Sommerrfelt and Rutstein (1991) found higher prevalence (20%) of illness among children of uneducated women than those among those children of mothers with primary schooling. Educated mothers are intrinsically more independent and more confidence to make decisions about their children's welfare. For instance, educated mothers are more likely to fully immunize their children, follow proper breastfeeding practices and so on. Educated women tend to marry late and prefer to have fewer children. Hobcraft (1993) rightly argues that maternal education plays a key role in determining child health even after control of socio-economic characteristics of husband. Education brings positive changes in the women's behavior that result in better child health. For example, education improves preventive care, use of modern medicine and utilization of healthcare. Another reason is that better education has link with improved socio-economic situation of the family. One state in India where female education has resulted in better nutritional status of children is the southern state of Kerala. Another country which has done remarkably well in improving the nutritional status of children is Bangladesh. Dreze and Sen (2013) argue that role of women plays a key factor in determining the child health status in Bangladesh. Caldwell (1979) in his study of Nigeria shows that maternal education plays a major role in reducing the infant and child mortality rates. Thus, maternal education appears to be the single most important factor for determining child health. However, maternal education is affected by other socio-economic factors and social norms. Less education among the women in the northern India is a reflection of the social norms and tradition of the society in which they live.

### **Conclusion**

The regression results find significant impact of women's enabling factors such as access to media, access to microcredits and women's education level in determining children's morbidity level. Women's education is found to have a major impact on the child illness rate. Importance of women's education for child health has been long established by many scholars, following the Caldwell (1979) seminal paper. Cleland (1990) argues that women's education can alter the power equation within the family which can ultimately enhances women's decision-making power. This researcher finds no such studies in India which explore the importance of women's

role in determining the illness among children. Most of the studies have focused on the impact of maternal education on actual health outcomes, which are at times rather weak, possibly because other societal and household's characteristics supersede the role of women in shaping child health. This study fills this gap in the existing literature by examining the role of women in determining the morbidity or illness among children. As it has been stressed throughout the analyses, there is clear evidence that women empowerment, especially education and women's access to credit and modern technology can be the key difference maker in determining child health status. This has important lesson, especially for low-income states like Bihar, MP, UP, Rajasthan and Odisha to give more emphasis on improving gender relation so they can improve their health conditions of the population. The findings stress the need to look beyond the reproductive role of women and to acknowledge the developmental role of women.

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