

The Influence of Women's Empowerment on Health-seeking Behavior: Findings from the Bangladesh Demographic and Health Survey

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Abstract

Women empowerment is a pertinent subject to attain the Sustainable Development Goals (SDGs) of Bangladesh. Considering the facets health seeking information is one of the most predominant indicators available. The purpose of the study is to identify the levels and patterns of women empowerment in terms of healthcare seeking behavior in Bangladesh based on the data of BDHS 2014. A combination of Cross tabulation and logistic regression analysis were carried to find out the women empowerment regarding health care seeking behavior. According to the results around 64.1% women were empowered (either by their own means or collectively with their spouses) to determine their own healthcare seeking and about 70.7% in their children's healthcare seeking. Place of residence, age group, educational qualification of woman, NGO activities, media exposure, wealth index and woman engaging with economy are more empowered in decision-making for both own and children's health care aspect. Women must be empowered to emancipate themselves in health information in order to boost their self-confidence, to access information, to succeed in addressing obstacles to life, to feel strong about health problems and disabilities, and to learn more information.

Keywords

Physical load; overload; fatigue; nitric oxide; calpains; calcium; myokines; inflammatory

1. Introduction

Empowerment and equality of women for all facets of sustainable and equitable growth are one of the 17 sustainable development goals. All the SDGs, in short, focus on the achievement of Target 5. The ability of women to make decisions which affect their own personal circumstances is an essential aspect of empowerment and a leading contributor to their overall well-being. Empowered women should deal more affluently with male peers in relation to their reproductive and health performance. The willingness of women to make important decisions about their own lives is an integral part of women's empowerment [19] and makes a positive and beneficial effect on their well-being. Bangladesh closed 72.6% of its overall gender gap and obtained 50th position out of 153 countries globally, the WEF said in its report titled 'Global Gender Gap Report 2020'.

Studies have shown that society can reap enhanced benefits because women have the power to make decisions and choose their activities. Moreover, the method allows one to build faith in relations; inform choices; promotes adaptation, well-being, and optimism; elevate the rate of

personal developments and appreciation in one's own world; consider one's own strengths and capabilities; feel

more motivated, higher self-confidence, higher personal contentment, and higher self-efficiency resulting an improvement in the quality of life. In various aspects of life, which include socio-cultural, family and interpersonal and legal dimensions, empowered women are able to influence decision-making [25]. The attitude of finding health information will promote health awareness and eventually formulate judgments, opinions, gathering ample knowledge to find alternatives and convenient tools to conduct divergent activities and to retain the polar aspects of problems [12].

The age of the mother might have a relationship with the accumulated knowledge regarding women's health care services on the other hand as a result of the advancement of modern medicine and the recent improvement of educational facilities for women, women of comparatively younger age have broader knowledge of modern health care facilities and values modern medicine upon anything else. The positive impact of an educated mother is reflected on health care utilization. Multiple different studies found a very positive influence of mother's education on the practice of health care services [28]. Arguably women with better education are more aware of health issues, well aware of the availability of health care services and they use these informations more constructively in maintaining or achieving the status of good health.

Most of the studies on getting health information in Bangladesh have not been done. The aim of this study was to identify the levels and differences in women's empowerment in relation to health-seeking behavior in Bangladesh in terms of decision-making authority. The study also investigated the relationship between women empowerment and health-seeking actions among women in Bangladesh. The results can be used to help the policymakers adopt sustainable development policy (SDGs). The purpose of the study is to identify the levels and patterns of women empowerment in terms of health-seeking behavior in Bangladesh.

2. Data & Methodology

2.1 Data

A survey study using BDHS 2014 datasets. In the BDHS survey, women's empowerment is measured as dichotomous variable coded 1 = woman participates in the decision (about own healthcare and child healthcare either alone or jointly with her husband) on the date of interview and 0 = woman doesn't participate (decision made by husband alone, someone else or other). This dichotomous response is analyzed under the response of married woman of survey of BDHS 2014. Variable of this study are Age- Group, Place of Residence, Religion, Respondent's Education Level, Division, Wealth Index etc.

Data Source: <https://dhsprogram.com/methodology/survey/survey-display-441.cfm>

3. Methodology

Woman empowerment under the suggestion of health seeking behavior (own health, children health, visiting to relatives or friend and purchasing power of large household items are analyzed under residential, geographic, demographic or others factor through bivariate analysis. In bivariate analysis, we employ Chi-square test or measure of association under fixed level of significance. Here, bivariate analysis is performed on woman health seeking behavior under four levels with independent variables. In multivariate analysis, this study outlay woman empowerment of four dependent variables with several independent variables. Overall analysis is accomplished under SPSS 25.0 version as statistical package for its accessibility and easy to understand.

In data analysis, we portray univariate, bivariate and multivariate analysis for exhibiting the effect of several variables on women's and their children's health care seeking behavior.

4. Results and Discussion

4.1 Univariate Analysis

In univariate analysis, our four dependent variables (decision on respondent's health care, large household purchase, visiting family or relatives and children health care) are exhibited with their basic statistics and frequency distribution. Standard deviation is almost close to all and also, skewness and kurtosis (except decision on child health care as its response is larger for positive as compared to others).

Table 1. Univariate analysis of decision making on own & children health care

Characteristics	Decision on respondent's health care	Decision on child health care
N	15576	15576
Mean	0.6411	0.7066
Median	1	1
Mode	1	1
Std. Deviation	0.47969	0.45533
Skewness	-0.588	-0.908
Std. Error of Skewness	0.02	0.02
Kurtosis	-1.654	-1.176
Std. Error of Kurtosis	0.039	0.039
Minimum	0	0
Maximum	1	1

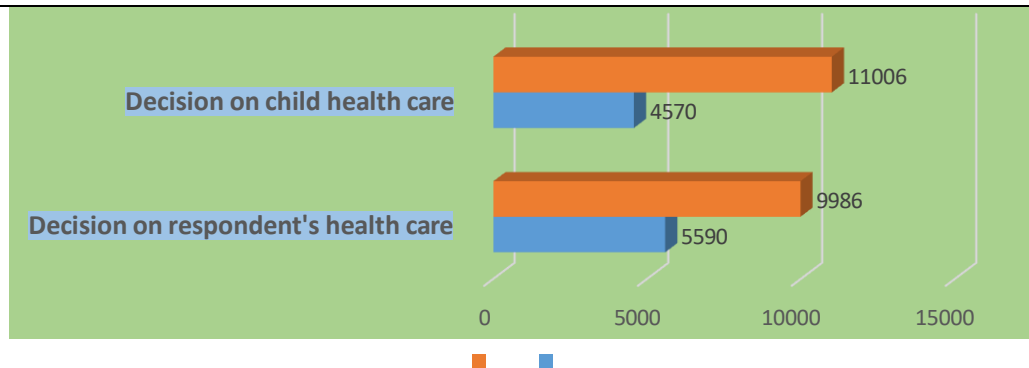


Figure 1. Univariate distribution of decision making on own & children health care.

From figure 1, it can be seen that in case of child healthcare decision, the attitude is more positive than others (70.7%) while its lowest for large household purchase (60.8%).

4.2 Bivariate Analysis

In bivariate analysis, we derive each dependent variables with our independent variables. Also, measure of association is employed for estimating overall relationship with one to other variable. In this study, we assess some information on respondent's health care and demographic variable (age group of respondent, age-gap). The possibility of decision making on health care increases with age. In this study on 35-39, its highest (70.5%). In case of age gap, taking decision is highest on same age-group.

In this study, we assess some information on respondent's health care educational as well as socio-economic variable. For wealth index, as its increases, the chance of taking decision on health care increases. For richest society, the chance of taking decision on regards of own health care is 69.6%. So, wealth index is statistically associated with decision taking on health issues.

Occupational status is positively associated with woman health seeking behavior. 69.4% woman positively opine for health seeking behavior having engaged in employment.

NGO, is now promoting woman involvement and also booming economy of our nation. In this study, just 1 in 4 people engaged with NGO activity where 67.31% woman takes decision on regards of health issues. Education is a basic prior of a civilized citizen. As education level of married woman increases, the chance of taking decision on health issues increases. So, decision making is associated positively with education acquiring. It's also true for husband's educational qualification.

Table 2. Association table of individual, household and community level characteristics

Independent variables	Category	Decision on respondent's health care (%)		Chi- square	d.f.	p-value
		No	Yes			
Age group of woman	15-19	52.50	47.50	300.36	6	0.00
	20-24	40.90	59.10			
	25-29	34.70	65.30			
	30-34	30.90	69.10			
	35-39	29.50	70.50			
	40-44	31.70	68.30			
	45-49	35.80	64.20			
Age gap	Less or same age	31.60	68.40	3.22	4	0.00
	1-5 years	35.40	64.60			
	6-10 years	35.80	64.20			
Wealth index	More than 10 years	36.60	63.40	80.86	4	0.00
	Poorest	40.40	59.60			
	Poorer	38.10	61.90			
	Middle	37.30	62.70			
	Richer	34.40	65.60			
Working status of woman	Richest	30.40	69.60			
	No	38.30	61.70			
Assist with NGO	Yes	30.60	69.40	25.03	1	0.00
	No	37.10	62.90			
Educational attainment of woman	Yes	32.70	67.30	32.72	3	0.00
	No education	36.40	63.60			
	Primary	37.10	62.90			
	Secondary	36.30	63.70			
Educational attainment of husband	Higher	29.30	70.70	38.20	5	0.00
	No education	35.80	64.20			
	Incomplete primary	38.20	61.80			
	Complete primary	35.90	64.10			
	Incomplete secondary	37.80	62.20			
	Complete secondary	36.20	63.80			
	Higher	30.70	69.30			
Division	Barisal	41.50	58.50	131.89	6	0.00
	Chittagong	32.00	68.00			

Table 2 Continued

	Dhaka	29.90	70.10			
	Khulna	39.00	61.00			
	Rajshahi	35.10	64.90			
	Rangpur	35.10	64.90			
	Sylhet	42.90	57.10			
Type of place of residence	Urban	32.50	67.50	39.88	1	0.00
	Rural	37.60	62.40			
Religion	Islam	36.20	63.80	20.29	4	0.00
	Hinduism	34.60	65.40			
	Buddhism	18.40	81.60			
	Christianity	12.90	87.10			
Media exposure	No	39.50	60.50	49.19	1	0.00
	Yes	33.80	66.20			

4.2.1 Decision on respondent's health care & geological and mass media variable

In case of divisional viewpoint, the chance of taking decision is larger for Dhaka (70.1%) & Chittagong (68%). Barishal and Sylhet is comparatively lower chance than other division.

Urban society's woman take decision more on health regards than rural woman in this study. Urban woman has 67.5% chance of making decision on own health care issues than non-taking decision.

Islam & Hinduism are two common religious people in Bangladesh. For Hinduism, its higher chances of taking decision as compared to Muslim woman.

For exposing with TV, newspaper or radio, it enables themselves to take decision on the betterment of themselves. In this study, this positivity comes as 66.2% of positively exposed with mass media in favor of making decision.

4.2.2 Decision on Children's health care & demographic variable

In case of children's health care, we assess demographic variable to exhibit the relationship with those. For age group of respondents, the chance of taking decision on favor of children health care increases until 39 years (79.30%) a later slightly down. Therefore, taking decision on children is much affected through mother's maturity as well as age goes. In addition, it is statistically significant at 5% level of significance.

Age gap is sometimes crucial for taking decision in favor of children's health betterment. For 6- 10 years age difference, the prevalence of taking decision in children's health perspective is highest as compared to others age-group. (71.2%). Age-gap is not statistically associated with children's health care decision-making.

Table 3. Cross tabulation of decision on children's health care & socio-economic and educational variable

Independent variables	Category	Decision on child health care		Chi- square	d. f.	p- value
		No	Yes			
Age group of woman	15-19	57.40	42.60	871.037	6	0.00
	20-24	36.50	63.50			
	25-29	27.70	72.30			
	30-34	23.00	77.00			
	35-39	20.70	79.30			
	40-44	21.70	78.30			
	45-49	24.30	75.70			
Age gap	Less or same age	31.60	68.40	2.757	3	0.431
	1-5 years	30.20	69.80			
	6-10 years	28.80	71.20			
	More than 10 years	29.20	70.80			

Table 3 Continued

Wealth index	Poorest	31.60	68.40	37.4	4	0
	Poorer	30.30	69.70			
	Middle	30.60	69.40			
	Richer	29.60	70.40			
	Richest	25.30	74.70			
Working status of woman	No	31.50	68.50	78.456	1	0
	Yes	24.50	75.50			
Assist with NGO	No	31.20	68.80	70.744	1	0
	Yes	24.30	75.70			
Educational attainment of woman	No education	27.30	72.70	18.694	3	0
	Primary	29.10	70.90			
	Secondary	31.20	68.80			
	Higher	27.80	72.20			
Educational attainment of husband	No education	26.10	73.90	49.433	5	0
	Incomplete primary	30.40	69.60			
	Complete primary	31.20	68.80			
	Incomplete secondary	32.60	67.40			
	Complete secondary	30.70	69.30			
	Higher	27.30	72.70			
Division	Barisal	29.90%	70.10%	93.418	6	0
	Chittagong	28.60%	71.40%			
	Dhaka	23.60%	76.40%			
	Khulna	33.60%	66.40%			
	Rajshahi	28.80%	71.20%			
	Rangpur	28.40%	71.60%			
	Sylhet	35.20%	64.80%			
Type of place of residence	Urban	26.70%	73.30%	26.847	1	0
	Rural	30.70%	69.30%			
Religion	Islam	29.50%	70.50%	21.516	3	0
	Hinduism	29.00%	71.00%			
	Buddhism	11.50%	88.50%			
	Christianity	6.50%	93.50%			
Media exposure	No	31.10%	68.90%	14.062	1	0
	Yes	28.30%	71.70%			

4.3 Decision on children's health care & socio-economic and educational variable

Children's health care decision largely depends upon socio-economic and educational qualification of mother as well as father of a child. In case of wealth index, as economic status increases, the chance of taking decision in favor of children's nourishment increases. This proportion lowest for poorest (68.4%) while largest for richest economic society (74.7%).

Mother's job is also important for making decision in betterment of children health. 75.5% mother's take decision in betterment of children nourishment while they are employed at study period. NGO, is now opening door for

booming economic cycle and enable woman in right direction. This study finds statistically significant result as the prevalence of NGO involvements rises. Though 1 in 4 women engaged with NGO, but the decision-making prevalence is higher for NGO workers (75.70%).

Education is crucial for taking any decision where it is for own or for child's health care. However, there is irregular movement of decision making as educational qualification increases. Having no education is also taking decision in children's health care in larger amount (72.70%).

Educational qualification for father is important as like as mother. However, pattern of educational qualification is same for taking decision of child's health care as mother. Highest occurrence of taking decision for children's health comes from having no light of education (73.90%).

Divisional variation is viewed whether it's for education, health or economic growth or else. Kin case of this perspective, all mother as well as couple make decision more than 70 percent except Khulna (66.40%).

In case of types of residence, urban (73.30%) has greater chance for making decision than rural (69.30%). Nevertheless, this discrimination is not too much larger.

Religious belief is sometimes crucial for making decision in children's health care. Top two religious believers making decision is not too much differ from other. (Muslim 70.5%, Hinduism (71%).

Mass media's effect on decision-making is sometimes playing a role for changing belief. But making decision on children's care is not largely differ for acknowledged with media exposure as compared with non-exposer.

4.4 Multivariate Analysis:

In multivariate analysis, we employ binary logistic regression for finding out the odds ratio and its significant interpretation through presence or absence of decision making of woman or both couple. The odds ratio entails us about how one variable is more likely to happen in absence or presence of others. Two logistic regression model is assessed and describes below:

4.4.1. Binary logistic regression of woman own decision making for own health care:

For finding out the odds, we decode 1 if woman or both couple affirm on own health care and 0 if not (none, husband only or other take decision on own health care).

Age group of respondents; The odds of taking decision of own health care is 0.52 times less statistically significant more for 15-19 age group than 45-49 age group. There is statistically significant increasing chance of taking decision of health care as age increases.

Division: in case of division, some division reveals significant impact of decision-making. As compared to Sylhet, the chance of taking decision on own health care is 0.034 times significantly more for Barishal division. Similarly, its highest for Dhaka division for 0.612 times significantly more than Sylhet division.

Types of residence: The chance of taking decision on own health care is 0.097 times statistically significant more for urban than rural areas.

Educational qualification of woman: The likelihood of taking decision in health perspective is statistically significant for educated person as compare to illiterate person. So, it's highest for higher educated person.

Religion: Religion is not statistically significant in case of making decision for own health care.

Wealth index: poorest family has statistically less significant than richest family. Others are not statistically significant.

Others: Notably working class woman and NGO facilities woman are significantly associated for taking decision on health care perspective. However, others are not statistically significant.

Table 4. Binary logistic regression of respondent's health care decision-making & study variable

Variable	Coefficients	S.E.	Wald	df	p-value	Crude odds ratio
Age-group of respondents						
15-19	-0.735	0.080	85.15	1	0	0.48
20-24	-0.324	0.071	20.65	1	0	0.723
25-29	-0.057	0.070	0.68	1	0.409	0.944
30-34	0.133	0.069	3.69	1	0.055	1.143

Table 4 Continued

Complete primary	0.1	0.079	1.59	1	0.207	1.105
Incomplete secondary	-0.052	0.067	0.60	1	0.437	0.949
Complete secondary	-0.091	0.082	1.24	1	0.265	0.913
Higher	RC					
Age gap of husband & wife						
Less or same age	0.105	0.149	0.50	1	0.481	1.111
1-5 years	0.05	0.046	1.20	1	0.273	1.051
6-10 years	0.051	0.041	1.59	1	0.207	1.053
More than 10 years	RC					
Assist with NGO						
Yes	-0.15	0.040	13.78	1	0	0.861
No	RC					
Media exposure						
Yes	-0.074	0.044	2.77	1	0.096	0.929
No	RC					
Constant	1.919	0.553	12.03	1	0.001	6.813

RC means reference category

4.4.2 Binary logistic regression of woman own decision making for children's health care:

For finding out the odds, we decode 1 if woman or both couple commit on children's health care and 0 if not (none, husband only or other take decision on children health care). Age group of

respondents ; The likelihood of taking decision of own health care is 0.11 times more statistically significant more for 40-44 age group than 45-49 age group. Like as previous regression. There is statistically significant increasing chance of taking decision of health care as age increases.

Division: In view of division, each division reveals significant impact of decision-making for child health care except Khulna division. As compared to Sylhet, the chance of taking decision on own health care is 0.31 times significantly more for Barishal division. Similarly, its highest for Dhaka division for 0.733 times significantly more than Sylhet division.

Types of residence: The chance of taking decision on child health care is 0.111 times statistically significant more for urban than rural areas.

Educational qualification of woman: The likelihood of taking decision in child health perspective is not statistically significant for educated person as compare to illiterate person. Therefore, it is highest for higher educated person.

Religion: Alike own health care, religion is not statistically significant in case of making decision for children health care.

Wealth index: Richer family has statistically 0.12 times less significant than richest family. Others are not statistically significant.

Others: Notably working class woman, NGO facilities woman and media exposure are significantly associated for taking decision on health care perspective. However, others are not statistically significant.

Table 5. Binary logistic regression of respondent's children health care decision- making & study variable

Variable	Coefficients	S.E.	Wald	df	p-value	Crude odds ratio
Age-group of respondents						
15-19	-1.537	0.085	325.263	1	0	0.215

Table 5 Continued

20-24	-0.717	0.077	86.081	1	0	0.488
25-29	-0.304	0.076	15.882	1	0	0.738
30-34	-0.033	0.077	0.181	1	0.671	0.968
35-39	0.139	0.081	2.932	1	0.087	1.149
40-44	0.104	0.082	1.604	1	0.205	1.11
45-49	RC					
Division						
Barisal	0.27	0.076	12.679	1	0	1.31
Chittagong	0.328	0.071	21.447	1	0	1.388
Dhaka	0.55	0.071	59.373	1	0	1.733
Khulna	-0.003	0.071	0.001	1	0.97	0.997
Rajshahi	0.22	0.073	9.138	1	0.003	1.247
Rangpur	0.316	0.073	18.86	1	0	1.372
Sylhet	RC					
			Type of place of residence			
Urban	0.105	0.044	5.648	1	0.017	1.111
Rural						
			Educational qualification of woman			
No education	-0.391	0.096	16.445	1	0	0.677
Primary	-0.209	0.087	5.803	1	0.016	0.811
Secondary	-0.031	0.076	0.161	1	0.688	0.97
Higher	RC					
			Religion			
Islam	-1.443	0.745	3.745	1	0.053	0.236
Hinduism	-1.472	0.748	3.873	1	0.049	0.23
Buddhism	-0.345	0.821	0.177	1	0.674	0.708
Christianity	RC					
			Wealth index			
Poorest	-0.118	0.082	2.085	1	0.149	0.889
Poorer	-0.101	0.076	1.789	1	0.181	0.904
Middle	-0.128	0.068	3.598	1	0.058	0.879
Richer	-0.121	0.061	3.917	1	0.048	0.886
Richest	RC					
			Respondent currently working			
Yes	-0.153	0.042	13.276	1	0	0.858
No	RC					

Table 5 Continued

Husband's educational qualification						
No education	0.285	0.081	12.295	1	0	1.33
Incomplete primary	0.131	0.081	2.601	1	0.107	1.14
Complete primary	0.14	0.084	2.781	1	0.095	1.15
Incomplete secondary	0.02	0.071	0.079	1	0.778	1.02
Complete secondary	-0.038	0.087	0.197	1	0.657	0.962
Higher	RC					
Age gap of husband & wife						
Less or same age	-0.258	0.151	2.92	1	0.088	0.772
1-5 years	-0.012	0.049	0.059	1	0.809	0.988
6-10 years	0.093	0.044	4.48	1	0.034	1.097
More than 10 years	RC					
Assist with NGO						
Yes	-0.232	0.044	27.787	1	0	0.793
No	RC					
Media exposure						
Yes	-0.097	0.048	4.126	1	0.042	0.908
No	RC					
Constant	2.805	0.754	13.837	1	0	16.522

RC means reference category

5. Discussion

This study analyzed woman empowerment on own health care & children health care through several norms & patterns of household related issues. Different socio-economic factors affect women's decision-making patterns. Chittagong and Rangpur reveals statistically significant result in case of woman's own health care decision-making, while for children health care, Dhaka & Rajshahi also included. Urbanization and working class group has statistical significance on respondent's own health care & children health care decision making. However, for media exposure, children healthcare is significant only. These results of this research are compatible with other studies in which it was claimed that girls' education and participation rates minimize gender disparity in education [23]. Likewise, the education of husbands had a big influence on the empowerment of women. Women whose husbands had formal education for many years were less motivated in terms of child health care decision-making and major household purchases, with the exception of empowerment to determine their own healthcare pursuit. It is possible that naturally educated husbands are more self-confident than uneducated husbands are, making them more authoritative. Extra-familiar sources of data and tools that improve their possible autonomy in family environments.

NGO membership has had a huge effect on the advancement of women. Studies have found that participation in credit programs is positively related to the degree of empowerment of women, identified as a function of their relative physical mobility, economic security, the ability to make different purchases on their own freedom from control and abuse within the family, political and legal knowledge, and participation in public protests and political campaigning [15]. In our research, except for pursuing child healthcare, religion had no major effect on women's empowerment.

There are a variety of research limitations. First of all, the participants in this study were women only. More accurate information on women's empowerment could be created by information from both men and women. Secondly, in decision making, only two metrics were used to assess women's empowerment. Therefore, the results do not reflect the general advancement of women, but rather concentrate on these indicators in particular.

6. Conclusion

This research explores the relationship between women's empowerment and the socio-economic variable in health seeking behavior. The findings of this study demonstrate the value of empowering women by supporting their rights in the search for health information and comprehensive management of health information. We find from the above binary logistic regression that middle-aged women, higher-educated women, urban women, media representation, income index, and women active in the economy are more motivated in both dimensions of health care decision-making. In order to increase the level of education for women, all possible efforts must be made. Government efforts should be made to increase women's jobs and women should be encouraged to engage in the activities of NGOs. For rural women, special awareness programs should be implemented in order to boost their economic status, increase their level of education and engage in the decision-making of their households. To achieve the objectives of the Sustainable Development Goals, the implementation of these guidelines is important (SDGs).

References

- [1] Abada T, Tenkorang EY. Women's autonomy and unintended pregnancies in the Philippines. *J Biosoc Sci.* 2012;44(6):703-18.
- [2] Ashraf J, Ashraf B. Estimating the gender wage gap in Rawalpindi city. *J Dev Stud.* 1993;29(3):365-76.
- [3] Baker DP, Salinas D, Eslinger PJ. An envisioned bridge: Schooling as a neurocognitive developmental institution. *Dev Cogn Neurosci.* 2012;2 Suppl 1:S6-S17.
- [4] Cameron L, Schulz PJ, Nakamoto K. Differential effects of health knowledge and health empowerment over patients' self-management and health outcomes: a cross-sectional evaluation. *Patient Educ Couns.* 2012;89(2):337-44.
- [5] Chant SH. *Gender, generation and poverty: exploring the feminization of poverty in Africa, Asia and Latin America.* Cheltenham: Edward Elgar Publishing; 2007.
- [6] Chaudhry IS, Faridi MZ, Anjum S. The Effects of Health and Education on Female Earnings: Empirical Evidence from District Vehari. *Pak J Soc Sci.* 2010;30(1):109-24.
- [7] Cline RJ, Haynes KM. Consumer health information seeking on the Internet: the state of the art. *Health Educ Res.* 2001;16(6):671-92.
- [8] Conner KO, Copeland VC, Grote NK, et al. Mental health treatment seeking among older adults with depression: the impact of stigma and race. *Am J Geriatr Psychiatry.* 2010;18(6):531-43.
- [9] Elo IT. Utilization of maternal health-care services in Peru: the role of women's education. *Health Transit Rev.* 1992;2(1):49-69.
- [10] Faridi MZ, Chaudhry IS, Anwar M. The socioeconomic and demographic determinants of women work participation in Pakistan: evidence from Bahawalpur District. *South Asian Stud.* 2009;24(2):351-67.
- [11] Fiedler JL. A review of the literature on access and utilization of medical care with special emphasis on rural primary care. *Soc Sci Med.* 1981;15C(2):129-42.
- [12] Greenaway ES, Leon J, Baker DP. Understanding the association between maternal education and use of health services in Ghana: exploring the role of health knowledge. *J Biosoc Sci.* 2012;44(6):733-47.
- [13] Hausmann R, Tyson LD, Zahidi S. *The Global Gender Gap Report 2011.* Geneva, Switzerland: World Economic Forum; 2011.
- [14] Hermansson E, Mårtensson L. Empowerment in the midwifery context—a concept analysis. *Midwifery.* 2011;27(6):811-6.
- [15] Holmström I, Röing M. The relation between patient-centeredness and patient empowerment: a discussion on concepts. *Patient Educ Couns.* 2010;79(2):167-72.
- [16] Hosmer DW, Lemeshow S. *Applied Logistic Regression.* New York: John Wiley & Sons; 1989.
- [17] Husain Z, Mukerjee D, Dutta M. Are women self-help group members economically more empowered in left-run municipalities? *Dev Pract.* 2013;23(1):107-22.
- [18] Kabeer N. Gender equality and women's empowerment: a critical analysis of the third millennium development goal. *Gend Dev.* 2005;13(1):13-24.
- [19] Koenig MA, Jamil K, Streatfield PK, Saha T, Al-Sabir A, Arifeen SE. Maternal health and care-seeking behavior in Bangladesh: findings from a national survey. *Int Fam Plan Perspect.* 2007;33(4):179-85.
- [20] Lee-Rife SM. Women's empowerment and reproductive experiences over the lifecourse. *Soc Sci Med.* 2010;71(3):634-42.
- [21] LeVine RA, Rowe ML. Maternal literacy and child health in less-developed countries: evidence, processes, and limitations. *J Dev Behav Pediatr.* 2009;30(4):340-9.

- [22] Mainuddin AKM, Begum HA, Rawal LB, Islam A, Islam SMS. Women Empowerment and Its Relation with Health Seeking Behavior in Bangladesh. *J Family Reprod Health*. 2015;9(2):65-73.
- [23] Mosedale S. Assessing women's empowerment: towards a conceptual framework. *J Int Dev*. 2005;17(2):243-57.
- [24] National Institute of Population Research and Training (NIPORT), Mitra and Associates, and ICF International. Bangladesh Demographic and Health Survey 2011. Dhaka, Bangladesh and Rockville, Maryland, USA: NIPORT, Mitra and Associates, and ICF International; 2013.
- [25] National Institute of Population Research and Training (NIPORT), Mitra and Associates, and Macro International. Bangladesh Demographic and Health Survey 2007. Dhaka, Bangladesh: NIPORT, Mitra and Associates, and Macro International; 2009.
- [26] Rodwell CM. An analysis of the concept of empowerment. *J Adv Nurs*. 1996;23(2):305-13.
- [27] Sathar ZA, Kazi S. Women's autonomy in the context of rural Pakistan. *Pak Dev Rev*. 2000;39(2):89-110.
- [28] United Nations. Sustainable Development Knowledge Platform [Internet]. 2016 [accessed June 2016]. Available from: <https://sustainabledevelopment.un.org/?menu=1300>