

doi:10.1016/j.worlddev.2011.08.003

Measurement of Women's Empowerment in Rural Bangladesh

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Summary. — Women's empowerment is a dynamic process that has been quantified, measured, and described in a variety of ways. We measure empowerment in a sample of 3,500 rural women in 128 villages of Bangladesh with five indicators. A conceptual framework is presented, together with descriptive data on the indicators. Linear regressions to examine effects of covariates show that a woman's exposure to television is a significant predictor of three of the five indicators. A woman's years of schooling is significantly associated with one of two self-esteem indicators and with freedom of mobility. Household wealth has a significant and positive association with a woman's resource control but a significant negative association with her total decision-making score.

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Key words — empowerment, measurement, choice, self-esteem, South Asia, Bangladesh

1. INTRODUCTION

With declining population growth rates in many developing countries, the attention of the population and development community has shifted away from fertility reduction and toward maternal and child health (MCH) goals. However, what has not shifted is the belief that women's empowerment is key for attaining both health and population goals. Thus, understanding the relationship between women's empowerment and maternal and child health (MCH) outcomes is an increasing focus of demographic and public health research (Basu & Koolwal, 2005; Bloom, Wypij, & Das Gupta, 2001; Gupta & Yesudian, 2006; Mullany, Hindin, & Becker, 2005; Portela & Santarelli, 2003).

The fact that many women in the developing world are now better able to control fertility does not necessarily mean that they have become more empowered. Despite nearly two decades of empirical research on assessing women's empowerment and measuring empowerment indicators, the process of women's empowerment is still poorly understood. Furthermore, the causal relationship, if any, between women's empowerment and MCH outcomes could be quite different from the relationship between women's empowerment and fertility outcomes. Hence, there is renewed interest in measuring empowerment indicators in a more systematic manner (Narayan-Parker, 2005, Chap. 1).

In this paper, we attempt to measure empowerment of rural women in Bangladesh using a number of selected indicators with data from 128 villages where an NGO health and micro-credit experimental study was conducted. Our objective is to gain a better understanding of the relationships between empowerment indicators and the context or background factors that affect them.

2. BACKGROUND

Although empowerment has now become a familiar and much used term, an adequate and comprehensive definition remains elusive. One problem is that empowerment is a "latent phenomenon" that is not directly observable: its aggregate results or effects may be visible but the internal dynamism is difficult to examine. Empowerment is also often seen only partially, as women's increased autonomy and freedom. However, empowerment also implies additional responsibility; responsibility which may not always lead to be welfare-enhancing outcomes. For example, women's greater mobility and visibility often lead to increased exposure to violence; women's increased role in decision-making may cause men to take less responsibility and even withdraw support for critical decisions like health care seeking. Thus, empowerment brings with it both rights and responsibilities, and may lead to some freedoms being curtailed (see Basu & Koolwal, 2005). It is because the process of empowerment is not without a price that assessing the relationship between empowerment and development outcomes is difficult.

One definition of women's empowerment is "an expansion in the range of potential choices available to women so that actual outcomes reflect the particular set of choices which the women value." (Kabeer, 2001, p. 81). Empowerment is also seen as the process by which the powerless gain greater

* This research was supported by National Institute of Child Health and Human Development (Grant No. R01 HD042542-2). The Associates for Community and Population Research was responsible for data collection. The authors express their gratitude to three anonymous referees for their useful comments on an earlier draft of the paper. The authors are solely responsible for the contents of the study. Final revision accepted: July 22, 2011.

control over their lives, gaining power not over others but to achieve goals and ends (Kishor & Gupta, 2004, p. 694). Thus, exercising choice is seen as gaining power. While the process of empowerment is applicable to both sexes, it is more relevant for women since women's disempowerment is more pervasive as it cuts across class and other social distinctions, and is made more complicated by the fact that household and intra-familial relationships are a major source of women's powerlessness (Malhotra & Schuler, 2005, Chap. 3). Drawing upon the above, and bearing the complexities in mind, empowerment broadly means having increased life options and choices, gaining greater control over one's life, and generally attaining the capability to live the life one wishes to live.

The above definitions imply that empowerment is a dynamic process of change whereby "those who have been denied the ability to make choices acquire such an ability" (Kabeer, 1999, p. 437). It is also a process that is more relevant for those who are "powerless" since it entails going from a "disempowered" state to a more "empowered" one. There are several defining elements that are common to the frameworks used to conceptualize the empowerment process (Kabeer, 1999; Kishor & Gupta, 2004). The first defining feature is that of *agency*, which is the "ability to define one's goals and act upon them" (Kabeer, 1999, p. 438) or the ability to gain control over various aspects of one's life (Kishor & Gupta, 2004, p. 694). The other critical element is access to and control over resources (material, human, and social) that a woman acquires from the multitude of relationships in the various domains of the family, market, and community. By providing the "building blocks" and defining the initial conditions which either support or hinder women's agency, resources determine the trajectory of the empowerment process. Finally, the broader setting that characterizes the circumstances of a woman's life (such as marriage, living arrangements, household wealth, and characteristics of influential family members) shapes the opportunities and choices available to her. All these features are important in any framework for measuring empowerment.

There are a number of measurement issues to consider. First, the empowerment process is not directly observable: it can only be approximated using proxies or indicators. For example, the initial resources that women can draw upon and are considered the prerequisites to exercise of choice, are generally indicated by paid employment, education, and media exposure, but there is no guarantee that these will necessarily translate into agency. Similarly, the ability to exercise choice can only be observed up to a point, since the motivations and purposes behind that choice are not evident. Indicators that have been commonly identified to measure agency have included observable actions like participation in decision-making, financial independence, and freedom of movement. However, as Kabeer (1999) points out, agency can also take forms that incorporate motivations and intentions that are less amenable to measurement, like bargaining and negotiation, cognitive processes of reflection and analysis, and attitudes to or rejection of gender-based subordination of women (Kishor & Gupta, 2004).

Second, empowerment is a multi-dimensional process. Gender inequality exists across different dimensions (social, economic, political, and psychological) and in various domains of women's lives. The causal pathways through which resources are translated into agency can also be varied: material, perceptual, relational, and cognitive (Chen & Mahmud, 1995). If the hypothesis is that increased agency enhances women's well-being by reducing gender inequality in health status, educational status, personal security, and so on, then the causal pathways of influence from agency to favorable outcomes also

need to be identified. In other words, indicators need to be specified and measured across various dimensions and along different pathways. There may be independence in the experience of empowerment across various domains. For example, women may gain greater agency and control within the family sphere without complementary changes in the community or public spheres. On the other hand, empowerment in one dimension can sometimes lead to empowerment in another. For example, women's agency in terms of gaining control over material resources can lead to greater participation in household decision-making.

Third, context is crucial. The particular pathways of change vary from context to context, and even within the same context all women may not experience empowerment within the same dimensions. This is particularly evident in the different ways household wealth and age can shape the empowerment process. Indicators can also be either context specific or universal. An indicator of freedom of mobility, for example, is much more relevant in a patriarchal context, where women are traditionally confined to the home, than in a western context.

Women's empowerment in rural Bangladesh has been empirically examined, primarily with respect to its relationship with access to financial services (Goetz and Gupta, 1996; Pitt and Khandker, 1995; Hashemi, Schuler, & Riley, 1996; Steele, Amin, & Naved, 2001; Kabeer, 2001; Mahmud, 2003). The indicators of empowerment used have been varied: they range from managerial control over loans, accounting knowledge, active use of loans, women's role in household decision-making, magnitude of women's economic contribution, mobility in the public domain, ability to make large and small purchases, ownership of productive assets, freedom from family domination, political awareness, access to household income and male income, and participation in "male" household decisions like purchase of land or productive assets or in crop production decisions. The resources that constitute the determinants (covariates) of women's empowerment identified by these studies were first and foremost participation in a microcredit program and the nature of that participation (type of investment made with the loan, size of loan, years of membership), but other determinants were also identified, such as education, paid employment, mobility in the male-dominated public domain (seen in one study as an initial condition rather than an indicator of the process), and a favorable household attitude. These studies used different conceptual frameworks to examine whether women's access to microcredit led to positive changes in their lives in terms of greater agency, but the "verdict" has not always been clear cut. (For a comprehensive review up to a decade ago, see Kabeer, 2001.) In some of the above studies empowerment indicators have also been used to predict outcomes at the household level, such as consumption levels, value of women's nonland assets, total hours spent by women and men in economic activities in the home, hours spent by women in household work, whether women received treatment when ill, whether children were immunized, the gender gap in education of children, contraceptive use, and exposure to violence.

Missing from these evaluations of the effect of participation in microcredit programs on women's agency and household outcomes is its effect on women's perceptions and attitudes, which constitutes an important dimension of the empowerment process in the conceptual models discussed above. Perception changes are indicated by the extent to which women experience an increase in self-worth and the extent to which there is a decline in acceptance of their lower status relative to men both in the home and in society. Moreover, an independent source of information is an important resource for

women in rural Bangladesh with potential for empowerment in terms of action and in terms of new attitudes and altered perceptions. But the empirical evidence on the empowerment of women in Bangladesh has not included media exposure as a covariate of empowerment. In this paper, we attempt to address these gaps and to document the relationship between empowerment indicators and several background socio-economic variables.

3. METHODS

In this section, we describe the conceptual framework used, the data collection process, the operational indicators of empowerment and covariates, and the analytic methods.

(a) Conceptual framework

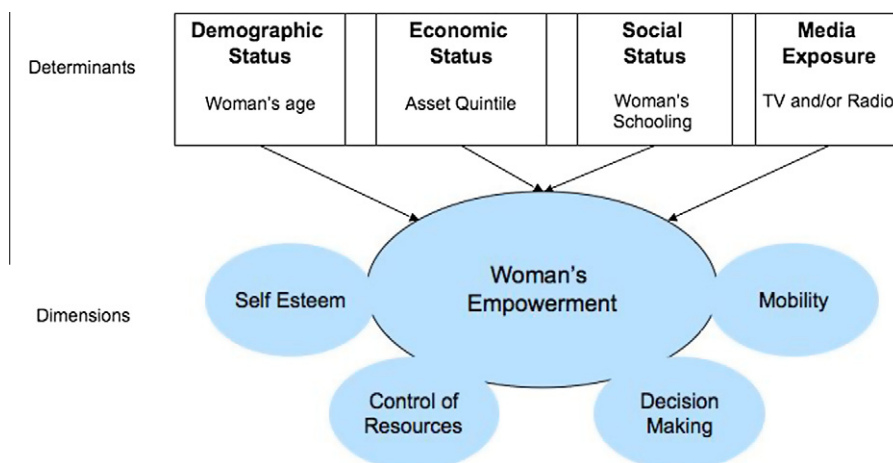
The conceptual framework we use for measuring women's empowerment in rural Bangladesh is given in Figure 1. According to this framework, the process of a woman's empowerment is shaped by several factors representing both the setting and resources: a woman's demographic status indicated by age; the household economic situation indicated by household wealth; a woman's social status as indicated by formal schooling; and her exposure to media. The process of empowerment is exhibited in four dimensions: self-esteem, participation in household decision-making, freedom of mobility, and control of material resources. The self-esteem dimension of empowerment is the least observable and has not featured commonly in the research on empowerment reviewed above (Basu & Koolwal, 2005).

Generally, a woman's freedom of mobility, control of resources, and participation in decision-making change over the life cycle and rise with age. The effect of household wealth on women's empowerment within the different dimensions is less straightforward, and can exert a negative influence on certain dimensions like role in household decision-making and freedom of mobility but a positive influence on control over material resources. Formal education and exposure to media can help to empower women in all the dimensions. By equipping women with information and new ideas, schooling can lead to an increase in women's role in household decision-making and freedom of mobility, and has the potential of

enhancing self-esteem as well by promoting reflection and analysis and by demonstrating alternative ways of thinking and doing.

(b) Data collection

Our investigation is among currently married women in Bangladeshi villages using a number of conventional indicators of empowerment with some modifications (described in detail below). The survey upon which these analyses are based was part of a larger experimental study of the effects of microcredit and health services interventions in rural Bangladesh. Specifically, in a collaborative study with Grameen Bank, we selected 16 rural areas from among 23 such areas where Grameen Bank had health centers in 2006. The 16 selected areas were those with the lowest levels of microcredit participation in the Thana, the administrative area within which they are located (Palli Karma-Sahayak Foundation, 2004). Eight villages with the lowest microcredit participation rates beyond the catchment area of each health center (defined by a circle of approximately 4 km in radius) were sampled purposively from 24 such villages enumerated in a census. A baseline survey was then conducted in the 128 villages (eight villages for each of 16 health centers) between July and September 2006. Using the census data, a stratified random sample of households was chosen: 12 households with members currently enrolled in microcredit, 15 households with women eligible for microcredit but not currently enrolled and four households that did not meet the Grameen Bank eligibility criteria for microcredit, as they owned more than 0.5 acres of land. The questionnaire to all ever-married women included sections on: respondent's background; reproduction; contraception; pregnancy, prenatal care, and breast-feeding; child immunization and health; fertility preferences; husband's background and women's work; decision-making; women's participation in microcredit; and treatment of women in the household. The household response rate was 91.3% and the women's response rate was 98.7%. Further details of the study are given elsewhere (Amin, Shah, & Becker, 2010). For these analyses we selected only currently married women. Appropriate sample weights were derived using the census data and these are employed in the analyses below.



Adapted from Jejeebhoy (2002 b)

Figure 1. Determinants and dimensions of a married woman's empowerment. (See above-mentioned references for further information.)

(c) *Indicators of empowerment and covariates*

The questionnaire items used to derive measurements or scores on the indicators within each dimension are shown in Table 1 and are now described according to the dimensions shown in Figure 1. In particular, the two self-esteem indicators can be considered universal while role in decision-making, freedom of mobility, and control of material resources are specific to the socio-economic context of rural Bangladesh.

(i) *Self-esteem*

The questionnaire asked each woman if she believed beating of a wife was justified for each of six scenarios shown in Table 1. In addition, in 10 household decisions (listed in Table 1 under decision-making) we assessed self-esteem based on whether the woman reported that she thought she should be involved in the decision. Thus two scores of self-esteem were derived by the number of scenarios in which the woman believes that beating is not justified and the number of household decisions in which the woman reports she should be involved.

The internal consistency of the two self-esteem scores and the overall construct of self-esteem were assessed using Cronbach's alpha coefficient (Bland & Altman, 1997). For women's beliefs that she should be involved in household decisions, internal consistency (α) was 0.74 and for her beliefs that beating was justified over the six indicators, it was 0.63.

(ii) *Role in decision-making*

For each of the 10 decision-making items, we code 0 if the woman reported that she does not participate in the decision, one if the woman reported that she contributes to the decision and two if she reported herself as the first or second most important person in actually deciding. Internal consistency of the decision-making score was $\alpha = 0.76$. The overall decision-making score was the sum of all 10 items.

(iii) *Freedom of mobility*

Women were asked if they had gone to five places in the last year: (1) a meeting or gathering within the village; (2) her father's home; (3) relatives' or friends' homes outside the

Table 1. *Distribution of married women's responses on 4 dimensions of empowerment*

Dimension	Response		
	Yes (%)	No (%)	Does not know (%)
Self esteem			
She thinks she should have a say in decisions on:			
Buying furniture	91	9	—
Buying livestock	82	18	—
Spending family savings	85	15	—
Taking a loan	82	18	—
Treatment for sick children	90	10	—
Visiting doctor for self	85	15	—
Her working outside home	74	26	—
Her visiting father's home	66	34	—
Having more children	70	30	—
Using family planning	71	29	—
She thinks a wife's beating is justified when:			
She burns the food	2	97	1
She neglects the children	11	89	0
She argues with husband	27	73	0
She talks to other men	38	61	1
She wastes husband's money	41	58	0
She goes out without telling husband	39	61	0
Decision making			
	Opinion is important (%)	Opinion not important (%)	Does not have input (%)
She has a say in decisions on:			
Buying furniture	75	14	11
Buying livestock	71	10	19
Spending family savings	76	7	17
Taking a loan	74	7	19
Treatment for sick children	84	5	11
Visiting doctor for self	78	7	16
Her working outside home	68	5	27
Her visiting father's home	58	7	35
Having more children	70	0	30
Using family planning	70	0	30
Mobility			
	Went without permission (%)	Took permission (%)	Did not go (%)
In the last year, she:			
Visited friends outside the village	8	68	23
Visited hospital or clinic	8	52	39
Control over resources			
	Yes (%)	No (%)	—
She has money she can spend as she wishes	27	73	—

village; (4) shops for marketing or shopping for clothes or other necessary things; and (5) hospital/health center or clinic. For those who said yes a follow-up question in each case was whether she asked permission to go or not. Since only 4% of women said they had gone to a meeting and only 20% had gone to the market, we did not use those items. We also judged that visits to the father's home are not necessarily an indication of empowerment because such visits could be more common for women who do not have a good relationship with their husband/in-laws. Thus, the mobility score was based on visits to two places and the score would be four if she went without permission to visit both friends/relatives outside the village and to a health facility and two if she went both places but with permission. If she went without permission to one and needed permission for the other, the score would be three.

(iv) *Control of resources*

The questionnaire asked women about work for pay and the use of the income. However, 84% of women did not report any work for pay. Therefore, we utilized responses to the question: "Do you have money that you can spend as you wish?" and coded one if yes and zero otherwise.

(v) *Covariates*

In line with our conceptual framework, the determinants of empowerment were: woman's age as a key demographic variable, level of schooling (none, some primary, primary completed) as a social indicator, household wealth as an economic variable, and whether the woman listens to the radio and/or watches television as indicators of media exposure. Relative economic status of the households was determined through the creation of a wealth index. Wealth is assumed to be an underlying, theoretically measurable construct. It has been shown to be reliably assessed via a collection of indicators representing durable goods owned by the household, materials used in construction of the home, water and sanitation facilities and size of the home (Rutstein & Johnson, 2004). Instead of assigning equal weights to each of the indicators in the wealth index, principal components analysis was employed (Filmer & Pritchett, 2001). The analysis yields a factor score for each household. The assets were: presence or absence of electricity; a wardrobe; table; chair; clock; bed; radio; television; bicycle; at least one of motorcycle, sewing machine or telephone; brick, cement or tin walls; modern toilet or pit latrine. Also available was the number of people in the household divided by the number of rooms in the house. All but the last are binary indicators. The resulting asset scores for households were ordered and used to divide households into quintiles, representing their relative wealth with respect to other households in the study.

(d) *Statistical methods*

We utilize percentages, percent distributions, and cross-tabulations for the descriptive analysis, and exploratory regression analyses to show relationships between the indicators and the covariates of empowerment. We estimated regressions for each of the five empowerment indicators (outcomes). For total decision-making score, beating not justified, thinks she should have a say, and mobility, this was weighted linear regression while for resource control it was weighted logistic regression. For these analyses SVY commands in STATA were utilized to adjust for village effects (StataCorp., 2005). We include the following set of covariates in each regression: age, age-squared, wealth quintile, level of schooling, and frequency of TV-watching and radio listening. We also included

covariates for division of the country, religion, woman's working status, and differences in age and schooling from those respective values for the husband. (Coefficients for these are not shown.)

4. RESULTS

The distributions (histograms) of scores of four of the indicators are shown in Figure 2. On the first self-esteem indicator (beating is not justified) the modal value was the highest score (beating not justified in any of six situations) which was reported by 29% of respondents. Only 4% justified beating always or in five situations, while 67% scored between two and five. The median score was five (mean 4.4, 95% CI: 4.3–4.6). If we take nonjustification of beating in any situation to indicate high self-esteem and justification in five or all situations as very low self-esteem, then a little less than one third of married women have high self-esteem, while 4% have very low self-esteem. The majority (55%) of married women condone beating in at least two situations.

On the second self-esteem indicator (the woman thinks she should be involved in various household decisions) the modal value was also the highest score of 10 (should be involved in all 10 household decisions) and was reported by 43% of respondents. Nearly one fourth (23%) scored nine, and one third scored eight or less. The median score was nine (mean 8.4), indicating a generally high level of self-esteem on this indicator. The two self-esteem scores provide different and complementary assessments of the level of rural women's empowerment.

On the indicator for role in household decision-making (with a range from 0 to 20), 85% of respondents had a score of 13 or higher, with a median score of 18 (mean 15.6) out of a maximum of 20—the latter score indicates that the woman reports her opinion as first or second most important in

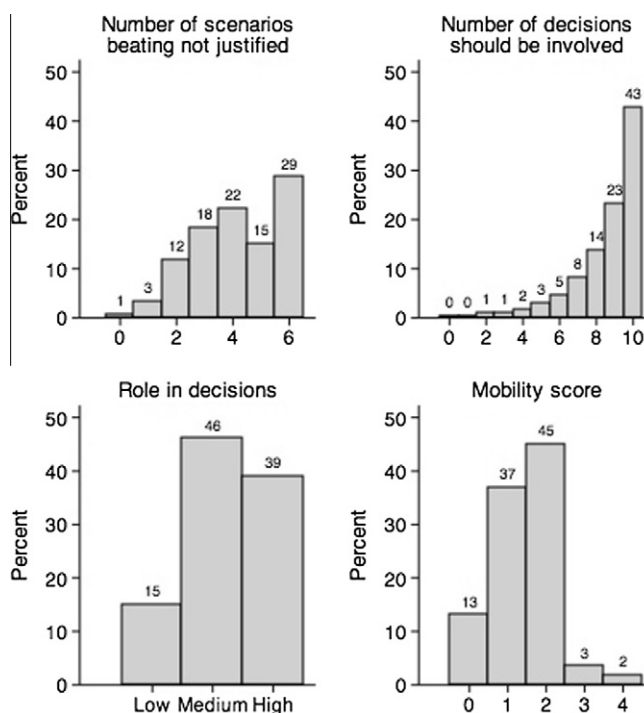


Figure 2. Distribution of empowerment indicators among married women in selected rural areas of Bangladesh.

all 10 scenarios.^{1,2} As this is a summative measure, other possible scores can be attained in a number of ways. For example, a score of 10 could indicate that the woman took part in all 10 decisions, but she reported that her opinion was not in the top two in any of them. It could also indicate that she was the primary decision-maker for five scenarios, and did not participate at all in the other five. The overall score has been grouped into three levels, with low indicating a decision-making score ranging from 0 to 12, medium referring to a score ranging from 13 to 18, and high indicating that the woman participated in all decisions and is of first or second most importance in at least nine decisions, that is, with a score of 19 or 20. Thirty-nine percent report that their opinion is highly important in at least nine decisions. Since the same decision-making score can emerge from a variety of decision-making contexts, it is useful to disaggregate this score. Figure 3 shows that the reported level of women's involvement in specific decisions varies considerably. The most common role for married women was as second decision-maker regardless of type of decision. Note that this could also be interpreted as joint decision-making with her husband. As "jointly made decision" was not a response category offered, we gave women reporting themselves as first or second most important decision maker the same score. Generally, married women were less likely to be the final decision-maker except in a few cases, but neither were they likely to be totally excluded from decision-making. They were most likely to have reported having the final say in deciding about family planning use (52%). Women also reported having the final say more often in decisions on health-seeking, both for her children (43%) and herself (35%), as well as in the decision whether to have more children or not (39%). Women were least likely to have the final say in all financial decisions: buying furniture (29%), taking a loan (22%) and selling cows or goats (24%). Having the final say was also low with regard to visiting their father's home (23%) and working for money (24%). Thus, on average, married women's role in household decision-making was relatively greater in health and family planning decisions, and lower in decisions related to household expenditures and personal autonomy.³

On the freedom of mobility score nearly half of the respondents (45%) scored two out of a maximum of four, while the other half scored less than two, with only 5% scoring three

or four (Figure 2). In this case as well, the same score can result from different circumstances, with 42% of women reporting that they attended a clinic and visited friends, but sought permission for both. Only 13% of women went to either or both places without seeking permission and 3% of women did not go to either during the past year (not shown). Thus, the modal value of two indicates that visiting outside the home with permission was the most frequent situation. Finally, 27% of the respondents reported that they had access to cash that they could spend on their own.

Table 2 reports the medians and means of the indicators by background variables that have been shown to determine/influence women's empowerment, namely age, household wealth, schooling, and media exposure. Median scores on the self-esteem and mobility indicators show little variability, while median scores on decision-making and the proportions of women who have control of resources are more variable.

Regression results for the five indicators of empowerment are shown in Table 3. A woman's decision-making ability within the household is significantly associated with her age and wealth quintile. The relationship with age is curvilinear as the age-squared term is negative and significant. Using the regression coefficients, the estimated maximum occurs at 26 years. Women in the high wealth quintiles have significant negative coefficients indicating that they have less decision-making power in the household compared to the poorest women. On the other hand, the odds that a woman has control of resources increases significantly with the wealth quintile of her household as well as with TV-watching.

For the two self-esteem variables, media exposure also has significant associations. For the number of situations when beating is not justified, the coefficient of TV-watching is positive and significant. Similarly, for the number of decisions where she reports she should have a say, frequency of radio-listening has a positive and significant coefficient as does years of schooling. Wealth quintile has no significant association with the beating justified variable and women in the richest wealth quintile report a significantly lower score on the number of decisions where they should have a say.

Women with higher levels of schooling and who watch TV more frequently also have significantly higher mobility scores. The regressions explain between 10% and 30% of the observed variation in the outcomes (last row of Table 3).

5. DISCUSSION

The process of women's empowerment is complex. This is confirmed by the results of the present analysis. We first examined the frequency distribution of the scores for each indicator to assess the level of empowerment along different dimensions in this population of rural married women. These distributions suggest that women's level of empowerment can be quite varied across the four dimensions identified.

If attainment of the highest scores on the scales of our indicators represents empowered women, then on average 39% of rural married women in our sample in Bangladesh are observed to be relatively empowered in terms of having an important say in decision-making in the household, and a slightly higher proportion (43%) is observed to experience empowerment in one self-esteem dimension, namely feeling that her opinion should be important in household decision-making. A little less than one third (29%) experience empowerment in the dimension of self-esteem indicated by nonacceptance of wife-beating. About one fourth (23%) experience empowerment in the dimension of control over resources, in

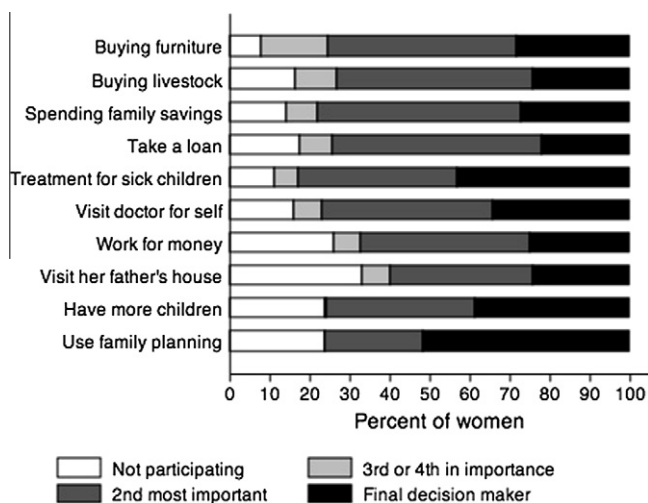


Figure 3. Percent distribution of women's reports of the importance of her opinion in household decisions, by type of decision in selected rural areas of Bangladesh.

Table 2. Median (mean) values of 4 empowerment indicators, by covariates

Covariates and categories	Empowerment indicator				
	# of women (full sample weighted)	# of situations where beating not justified Max = 6	# of decisions she reports she should be involved in Max = 10	Reported level of her involvement in decisions Max = 20	Her freedom of movement Max = 4
	All women	3,548	5 (4.4)	9 (8.4)	18 (15.6)
Woman's age					
<25	896	5 (4.5)	9 (8.5)	16 (14.5)	2 (1.5)
25-34	1,122	4 (4.4)	9 (9.0)	18 (17.5)	2 (1.6)
35+	1,531	4 (4.4)	8 (8.0)	16 (15.0)	2 (1.5)
Wealth quintile					
Poorest 20%	565	4 (4.2)	9 (8.2)	18 (16.0)	1 (1.3)
20-40	666	4 (4.2)	10 (8.9)	18 (16.8)	1 (1.4)
40-60	663	4 (4.3)	9 (8.5)	17 (15.6)	2 (1.5)
60-80	711	4 (4.4)	9 (8.5)	18 (15.6)	2 (1.5)
Richest 20%	942	5 (4.8)	9 (8.1)	16 (14.1)	2 (1.8)
Woman's schooling					
Never in school	1,482	4 (4.3)	9 (8.1)	18 (15.5)	1 (1.4)
Some primary	1,039	4 (4.3)	9 (8.6)	18 (15.9)	2 (1.4)
Primary or more	1,026	5 (4.7)	9 (8.8)	16 (15.2)	2 (1.8)
Media watching/listening					
No TV or radio	1,101	4 (4.1)	9 (8.1)	16 (15.0)	1 (1.3)
TV or radio	1,467	5 (4.5)	9 (8.4)	18 (15.8)	2 (1.6)
Both TV and radio	980	5 (4.6)	9 (8.9)	18 (16.0)	2 (1.7)

Table 3. Linear regression coefficients and odds ratios from logistic regression with 95% confidence intervals for effects of covariates in regression of women's empowerment indicators

Covariate	Empowerment indicator				
	Total decision- making score	Resource control (odds ratios)	Beating not justified	Thinks she should have say	Mobility
Number of observations	2,852	3,498	3,498	2,828	3,498
Woman's age (in years)	.51 (.02, .99)**	1.02 (0.76, 1.37)	-0.04 (-0.20, 0.12)	-0.03 (-0.27, 0.20)*	0.08 (-0.01, 0.18)
Age squared (values * 100 for linear reg.)	-.99 (-1.26, -.71)**	1.00 (0.998, 1.001)	0.05 (-0.02, 0.11)	-0.34 (-0.46, -0.23)**	0.01 (-0.03, 0.02)
Wealth quintile (ref = poorest)					
2	-.13 (-1.19, .93)	1.44 (0.87, 2.39)	-0.02 (-0.30, .25)	0.05 (-0.40, 0.50)	-0.09 (-0.26, 0.089)
3	-.90 (-2.21, .41)	2.96 (1.74, 5.03)**	0.05 (-0.25, 0.35)	-0.16 (-0.65, 0.34)	-0.04 (-0.22, 0.14)
4	-1.43 (-2.83, -0.03)*	4.51 (2.20, 9.27)**	-0.01 (-.33, 0.31)	-0.43 (-1.07, 0.21)	-0.02 (-0.24, 0.19)
5	-3.09 (-4.46, -1.72)**	5.12 (2.33, 11.22)**	0.16 (-.29, -.61)	-1.15 (-1.88, -0.42)**	0.06 (-0.22, 0.34)
Highest level of schooling (ref = none)	.41 (-0.13, .94)	1.37 (.99, 1.91)	.03 (-.14, 0.19)	0.36 (0.12, 0.61)**	0.11 (0.04, 0.20)*
Frequency of tv watching (ref = never)	.29 (-0.06, 0.64)	1.25 (1.04, 1.51)*	0.12 (.03, 0.20)*	0.07 (-0.10, 0.23)	0.09 (0.05, 0.15)**
Frequency of radio listening (ref = never)	.32 (-0.01, 0.65)	1.17 (.96, 1.43)	0.03 (-0.09, 0.15)	0.21 (0.08, 0.33)**	0.01 (-0.04, 0.08)
Constant	3.36 (-1.12, 7.84)		5.38 (4.35, 6.42)**	5.17 (3.38, 6.96)**	0.62 (0.04, 1.21)*
R-squared	0.31		0.12	0.27	0.11

*p<0.05 for test that coefficient is 0.0 (or odds ratio is 1.0);

**p<0.01 for same test.

terms of having access to cash to spend. Only 5% of women appear to be empowered in terms of freedom of mobility.

In other words, women are most likely to feel empowered with respect to household decision-making and one self-esteem indicator, but relatively less likely to experience empowerment with respect to access to cash and least likely in terms of freedom of mobility. In order to understand these differences better it is useful to examine the meanings of the empowerment indicators in the socio-cultural context. The first self-esteem indicator is an assessment of woman's own self worth (percep-

tion) or the extent to which a woman in a Bangladeshi village values herself. Her decision-making role is an assessment of her relationships in the household or how she is valued within her household. Since self-valuation and value in the eyes of family members are likely to be correlated, it is not a surprise that these two indicators move together. On the other hand, the freedom of mobility indicator measures not simply the extent of women's physical mobility outside the home but also her personal autonomy in terms of not having to seek permission. Similarly, the indicator of having access to cash to spend

(as she wishes) measures a woman's material empowerment but also incorporates personal autonomy in terms of ability to spend money as she wishes. Thus in the context of Bangladesh the latter two indicators are also assessments of women's autonomy and emancipation more broadly, components of empowerment not captured in the first two indicators. In sum, women's empowerment is more likely and visible in the perceptual and relational aspects of their lives than in terms of personal autonomy. The fact that women are least likely to be involved in decisions about her paid work and visit to her father's house (Figure 3) supports this conclusion.

The complexity of empowerment is evident when comparing the relationships between covariates and indicators. From the regression results we find that the various dimensions of empowerment (participation in decision-making, freedom of mobility, self-esteem, and resource control) are not necessarily related to the determinants (covariates) in a consistent fashion. For example the women in the wealthiest households have lower scores on decision-making even though they are more likely to have greater access to cash. The score on decision-making role is lower for younger and older women and highest for women in their mid twenties. A plausible explanation of this is that younger married women are probably living in an extended household so they have not yet become central to the household management and older women become dependent on adult sons and live in the married son's household, and also become less involved in household management and decision-making. Formal education is only associated with freedom of mobility and one self-esteem indicator. This is likely a reflection of patterns transported from the natal household, as girls who left the house to go to school necessarily had mobility.

The finding that women in the wealthiest households report a markedly lesser role in decision-making is not unexpected (Goetz & Gupta, 1996; Safilios-Rothschild & Mahmud, 1989). These women are also less likely to feel they should have a say in household decisions. One explanation is that in the wealthiest households the male breadwinner role is more dominant (since they are likely to be the major or only income earner), limiting women's decision-making role, compared to less well-off households where men may share the breadwinner role with women. However, the median decision-making score (out of 20) was not very different for women who worked for pay in the past year (14) and women who did not (16) (not shown). Among working women the median decision-making score also did not vary by whether she gave all her earnings to her husband, kept some, or kept all (not shown).

The aggregate freedom of mobility score was surprisingly low given that Bangladeshi women have over the past several decades become increasingly visible in the public sphere (i.e., outside the home and compound). In rural Bangladesh the practice of *pardah* confines women within the homestead and compound and they generally have to seek permission either from the husband or older in-laws, or at least inform them when going outside. Thus, one explanation for the low score could be the inclusion of the follow-up question on seeking permission to go. Qualitative research suggests that for women employed outside the home such permission is not usually required when going out for work, but is needed when going out for other purposes (Mahmud & Sultan, 2010). The 2007 DHS found that two-thirds of married women said they could go alone to the health center and hospital, but the questionnaire did not ask whether they needed permission (NIPORT, 2005). This proportion is close to the figure of 61% of respondents in this sample who said they had visited a hospital or a clinic in the last year, with 52% having taken

permission (Table 1). In India too, large proportions of women have to seek permission to go out, as indicated by data from the National Family Health Survey conducted in 1998–99 which reported that only 22% of currently married women did not need permission to go out to meet friends, with wide variations across states (Kishor & Gupta, 2004).

It was also surprising to find that household wealth had no effect on freedom of mobility, since other research indicates that the poorest women have relatively greater mobility outside the home, probably related to their greater participation in the workforce (Balk, 1997). This could be a reflection of our score construction, which is based on visit to a relative/friend outside the village and visit to a health center. Visits to both these places are less likely for poorer women, the first because it involves time and money, and the second because poor women are less likely to seek allopathic care when sick (Ahmed, Adams, Chowdhury, & Bhuiya, 2003; Steinhardt *et al.*, 2008). Freedom of mobility was positively related to a woman's schooling and television-watching, both of which are expected patterns. The Bangladesh DHS of 2007 found that women who have completed secondary or higher education, and women in the highest wealth quintile were more likely to go to health facilities (NIPORT, 2005).

The two indicators of self-esteem measure distinct aspects of self-esteem. The first indicator, the belief that one's opinion should be heard in household decision-making, reflects the extent to which a woman values herself as an individual within the family, that is, a measure of her self worth. By contrast, the other self esteem indicator, nonjustification of wife-beating, is not a direct measure of self worth but a measure of non-acceptance of women's subordinate position *vis-a-vis* men in society more generally. Hence it was thought useful to include both these indicators in this study, particularly because the dimension of self-esteem has not been explored previously in the context of women's empowerment in Bangladesh.

The fact that the two indicators are measuring different aspects of self-esteem may explain why they behave distinctly in relation to household wealth, although both are significantly predicted by exposure to media which provides women an independent source of information and is likely to contribute to the formation of alternative attitudes and opinions. The first self-esteem indicator, the woman feels she should be involved in household decision-making, is significantly associated with household wealth and listening to the radio. The likelihood that women feel they should take part in household decision-making declines with household wealth, while women who listen to the radio are more likely to feel they should have a say in household decisions. The nonjustification of wife-beating is positively related to television watching and has no relationship with household wealth. It is possible that women's actual experience of participating in household decision-making, which has a negative relationship with household wealth, has a bearing upon their beliefs about whether they should participate. This is confirmed in the present survey, that is, women's feeling that they should have a say in household decision-making declines with an increase in household wealth. The reason why household wealth has no effect on the other self esteem indicator, non-justification of wife beating, could be that women's attitudes about wives' status relative to husbands are determined more by general attitudes prevailing in the community than by their own household circumstances. It is also true, however, that women who experience violence themselves are more likely to justify wife-beating, but whether experience of violence is correlated with household wealth is not known (Kishor & Gupta, 2004).

When comparing the relative importance of the covariates in predicting empowerment, it is found that access to television has a positive and consistent relationship with three of the five empowerment indicators: women who watch television are more likely to have cash to spend, to have greater freedom of mobility, and are less likely to justify wife-beating. Radio-listening was significantly associated with a woman's belief that she should be involved in household decisions. It may be argued that access to media is an outcome of empowerment rather than an indicator of empowerment, or at most there is a two-way relationship. However, at a conceptual level, access to television and radio is seen as a potential source for empowerment "equipping women with the information and means to function effectively, especially in the modern world" (Kishor & Gupta, 2004, p. 695). In Bangladesh, adult literacy levels are low in general but even lower for women. (In 2006, literacy rates of persons 15 years and over were 59% for men and 49% for women (BBS, 2008).) In this context, women's limited access to independent sources of information makes watching television and listening to the radio, resources that can be empowering. Reverse causality in this context is not that apparent.

Household wealth is associated with three indicators but not in a consistent way: women in wealthier households have less influence in decision-making and also feel that their opinion is relatively less important, but are more likely to have access to cash to spend.

6. CONCLUSION

The results confirm that the empowerment process does not necessarily occur simultaneously across the different dimensions. Thus, it is quite possible for there to be an increase in a woman's value to herself and the household (self worth and role in decision-making) without a commensurate increase

in her personal autonomy and independence *vis-a-vis* men (freedom of mobility and access to cash). In a society undergoing rapid economic change this is a reflection of the emerging "patriarchal bargain" (Kandiyoti, 1988).

One limitation of this study is that women's responses may be affected by social desirability bias (Jejeebhoy, 2002a). Since Bangladeshi society has been strongly patriarchal, women may give responses that represent lower empowerment than is actually the case. However, the fact that women's responses cover the whole range of possible responses implies that at least some women are not reporting the socially normative response. Another perspective on this can be had by comparing responses on these questions from both wives and their husbands (Becker, Fonseca-Becker, & Schenck-Yglesias, 2006; Ghuman, Lee, & Smith, 2006). In a subsample of households in the current study, husbands were interviewed. From matched data for 512 couples we found that in 63–87% of couples, spouses had concordant responses on women's role in decision-making across the 10 decisions (not shown). In the case of discordant responses, we cannot know whose response is correct. However, these cases do suggest that perceptions of decision-making differ within some couples and possibly that norms are changing.

One specific recommendation is that other researchers add the component of self-esteem as another dimension of empowerment, as first proposed by Basu and Koolwal (2005). Empowerment is a process in each woman's life but is also a process occurring over time in a society. In Bangladesh, for example, the widespread availability and door-to-door provision of contraception, availability of microcredit and women's participation therein, and government subsidization of girls' schooling have all combined to create conditions for increased empowerment. That is, 20 years ago and 20 years hence, results on indicators reported here would very likely differ. This analysis has presented a snapshot of rural Bangladeshi society in 2006.

NOTES

1. One might ask how close a woman's responses were on whether she thinks she should have a say and whether she reports she actually does have a say in a decision. A cross-tabulation of these two indicates that, depending on the decision, between 69% and 94% of women report both that they should have a say and do have a say in the decision (not shown). Nearly all of the remainder report that they do not think they should have a say and do not have a say. Only 1% or less for any given decision think they should have a say but report they do not have a say. Of course the decision-making variable has more information as it includes three levels according to her level of involvement in the decision.

2. During data exploration, inconsistencies were discovered, where interviews conducted by a few interviewers reported results significantly

different from the mean of other interviews conducted in that village and district. These inconsistencies appear in the sensitive domestic violence module of the questionnaire, as well as the decision-making questions. Data from the four interviewers identified as introducing bias into the responses have been dropped from these respective analyses. As a result, the number of responses for each analysis varies. Data were reweighted to make the remaining responses representative of village composition.

3. The result on the family planning decision possibly reflects the current social acceptance and wide use of family planning methods among married women in Bangladesh, making this less a matter for household decision-making and more a matter of norms compared to 30 years ago.

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