Rich-Poor Gap and Health Inequality Among Married Women in Pakistan: An Empirical Analysis

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Abstract

The study empirically investigates severity of the rich-poor gap and its implications on health inequality among married women in Pakistan using micro-data set of Pakistan Demographic and Health Survey (PDSH) 2012-13. It is widely recognized that people's equitable access to health care services is vital to sustaining good health which depends primarily on income levels and the cost and availability of quality health services. The study determines several indicators to measure rich-poor gap within the scope of PDSH data. The analyses include only women aged 15 to 49 and findings are supported with econometric analysis under cross-section technique using Logit regression. Inequalities are measured with several indexes e.g. Odds Ratio (OR) and Relative Index of inequality (RII). The results indicate that rich-poor gap is high between the provinces than within the provinces of Pakistan. The results also indicate that rich-poor gap is significantly affecting health inequality among married women in Pakistan. People with low income do not observed in taking reasonable health care services, and people with high income enjoys required health care services for married women.

Keywords: Rich-Poor Gap, PDSH, Health Inequality

1. Introduction

The status of health of the population in any society is always very important, as the richness of the society judged by the health care facilities available across the society. It is universally accepted that health facility equality among the gender is inevitable. Improving the health is a crucial component of developmental issue in any society. The available literature shows that there is growing inequalities in access to health care services among the maternal health within and between developing countries (Ahmed et all, 2010; Makinen et al., 2000). Due to which the inequality in health care get attention of the policy makers to show commitment in reducing the health gap (World Health Organization (2004))

The concept and measurement of inequality in health care provision remains an ambiguous issue if interpreted in terms of fairness and justice, making its definition very complex and imprecise. However, the gaps in socioeconomic status that are most commonly used in research and analysis to identify social inequalities are used interchangeably with inequities. This practice is increasingly being recognized by the international community. In general terms, health inequity is defined as "inequalities in health status, risk factors, or health service utilization between individuals or groups that are unnecessary, avoidable and unfair" [World Health Organisation (1998)]. The differences in the health care facilities in different population sub group are due to unequal opportunities and socio-economic constraints. The health equity requires the comparison between social groups advantaged more or less. This

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will help to identify the correct policies and programmers towards the justice in health equality across the gender and especially in maternal health care (Aslam et al, 2016).
This would be the first study with special reference to Pakistan which reports rich-poor gap as wealth based socio-economic inequalities using large data from nationally representative PDSH survey.[1] The objective of the study is to explore first to income and wealth related rich-poor gap and then implication of this gap on health inequality among married women aged 15-49.
The health indicator of Pakistan in comparison of other regional countries is shown in table-1. It clearly shows that Pakistan is far behind than other regional countries. The fig-1 shows that the life expectancy in Pakistan is 66 year which is less than Sri Lanka where the life expectance is 74 years. Similarly the female attended during birth by skilled person is just 42 out of 1000 women which is also low than Sri Lanka where the rate is 92. The situation of infant mortality rate is also not different than the other two indicators of health. In Pakistan the infant mortality rate is highest in the region 81.This leaves large room for improving maternal health care indicators in pursuit of the targets of MDG 5 by the year 2015 (Figure 1)

Figure 1
Demographic Indicators of Pakisatn With Comparison To Other Regional Countries

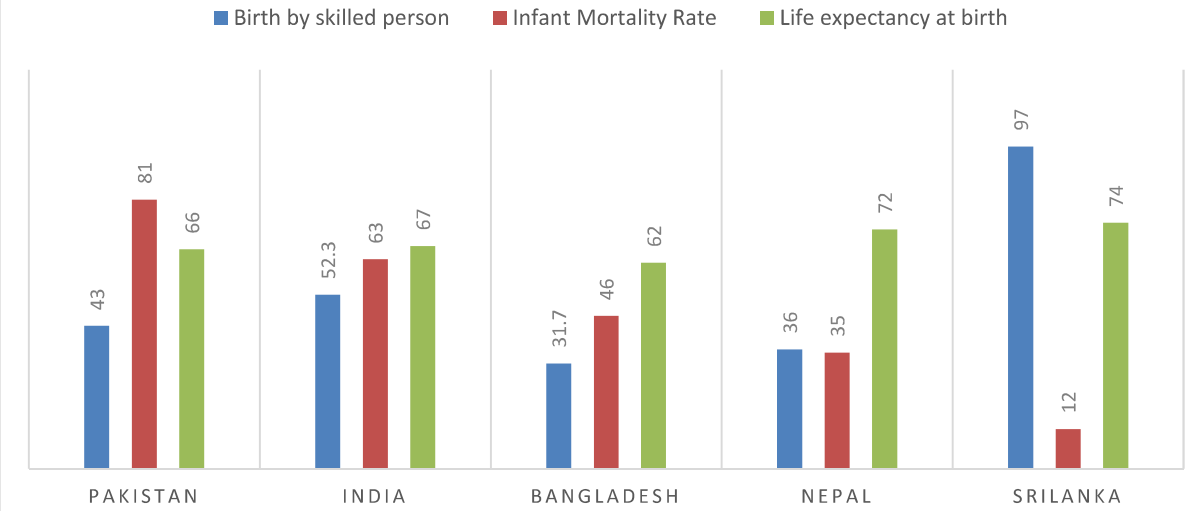

Figure Source: Pakistan Demographic and Health Survey (2012-13)

The rest of the study is organized as, section 2 is about literature review on the subject matter, and section 3 provides methodology containing estimation model and data description. Section 4 is about descriptive and regression results. Section 5 provides short conclusion of the study.

2. Literature Review

The poor countries have monopoly on the gender inequality. In all the societies the men earn more than the female. Shelah et al (2001) found that women with greater freedom of movement obtained higher levels of antenatal care and were more likely to use safe delivery care for India. Khan et al (2011) explored that country's low-lying deltaic topography, frequent natural disasters and low financial and adaptive capacity undermine the national economy and greatly impact on human lives and concluded that Persistent inequities in

[1] Previous studies with special reference to Pakistan are more focused to only health inequality by using micro data, e.g. Mehmood and Bashir (2012)

Bangladesh endanger equitable and sustainable human development in the country. Pro-poor development strategies based on the principles of equity and quality should be implemented to narrow existing gaps and further promote holistic and equitable human development. There are many studies to explore the real determinant of health inequalities among the married women in under developed countries like Pakistan. Jayachandran (2014) found that the rich poor gap of health inequality among the women widened in the India. The study explored that the gap widened due to income and other socio economic factors. Deaton (2003) examined the health inequality and economic development among poor as well as rich countries and found that income inequality affecting health is stronger than the evidence in the poor countries.

Franny (2013) argued that health inequality among married women is about the inequality health care system aiming to reduce pregnancy-related morbidity and mortality must focus on maternal and newborn health. Reproductive health care, the care a woman receives before and during pregnancy, at the time of delivery, and soon after delivery, is important for the survival and well-being of the mother and her child. It encompasses the health care dimensions of family planning and prenatal, natal, and postnatal care with the aim of reducing maternal morbidity and mortality.

Existing literature has identified a number issues to health inequality by using micro data sets for different countries, however for Pakistan the concept of rich-poor gap is very old but new in empirical literature and there is only few studies found on the subject that implications of rich-poor gap. Thus this gap in the literature signifies the current study's importance.

3. Methodology

Empirical analyses are divided into two parts, fist one is about the descriptive analysis about the key indicators of health inequality and rich-poor gap in Pakistan. In the second step the study tested the hypothesis to signify the importance of rich-poor gap in determining unequal access to health care services among married women in Pakistan with the help of econometric technique of Logit regression. The study has taken analysis with the help of crosstabs, percentage frequencies and regression. Following model is developed by reviewing some recent empirical literature (Mahmood and Bashir, 2012 and Jayachandran, 2014).

$$HINQ = \beta_1 + \beta_2 RPG + \beta_3 EDU + \beta_4 REG + \beta_5 AREA + \mu \ldots(1)$$

Where HINQ is the unequal access to health care, RPG is rich-poor gap which is determined through wealth index, EDU is the education level of the married women, REG is region which is categorized to provinces. AREA is the residence area e.g. rural or urban.

For empirical content the study has incorporated the micro data set of Pakistan Demographic and Health Surveys (PDHS) for the year of 2012-13 and also taken some facts from 1990-91 and 2006-07. PDSH surveys are nationally representative undertaken to yield information on demographic, socioeconomic and health characteristics of women. The 2012-13 PDHS is the recently available dataset covering the largest-ever household-based sample of more than 12000 ever-married women of 15-49 years of age. The analysis has taken selective indicators from the data according to the subject matter. The empirical results given I flowing section

4. Results and Discussion

First step in the empirical analysis is about descriptive analysis using crosstabs and contingency tables. Table 1 shows the comparison of available data sets PDSH of 1990-91, 2006-7 and 2012-13.[1] We can see there is a gradual increase of rich-poor gap in all three surveys. Percentage of women having live birth in preceding five years of survey have shown an increase in the richest proportion and there is increase of overall gap from 1990 to 2012.

[1] This analysis has been followed from PDSH report.

Table 1 Percent Women (15-49) who had Live Birth Preceding Five Years of the Survey at Public and Private by Wealth Quintiles with rich-poor gap.

	Public			Private		
	1990-91	2006-7	2012-13	1990-91	2006-7	2012-13
Poorest	1.7	4.5	6.3	0.2 1	11.2	16.5
poorer	2.9	7.8	10.2	0.5 1	16.2	23.12
Middle	2.9	12.2	15.4	1.6 1	19.6	29.2
Richer	8.8	17.7	21.6	6.0 3	31.4	40.4
richest	20	21.1	25.7	24.5	52.6	60.2
Rich-Poor Gap	18.3	16.6	19.4	24.3	41.1	43.7

Source: PDSH 2012-13

Recent literature has identified that prenatal and postnatal checkup for the mother is key indicator for determining health equity among mothers. Table 2 shows that in the two years preceding the survey, 60 percent of women received postnatal care for their last birth within the first two days following delivery. 38 percent of women had no postnatal checkup. The women aged 20 to 34 are observed high in proportion to have postnatal checkup. However the gap is lower in the later age 35 to 49. It seemed that the mothers in later age are facing an unequal treatment with compare to younger mothers. Relative index of inequality (RII) is determined through the behavior observed in both areas; rural and urban in Pakistan.

Table 2 Proportion of first postnatal checkup for the mother

Background characteristic	No Postnatal checkup	Proportion of women having postnatal checkup	Total women
Mother's age at birth			
<20	38	58.6	350
20-34	36.6	61.2	3,416
35-49	44.5	55	479
Region			
Punjab	31.6	66	2,425
Urban	20.4	76.6	736
Rural	36.5	61.3	1,690
Sindh	32.2	66.3	961
Urban	23.4	74	377
Rural	37.8	61.3	585
Khyber Pakhtunkhwa	60.7	37.7	623
Urban	33.2	64.3	99
Rural	65.9	32.7	524
Balochistan	61.1	37.2	187
Urban	56.4	42.3	32
Rural	62.1	36.2	156
ICT Islamabad	19.9	77.9	16
Gilgit Baltistan	75.9	19.9	33
Wealth quintile			
Lowest	56.7	42	934
Second	44	54.5	914
Middle	39	57.6	858
Fourth	25.4	72.2	873
Highest	16.3	81.7	667

In the further analysis the study has tested the hypothesis that is there a significant relationship exist between health care services and rich-poor gap by controlling other measures such as area, region and education. The results are based on logit regression model To further test the hypothesis that wealth (as a proxy for rich-poor gap) has a stronger impact on improving maternal health care practices than education and residential status, logistic regression models were applied to 20012-013. The test is conducted on two sets, publich and private health care service inequalities. The results are presented in Table 3.

Table 3 Odds Ratios Showing the Effect of Rich-Poor Gap, Education, and Residence on Use of Prenatal, Delivery Care and Facility-based Service

	Model-1		Model-2	
	Private		Public	
	Coefficients	Sig.	Coefficients	Sig.
Region				
Islamabad [r]	-----	----	------	-----
Punjab	5.466***	.000	.169***	.000
Sindh	6.947***	.000	.124***	.000
KPK	4.800***	.000	.201***	.000
Baluchistan	1.626***	.001	.218***	.000
Gilgit Baltistan	3.996***	.000	.460***	.000
Area				
Rural [r]				
Urban	.702***	.000	1.368***	.000
Rich-poor gap				
Richest [r]		------		----
Poorest	.469***	.000	1.578***	.001
Poorer	.516***	.000	1.533***	.001
Middle	.610***	.000	1.651***	.000
Richer	.733***	.001	1.341***	.004
Education				
No. education [r]		------		------
Primary	.623***	.000	1.433***	.002
Secondary	.611***	.000	1.434***	.003
Higher	.773***	.013	1.358***	.005
Constant	1.039***	.760	.806*	.091

Note: *, **, *** shows the significant level at 10%, 5% and 1% respectively
Source: PDHS, 20012-013 data.
Results based on logit regression models

The results of logit model indicate that there is significant relationship exists between rich-poor gap (different levels of wealth) and inequality in the use of public and private health care resources. Simultaneously education, area and region are also significant determinants of health inequality. The region wise variations show a significant contribution in the health care use among married women in Pakistan. The results of the study are similar to the previously conducted studies on the same issue.

5. Conclusion

The study determines the impact of rich-poor gap of wealth on inequality in health care services among married women in Pakistan using micro data set of Pakistan Demographic and Health survey (PDHS) 2012-13. From descriptive and logistic findings there can be a number of recommendations and conclusion drown to inform policy implications, future research and programming. The overall findings indicate that there is an improvement in

inequity patterns of health care among married women during the period 1990-91 to 2006-07 and to 2012-13. There is still very high inequality exists among different regions of the Pakistan ad there is inequality within the regions among the women living in rural and urban areas. The main finding of the study is that there is significant relationship exists between health care inequality and rich-poor gap in wealth. The change witnessed over the last decade is not large enough to bridge the health gap between the rich and the poor. According to the findings of the study there is need of policy implications to provide better awareness to the poorer mothers and there is need of improvement of public health care providence. The rich-poor gap is gradually improving need to be controlled to prove equitable health care services to all the mothers of the nation.

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