

In the decade since the ICPD galvanized attention to the role of gender inequality and women's empowerment in shaping demographic processes and outcomes there has been an acceleration of conceptual and empirical work on this issue as well as continued policy interest. One of the United Nations Millennium Development Goals, for example, is to "Promote gender equality and empower women" (United Nations 2004). Many international bilateral and multilateral donors, such as the World Bank, now include women's empowerment as an element in their health and development assistance strategies. Important conceptual progress has been made (see reviews Presser and Sen, 2000 and Malhotra et al, 2002) to support these efforts, but there are still significant challenges regarding the translation of concepts around women's empowerment and autonomy into operational measures, particularly those which could be used for comparative purposes (Mason and Smith, 2001). Quite a number of international studies have operationalized the concept of women's empowerment to test hypotheses linking empowerment with family planning and fertility outcomes and some have linked empowerment with other aspects of women's health, yet the conclusions from this body of research remain unclear – in no small part because of the methodological challenges involved. Much of the work around empowerment measurement has focused on content validity – whether, for example, the domains of empowerment are adequately covered. Needed still is more empirical work that tests the extent to which and how these domains can be translated into operational indicators and how they perform over time.

In this paper we use detailed cross-sectional and longitudinal data from 1994 and 2002 to explore eight indicators of women's empowerment in the context of rural Bangladesh. Specifically, we examine changes over time in women's empowerment scores and their health and development correlates. To our knowledge, this study is the first to make use of detailed longitudinal data on women's empowerment.

Following Kabeer (2001c), we define empowerment as "the expansion in people's ability to make strategic life choices in a context where this ability was previously denied to them." Thus we view women's empowerment as a process involving women's agency--their ability to define their own goals and act upon them. In an early review, we identified six inter-related areas of life in which women's empowerment was thought to be occurring in rural Bangladesh as a result of recent policies, programs, and political action. These "domains of empowerment" were: sense of self and vision of a future, mobility and visibility, economic security, status and decision-making power within the household, ability to interact effectively in the public sphere, and participation in non-family groups. Between 1992 and 1996, we explored these aspects of life through qualitative research. The domains and indicators of empowerment that we developed as part of this and additional quantitative research have been widely cited, and many of the survey questions we developed for measuring empowerment have been incorporated into other surveys (e.g., Amin et al. 1996; Govindasamy and Malhotra 1996; Rahman 2001).

In 1994 we conducted a survey of all women of reproductive age in 6 rural villages in Bangladesh. Eight indicators of women's empowerment based on several questions each were used in this survey in which we also measured women's access to resources such as

education and microcredit and women's reproductive health outcomes such as use of family planning.

The eight empowerment indicators consisted of:

*Political and legal awareness.* Respondents were asked the names of their local government representative, a Member of Parliament, and the Prime Minister. They were also asked what share of property a son vs. a daughter should receive according to law; and they were asked to explain the significance of registering a marriage.

*Mobility.* The respondent was presented with a list of places (the market, a medical facility, the movies, outside the village) and asked if she had ever gone there with others or alone.

*Ability to make small purchases.* Respondents were asked if they are able to make certain purchases without their husbands' permission, including items used in family food preparation (kerosene oil, cooking oil, spices), small items for themselves (hair oil, soap, glass bangles), and ice cream or sweets for their children. They were also asked if the purchases were made at least in part with money that they themselves earned.

*Ability to make large purchases.* Respondents were asked about their ability to purchase pots and pans, children's clothing, saris for themselves, and the family's daily food and whether any of this was purchased with money they themselves earned.

*Involvement in major decisions.* Respondents were asked about their involvement in household decisions (individually or jointly with the husband) within the past few years related to house repair, whether to raise a goat for profit, whether to lease or buy land, or to buy a boat or bicycle rickshaw. Again they were asked if money they themselves earned was used.

*Participation in public protests and political campaigning.* The respondent was classified as "empowered" if she had campaigned for a political candidate or had gotten together with others to protest: a man beating his wife, a man divorcing or abandoning his wife, unfair wages, unfair prices, misappropriation of relief goods, or "high-handedness" of police or government officials.

*Freedom from domination by the family.* The respondent was asked if, within the past year, (a) money had been taken from her against her will, (b) land, jewelry or livestock had been taken from her against her will, (c) she had been prevented from visiting her natal home, or (d) she had been prevented from working outside the home.

*Economic security.* Respondents were asked to indicate their personal ownership of 3 specific assets that could be used for productive ends: any land, the homestead land, or the house; productive assets, such as a sewing machine; and cash savings.

In 2002 we resurveyed these women, as well as all other women in the 6 villages below age 50. We administered the same set of empowerment indicators and measures of family planning use, credit program participation and education. Of the original 841 women interviewed in 1994, 610 were re-interviewed in 2002. The total sample size for the 2002 survey was 1,212.

The repeated measurement of specific empowerment indicators allows us to examine changes over time, both in empowerment, as well as in the relationships between individual empowerment indicators and their hypothesized correlates. In the present analysis, we use cross-sectional data from both 1994 and 2002 surveys, as well as cohort data from women who were interviewed in both years, to accomplish three things:

1. We examine the levels of each of the eight empowerment indicators in 1994 and 2002 and explore changes over time among the cohort, identifying the empowerment components that appear to be most (or least) amenable to change. We also examine the associations between the individual empowerment indicators.
2. We test for an association between empowerment and its 'upstream' correlates such as education and micro-credit program participation in both 1994 and 2002. We also examine whether these correlates in 1994 predict any changes in empowerment between 1994 and 2002.
3. Finally, we test for an association between empowerment and family planning. We compare the association between empowerment and current contraceptive use in the 1994 sample with that in the 2002 sample to determine the extent to which the empowerment scores are salient predictors of family planning over time.

We found that between 1994 and 2002 overall levels of empowerment increased. This was the case both for women in the 1994/2002 cohort as well as in aggregate score comparisons. The largest increase in scores was seen for the mobility and large purchases indicators. In cases where women's scores did not improve, it usually had to do with financial resources (such as economic security). Within each indicator we found specific items or types of items that did not behave consistently, suggesting that all of the questions in that domain were not tapping the same latent construct. Some indicators were more strongly correlated with others, although factor analysis suggested a one-factor model. Large levels of variation between empowerment components within individuals were also observed. Upstream correlates of empowerment such as education and participation in micro-credit were positively associated with most empowerment indicators cross-sectionally in 1994 and in 2002. However, the relationship between these factors and changes in empowerment over time was mixed, with each of the empowerment indicators behaving differently. We observed a significant association between empowerment indicators and family planning in 1994 but not in 2002. Our findings support the notion of empowerment as a multidimensional construct, with various dimensions having different determinants and consequences, and suggest that the salience of empowerment as a determinant of demographic outcomes vis-à-vis other factors may change over time. Our results feed back into important conceptual questions

about whether empowerment is composed of one or many constructs, whether it is an absolute or relative construct, and about whether operational indicators should/do function as markers of existing empowerment or as markers of phenomena expected to be *empowering*.