

## **Distribution Agreement**

In presenting this thesis or dissertation as a partial fulfillment of the requirements for an advanced degree from Emory University, I hereby grant to Emory University and its agents the non-exclusive license to archive, make accessible, and display my thesis or dissertation in whole or in part in all forms of media, now or hereafter known, including display on the world wide web. I understand that I may select some access restrictions as part of the online submission of this thesis or dissertation. I retain all ownership rights to the copyright of the thesis or dissertation. I also retain the right to use in future works (such as articles or books) all or part of this thesis or dissertation.

Signature:

Sara Kathleen Head

5/29/12

Date

**Pathways to Women's Empowerment in Contemporary Bangladesh:  
Fertility, Resources, and Intimate Partner Violence**

By

Sara Kathleen Head

Doctor of Philosophy

Behavioral Sciences & Health Education

---

Kathryn M. Yount, PhD

Advisor

---

Monique M. Hennink, BA(Hons.), PhD

Committee Member

---

Claire E. Sterk, PhD

Committee Member

Accepted:

---

Lisa A. Tedesco, PhD

Dean of the James T. Laney School of Graduate Studies

---

Date

**Pathways to Women's Empowerment in Contemporary Bangladesh:  
Fertility, Resources, and Intimate Partner Violence**

By

Sara Kathleen Head

BA, Ohio Wesleyan University, 2004

MPH, University of Kentucky, 2007

Advisor: Kathryn M. Yount, PhD

An abstract of  
A dissertation submitted to the Faculty of the  
James T. Laney School of Graduate Studies of Emory University  
in partial fulfillment of the requirements for the degree of  
Doctor of Philosophy  
in Behavioral Sciences & Health Education  
2012

## Abstract

### **Pathways to Women's Empowerment in Contemporary Bangladesh: Fertility, Resources, and Intimate Partner Violence**

By Sara Kathleen Head

Empirical evidence suggests women's empowerment, defined variously, and fertility mutually influence one another. Research on this relationship is most abundant in classic patriarchies; historically in these settings proof of fertility and the birth of sons have been critical for a woman's social standing and economic security according to women's financial dependence on male relatives, constrained sexuality, and confinement to the domestic sphere. Social and economic changes are transforming classic patriarchal systems and have various potential impacts on women's societal role and pathways to empowerment. This dissertation conducted three studies in one classic patriarchal setting, Bangladesh, to examine the direct and indirect effects of fertility and other resources on a fundamental dimension of women's empowerment, household decision making. Study 1 examined effects of women's cumulative fertility and conformity to community based fertility norms on empowerment. Findings indicated women's empowerment remains low, and aspects of increased fertility were negatively associated with empowerment. Study 2 reviewed three mediation models examining the net effect of fertility on empowerment as mediated by intimate partner violence (IPV). Results indicated cumulative fertility has only modest influence on empowerment; having at least one child, though not necessarily a son, remain important for women's empowerment. Study 3 examined customary and contemporary resources for empowerment. Contemporary resources, specifically, women's recent employment, non-governmental organization membership, and absence of the husband had the strongest and most consistent associations with women's empowerment. This dissertation contributes to our overall understanding of the complex interplay between the demands of patriarchal structures and women's empowerment, measured via household decision making. In Bangladesh's rapidly changing environment, fertility remains influential, but contemporary resources for empowerment such as women's economic participation and household structure are more strongly associated with empowerment. Efforts to enhance women's empowerment should consider this changing economic landscape accordingly. Findings may serve to support empowerment efforts engaged in fertility control and its impact on gender systems. Further research is recommended to examine fertility and IPV's association with additional dimensions of empowerment and within societies undergoing demographic transition. Research should also investigate changes in household power dynamics associated with the presence or absence of the husband.

**Pathways to Women's Empowerment in Contemporary Bangladesh:  
Fertility, Resources, and Intimate Partner Violence**

By

Sara Kathleen Head

BA, Ohio Wesleyan University, 2004

MPH, University of Kentucky, 2007

Advisor: Kathryn M. Yount, PhD

An abstract of  
A dissertation submitted to the Faculty of the  
James T. Laney School of Graduate Studies of Emory University  
in partial fulfillment of the requirements for the degree of  
Doctor of Philosophy  
in Behavioral Sciences & Health Education  
2012

## Acknowledgements

I would like to acknowledge the following people who were instrumental to the completion of this dissertation. My chair and committee: Kathryn M. Yount, PhD; Monique M. Hennink, BA(Hons.), PhD; and Claire E. Sterk, PhD. My family here and in Bangladesh: Jason Hettmansperger; Tory and Jesse Stewart; Cindy Head; Nancy and Chris Head; Rizwana, Partha, and Raed. My colleagues at Emory: Liz Walker; Laura Lessard, PhD; Emily Dauria-Russell; Amanda Garcia-Williams; Nafisa Halim, PhD. My colleagues from professional organizations: Neha Shah, PhD; Karen Grace-Martin, PhD; Eileen O'Grady, PhD; Elif Bengu, PhD.

## Table of Contents

Introductory Literature Review .....	1
Literature Review, Figure 1, Conceptual Framework of the Effects of a Woman’s Fertility on her Empowerment.....	3
Study 1: The Effects of Women’s Fertility on their Empowerment in Bangladesh .....	46
Study 1, Table 1: Sample Characteristics .....	62
Study 1, Table 2: Effects of Fertility on Household Decision Making, Generalized Ordered Logistic Regression (constrained).....	63
Study 1, Figure 1: Predicted Probabilities of Women’s Involvement in Household Decision Making for Individual and Relative Fertility.....	64
Study 2: Effects of Women’s Fertility on Empowerment and Intimate Partner Violence: A Mediation Analysis .....	71
Study 2, Figure 1: Conceptual Fertility-IPV-Empowerment Model .....	86
Study 2, Table 1: Sample Characteristics .....	87
Study 2, Table 2: Fertility-IPV-Empowerment Mediation Models.....	88
Study 3: Resources for Women’s Empowerment via Household Decision Making in Bangladesh ...	95
Study 3, Table 1: Household Decision Making, Individual Indicators .....	112
Study 3, Table 2: Sample Characteristics .....	113
Study 3, Table 3: Resources for Women’s Empowerment via Household Decision Making in Bangladesh .....	114
Conclusion .....	123

## 1. Introduction

Women's empowerment, which Kabeer (2001) defines as women's agency or ability to make strategic life choices in a context where this ability was previously denied (Kabeer, 2001), has been viewed as a major and necessary factor for fertility decline in countries with strong patriarchal systems (Cain, 1984; Caldwell, 1982; Folbre, 1983; Sen & Batliwala, 2000; United Nations [UN], 1994). This position is based on the hypothesis that more empowered women will have greater control over their sexual and reproductive lives (Sen & Batliwala, 2000). The evidence pertaining to this hypothesis, however, is mixed (Mason, 1984) in part because of limitations in measuring the multiple dimensions of women's empowerment (Jejeebhoy, 2000; Malhotra, Schuler, & Boender, 2002). Employment is often considered a proxy for empowerment (Jejeebhoy, 2000; Malhotra et al., 2002), yet the relationship between a woman's work and her fertility has varied within countries, across a woman's life-cycle, and by occupational experience (Lloyd, 1991). Women's involvement in microcredit organizations is linked with empowerment and contraceptive use (Balk, 1997; Hashemi, Schuler, & Riley, 1996; Kabeer, 1998; Mahmud, 2000; S Mahmud, 2003), but also with intimate partner violence and financial exploitation by male family members (Mahmud, 2000; Schuler, Hashemi, & Badal, 1998; Schuler, Hashemi, Riley, & Akhter, 1996). Studies measuring empowerment via a woman's freedom of movement or role in household decisions indicate negative (Moursund & Oystein, 2003), positive (Al Riyami, Afifi, & Mabry, 2004; Chacko, 2001; Saleem & Bobak, 2005), and null associations (Fikree, Khanam, Kadir, Sajan, & Rahbar, 2001; Morgan, Stash, Smith, & Mason, 2002; Saleem & Bobak, 2005) with contraceptive use. Further, a growing body of research indicates that prevailing gender norms in a specific context influence the relationship between empowerment and fertility (Balk, 1997; Mason & Smith, 2000; Family Health International [FHI], 2009).

More recently, women's empowerment has received attention as a human right and as an important end in itself (Kabeer, 1999, 2005), with broad implications for child and family well-being (Grown, Gupta, & Pande, 2005; Kishor, 2000; Murthi, Guio, & Dreze, 1995). As a result, researchers increasingly have begun to investigate the determinants of a woman's empowerment, including how

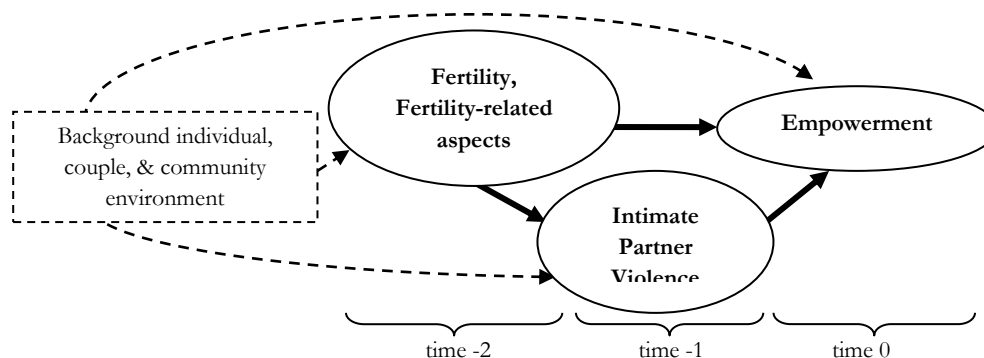


aspects of her reproductive health may affect her empowerment (Balk, 1994; Mason, 1993; FHI, 2009). Reproductive health as a cause of empowerment is of particular interest in classic patriarchal settings where proof of fertility and the birth of sons have been critical for a woman's social standing and economic security. Such is the setting in Bangladesh (Cain, 1984; Vlassoff, 1992), where women's status often is noted to be among the lowest in the world (Cain, Khanam, & Nahar, 1979; Curtin, 1982), but where considerable changes in women's fertility and reproduction have occurred in recent decades (Amin & Lloyd, 2002; National Institute of Population Research and Training [NIPORT], Mitra and Associates, & Macro International, 2009). Research indicates that family planning programs often empower women (Hoque & Murdock, 1997; Mazharul Islam, 1999; Simmons, Baqee, Koenig, & Phillips, 1988) although these gains may be limited to the reproductive sphere (Schuler, 1999; FHI, 2009). Indeed, women face considerable pressure to conform to acceptable reproductive behaviors, and the members of a woman's community may view certain reproductive behaviors as transgressing the gender status quo. As a result, aspects of reproductive health that are thought to empower women may have the opposite effect because they threaten the norm and provoke violence as a tool to ensure conformity.

Research elsewhere in South Asia has demonstrated a positive and systematic association between physical and sexual abuse and men's reports that their wives had one or more unplanned pregnancies (Martin, Kilgallen, et al., 1999). Other studies have shown a positive relationship between family violence and perceived infertility (Papreen et al., 2000; Sami & Ali, 2006; Unisa, 1999) and between partner violence and the wife's sterilization (Rao, 1997). Finally, there is evidence that contraceptive use can precipitate intimate partner violence (IPV) (Akin & Ozaydin, 2005; Bawah, Akweongo, Simmons, & Phillips, 1999; Blanc, 2001; Ezeh, 1993). In Bangladesh, where fertility preferences and women's position are in rapid flux (Cleland, Phillips, Amin, & Kamal, 1994; Larson & Mitra, 1992; Schuler, 1999) and where rates of IPV are as high as 62% (Garcia-Moreno, Jansen, Ellsberg, Heise, & Watts, 2005), a woman's fertility may influence her empowerment, in part because of the mediating role of IPV (Figure 1). Given these potentially countervailing effects, the objective

of this dissertation research was to explore the direct and indirect pathways by which a woman's fertility affects her empowerment.

**Figure 1. Conceptual Framework of the Effects of a Woman's Fertility on her Empowerment.**



Note. Bolded arrows indicate pathways of interest. Dashed arrows indicate pathways to control.

Three studies were conducted to address the dissertation objective. Study 1 examined the pathways by which a woman's fertility and her conformity to community based fertility norms affect her empowerment. Study 2 considered three mediation models outlined in Figure 1 to determine the direct and indirect effects of various aspects of fertility (including total number of living children, conformity to community based fertility norms, having at least one child, and having at least one son) on empowerment. Upon reviewing results of studies 1 and 2, Study 3 investigated how customary and contemporary resources were associated with empowerment.

This introductory chapter will contextualize the model outlined in Figure 1 and provide further support for the hypothesized relationships between each construct and in each individual Study. Section 2 supplies a brief overview of the research country setting. It is followed by section 3 examining the status, in Bangladesh, of each of the constructs under consideration: women's empowerment (3.1.), women's fertility and reproductive health (3.2.), and intimate partner violence against women (3.3.). Section 4 outlines evidence of the direct pathways from reproductive health to women's empowerment and the indirect pathways from reproductive health to women's

empowerment through IPV in support of the outlined model. Finally, Section 5 discusses the rationale for the research and its significance for women's health and women's rights.

## **2. Bangladesh country description**

Research took place in Bangladesh, a densely populated country located on a delta in the northeastern part of South Asia. Formerly part of the British colony of India, present-day Bangladesh was partitioned in 1947 as a part of the independent state of Pakistan. After the nine-month Liberation War in 1971, Bangladesh became a sovereign state. The country is marked by an extensive network of rivers which flood with seasonal monsoons. The climate is also known for frequent natural disasters, such as cyclones and drought. Bangladesh is a relatively homogenous society in that Muslims comprise almost 90% of the population (about 9% are Hindu) and Bangla, the national language, is spoken and understood by all. Literacy rates are low; 55% of women and 57% of men are literate. Historically, fertility rates in Bangladesh have been relatively high; fertility has declined from 6.3 births per woman in the 1970s to the current 2.7 births per woman. Approximately 48% of the total labor force are farmers, and agriculture is the largest producing sector of the economy. The manufacturing sector, driven by the garment industry and foreign investment, is increasing in importance while underemployment and land pressure have led to growing urban migration. In recent years, poverty in Bangladesh has decreased in overall terms, yet the country remains one of the poorest in South Asia (NIPORT et al., 2009).

### **3.1. Women's empowerment**

*Women's empowerment for human welfare and as a human right*

Women's empowerment, which Kabeer (2001) defines as women's agency or ability to make strategic life choices in a context where this ability was previously denied, is increasingly recognized as necessary to global health and development. Many prominent institutions, including the World Bank and the United Nations, have incorporated women's empowerment and gender equity into program policies and goals, citing women's empowerment as vital to poverty reduction and economic growth (United Nations Development Program [UNDP], 2008; World Bank, 2001). In

recent decades, several policy statements have emerged from international conferences (e.g. Beijing Platform for Action (United Nations [UN], 1996), Cairo Programme of Action (UN, 1994), Convention on the Elimination of All Forms of Discrimination Against Women (United Nations General Assembly, 1979)) in support of women's empowerment for human welfare and as a human right.

Further, women's empowerment is empirically shown to have broad implications for the health and welfare of women, children, and families. Studies in various settings show that women's empowerment is linked to decreases in child mortality (Basu & Basu, 1991), better height and weight outcomes for children (Haddad & Hoddinott, 1994), and increases in children's schooling (Khandker, 1998; Pitt & Khandker, 1998) and education expenditures (Quisumbing & Maluccio, 1999). With regard to household well-being, women's empowerment is associated with increases in money spent on food (Hoddinott & Haddad, 1995), increases in assets held by women (Khandker, 1998; Pitt & Khandker, 1998), and increases in household nutrient intake (Thomas, 1990, 1997). In some settings, empowered women have enhanced sexual negotiation skills (Wolff, Blanc, & Gage, 2000) and are more likely to access prenatal and delivery care (Beegle, Frankenberg, & Thomas, 1998).

#### *Defining and measuring women's empowerment*

The term "empowerment" has been used to represent various concepts concerning freedom of choice and action. Scholars from across the social sciences have contributed to the literature attempting to define empowerment, in particular women's empowerment (see Malhotra et al. 2002 for a review). These conceptualizations converge on two key elements: a) the idea of "control" as in control over one's life, over resources, and over external forces affecting one's welfare (Batliwala, 1994; Sen, 1994) and b) the intrinsic notion described as self-efficacy, which drives one to feel entitled and enabled to achieve control and overcome external barriers (Batliwala, 1994; Kabeer, 2001; Nussbaum, 2000; Rowlands, 1995; Sen, 1999; Sen, 1994). Kabeer's (2001) definition captures these common elements; she describes empowerment as "the expansion in one's ability to make

strategic life choices in a context where this ability was previously denied” (p. 21). Herein, it is understood that empowerment exists as 1) a process where a person’s ability is increased and as 2) an expression of agency where a person has sufficient confidence and control to make life choices.

Kabeer further elaborates that this ability to make choices occurs within three inter-related dimensions: resources, agency, and achievements. Resources, the focus of this investigation, refer to the conditions under which choices are made and may be material, cognitive, or relational. Material resources might describe land, financial capital, equipment, or other conventional forms of economic support. In contrast, cognitive and relational resources are those which intrinsically enhance the ability to exercise choice. These encompass characteristics of the individual and the individual’s relationships, such as: (cognitive) knowledge, skills, creativity; and (relational) the claims, obligations, expectations inherent to an individual’s relationships. The second inter-related dimension, agency, represents the ability to define and act on choices. It refers to observable actions, such as individual decision making, and to a wider range of purposive actions including bargaining, negotiation, resistance, protest, and cognitive processes like reflection and analysis. The third dimension, achievement, is the outcome of an individual’s choice; essentially, the application of their resources and agency (Kabeer, 2001).

Kabeer’s empowerment definition is applicable to all disempowered people; however, women are unique in the degree to which household and family relations influence their empowerment (Malhotra et al., 2002). In patriarchal settings, women’s roles are subordinate to those of men. This inequality is embodied in legal and social institutions and is reproduced daily in household and family life. In this way, women’s empowerment is conditioned by gender relations, macro-patriarchal structures, and the cultural context in which women live (Kishor & Lekha, 2008). Assessments of women’s empowerment must be considered within these socio-cultural contexts; indicators of women’s empowerment must be appropriate to the current normative environment (e.g. current gender norms in a community) and must reflect the setting (e.g. the household) in which women’s empowerment plays out (Malhotra et al., 2002).

There are several difficulties inherent in measuring empowerment since, by definition, it exists as a process, in multiple dimensions, and for both individuals and groups. Research has considered proxy measures, such as employment and education (Ackerly, 1995; Jejeebhoy, 2000; Kishor, 2000; Malhotra et al., 2002), although the literature suggests that these proxies are resources for empowerment and as such, may not adequately represent the agency or achievement aspects of empowerment (Jejeebhoy, 2000; Malhotra & Mather, 1997; Mason et al., 1995). Increasingly, the field has turned to measures of women's decision making and freedom of movement; these dimensions are seen as more effective representations of the process of empowerment since they are closer to measuring agency (Hashemi et al., 1996; Malhotra & Mather, 1997; Mason, 1998; Mason & Smith, 2000) and are evidence of the achievement of the empowerment process (Kishor, 2000; Kishor & Lekha, 2008). Examples of these direct indicators include those summarized in Jejeebhoy (2000): economic, child-related, and marriage-related decision making; freedom of movement; and spousal power relations. In a review of methodological approaches to measuring women's empowerment, Malhotra et al (2002) also argue that individual-level empowerment can be indicated by the degree to which an individual's behavior differs from the community norm. For example, the measure of an individual woman's freedom of movement may be less indicative of empowerment in communities that allow women outside access as compared to communities that institute *purdah*, or women's seclusion to the household.

Finally, both quantitative and qualitative methodological approaches are vital to the study of empowerment, and research often employs both designs in combination. Quantitative data allow for statistical estimation of determinants of empowerment and statistical comparisons across communities or countries. Qualitative data help to identify contextually relevant dimensions of women's empowerment (Santillán et al., 2004), to understand the process of empowerment in all of its complexities (Kabeer, 1997; Malhotra et al., 2002; Sen, 1994), to specify a quantitative model of empowerment, and to interpret the findings from quantitative research on empowerment (Malhotra et al., 2002).

*Gender transformation in Bangladesh, a classic patriarchy, and implications for women's empowerment*

Classic patriarchies,' a term applied by sociologist Deniz Kandiyoti (1988, 1991), describe systems of male dominance specific to countries in North Africa, the Middle East, and parts of South and East Asia. These regions are distinguished by structures which economically and culturally devalue women and thereby restrict them to reproductive and domestic roles. Family name and property are transferred through males, and household may be comprised of extended families with authority vested in the senior most male. Marriage effectively separates women from their natal family as they are absorbed into their husband's household; in some regions, this move includes cost of a dowry. Gender norms in classic patriarchal settings and their associated codes of behavior are, in part, driven by a powerful ideology linking family honor to female virtue, good conduct, and premarital virginity (Kabeer, 1988). In attitudes and appearance, women are expected to be modest and self-effacing – virginal before marriage and matronly thereafter (Kabeer, 1988; Moghadam, 2003). Childbearing is viewed as the essence of woman-hood and is considered central to a wife's duty and value (Inhorn, 1996; Moghadam, 2003). This lack of property rights, economic participation, and cultural value forces women's dependence on male relatives and places women in a position of economic and moral liability to their families. Classic patriarchies, therefore, are characterized by nearly universal marriage, high fertility, and son preference in addition to gender disparities in education, employment, and health (Cain, 1984; Kabeer, Mahmud, & Tasneem, 2011; Kandiyoti, 1988; Moghadam, 2003).

Bangladesh, situated within the so-called "patriarchal belt," (Caldwell, 1982; Kandiyoti, 1988) is generally categorized as a classic patriarchy but has experienced substantial social and economic transformation in recent decades. Gender relations in Bangladesh are, therefore, also undergoing change as part of this broader process. While there have been notable advances in recent years, women continue to be constrained by patriarchal legal, economic, and socio-cultural structures and the traditional gender norms supported by these structures (Baden, Green, Goetz, & Guhathakurta, 1994). Indeed, the course of women's empowerment in Bangladesh is not

straightforward but includes many encouraging efforts, contradictory actions, and changes having both positive and negative implications for women.

Since achieving independence in 1971, the government of Bangladesh has instituted multiple efforts on the national and international level to promote gender equality. Bangladesh was among the first of developing countries to establish a Ministry of Women's Affairs (1978), constitutional articles allow for the inclusion of women in governmental activities, and a series of Five-Year Plans for development have increasingly focused on gender disparities (Das, Amin, Das Gupta, Johnson, & Hossain, 2008). However, in many instances, Bangladesh's legal efforts are themselves contradictory and are simply not what is practiced at the state or community level where a range of customs and traditions may prevail (Baden et al., 1994; Bhuiyan, 1986). The Constitution of Bangladesh, for example, grants equal rights to men and women in all spheres of public life and is supplemented by multiple articles specifically intended to protect women's rights (e.g. the Dowry Prohibition Act, 1980; the Child Marriage Restraint Act, 1984 and 1992; and the Family Courts Ordinance, 1985). While a full review of said articles' implementation and impact has not yet been undertaken, it is known that illegal dowry practice is increasing (United Nations [UN], 2005) and 66% of women currently age 20-24 are married before the legal age of 18 (NIPORT et al., 2009). Although Bangladesh ratified the UN Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) in 2000, the government continues to assess inconsistencies between CEDAW obligations and Bangladeshi law, including contradictions with Bangladesh's Religious Personal Law which allows members of different faiths to practice marriage, divorce, alimony, custody, and guardianship in accordance with religious law. Bangladesh's fifth periodic report to the CEDAW committee is evidence of the gulf between women's equality in the public and private sphere; the report notes "the personal laws that govern family life are a major impediment for women in exercising their fundamental human rights" (CEDAW, 2003).

Thus, a national legal framework for gender equality exists, but these legal rights have minimal effects in empowering women in the context of the prevailing social institutions which truly



inform the behavior of men and women in Bangladesh. Historically, women in Bangladesh are socially constructed as dependents and of subordinate status, valued primarily for their role in reproduction and household work (United Nations Development Program [UNDP], 2000). Differences certainly exist for women across age, class, education, and geographic characteristics, yet this subordinate position is widely reflected in women's early and nearly universal marriage (UNDP, 2000; NIPORT et al., 2009) accompanied by the perceived need to control women's sexuality. As youth, women are under the guardianship of their fathers and brothers; following marriage, women are transferred to the protection of their husbands (Adnan, 1989; Baden et al., 1994; Kotalova, 1993). Bangladeshi's construction of the ideal femininity and the religious based institution of purdah also serve to define women's gender role in society. In her 1993 ethnography, Kotalova notes that "submissiveness, self-effacement, and self-sacrifice are the tenets of womanhood and that subdued (or no) speech or laughter, slow graceful gait, and veiling are its physical expressions" (Kotalova, 1993). Purdah, defined generally as a set of ideals and practices through which men and women are segregated, is instituted to varying degrees in Bangladesh and often results in women's confinement to the domestic sphere (UNDP, 2000). These long-standing gender norms which restrict women's empowerment are increasingly challenged as women become more visible in the changing economic environment.

Bangladesh Labor Force statistics indicate women's participation in the formal labor force, specifically in the agriculture and manufacturing sectors, is growing substantially (Bangladesh Bureau of Statistics, 2004). Agricultural work outside of the home has historically been performed by men, but increasing landlessness, men's migration for employment (Raschen & Shah, 2006), and the mechanization of agricultural processing activities typically reserved for women (e.g. paddy husking, rice milling, and oil pressing) has driven women's participation in this sector (Jahan, 1989; World Bank, 1990). The manufacturing sector, specifically the ready-made garment industry, employs approximately 1.35 million women, and women comprise 90% of the garment industry work force (Raschen & Shah, 2006). (Note, there is much controversy surrounding valid and reliable

measurement of work - paid or unpaid - in which women participate; for example, since housework is still not recognized as an economic activity in surveys, statistics assessing patterns or changes in women's work inside the home are difficult to obtain (UNDP, 2000)). This movement of women into the public sphere is also concurrent with a breakdown of extended family units to nuclear families and an increase in female-headed households (Blanchet, 1986; Islam, 1993; Lewis, 1993).

Even as women increasingly populate the formal labor force, significant gender discrepancies remain; men still far outweigh women in current paid employment (68% versus 23%, respectively) (NIPORT et al., 2009), in administrative or decision-making positions (Bangladesh Bureau of Statistics, 1992), in job security, in longer work shifts (Zohir, 1998), and in wages (e.g. women's wages are approximately 60-65% those of men's in the agricultural labor market (Das et al., 2008)). Although these disparities are discouraging, some scholars see the entrance of Bangladeshi women into paid labor positions as opportunities for women's empowerment and as a breakdown of systems of patriarchal control (Adnan, 1989; Mahmud, 2001). Indeed, researchers frequently use employment as a proxy indicator for empowerment (Ackerly, 1995; Jejeebhoy, 2000; Kishor, 2000; Malhotra et al., 2002). However, previous investigations of women's role in economic development, particularly Boserup's classic 1970 text (Boserup, Kanji, Tan, & Toulmin, 2007), indicate that an assumption of empowerment is not entirely accurate (Ahmed, 2004; Chakraborty, 2004; Pogge, 2002). As current research in Bangladesh shows, individual women are likely to experience both gains in and loss of empowerment in association with their economic role. For example, women may or may not enter into employment willingly. In the case of garment workers (a workforce comprised mostly of young, unmarried, rural women (Gain, 1990; Jamaly & Wickramanayake, 1996; Seabrook, 1996)), women may migrate to factories for a means of income (Absar, 2001a, 2001b) while others are driven to the city because of severe impoverishment (Ahmed & Khatun, 2008; Dewan, 1999) or under demands from their families for remittances (Wiest & Mohiuddin, 2002). Research also indicates that while a majority of garment workers feel their jobs give them control over their earnings, less than half of workers state that no one else interferes with or takes their earnings (Wiest

& Mohiuddin, 2002). Qualitative reports from women workers indicate they are increasingly sensitive to their subordination to males in their family and in society, but they are also fearful of their vulnerability and of the potential loss of their traditional household entitlements (e.g. shelter, dowry) (Wiest & Mohiuddin, 2002) and of their social status (Baden et al., 1994). Finally, female-headed households may escape authority of husbands and in-laws (Chen, 1986), but they are at enormous disadvantage considering the weakening/loss of traditional entitlements of family social support, their heavier work burdens, and constraints on their upward mobility (Moghadam, 1998; Moghadam, 2005).

Essentially, it appears that economic and social changes in Bangladesh may have contradictory implications for women's empowerment. Considering women's movement into the formal labor force: labor outside of the home is traditionally a "male" domain in Bangladesh, and women's presence in this space is in conflict with *purdah* and other social institutions. Scholars argue that women accessing these spaces are still disempowered because they must continue to act according to the subordinate norms of femininity (Kramsjö & Wood, 1992; White, 1992) and their act of trespass risks violent reaction from men or the community (Kramsjö & Wood, 1992; White, 1992). In support of this argument, research indeed indicates that marriage to protect honor (*izzat*) and for security (*nirapatta*) is a priority and a distressing issue for garment workers (Wiest & Mohiuddin, 2002). In direct contrast, other scholars argue that women's growing economic visibility is forcing society to re-define gender norms and that women in these positions are striving to create new, empowered identities (Mahmud, 2001; Parreñas, 2001). In support of this contrasting argument, research also indicates that women garment workers are pursuing marriage on their own terms and sometimes, under conditions that purposely reject family and tradition (Wiest & Mohiuddin, 2002).

The same complicated and contradictory implications for empowerment may be seen in women's involvement in other arenas. Microcredit organizations, for example, are conventionally thought to empower women, and this view is supported by empirical research considering different dimensions of women's empowerment (Hashemi et al., 1996) including household decision-making

(Mizan, 1993). Other researchers, however, find that women's credit is exploited by their husbands leaving women with minimal to no control over the loan; therefore, some do not consider microcredit to improve women's empowerment (Goetz & Gupta, 1996). Women's education is frequently linked to empowerment since education is associated with lower fertility and delay in marriage, yet women's education is also often obtained with the purpose of gaining a better-positioned husband (Jejeebhoy, 1995).

In summary, the economic and social changes occurring in Bangladesh are having a transforming effect on gender norms and these changes have major implications for women's empowerment. Women may be disempowered when removed from their traditional and historical role as wife, mother, or daughter reserved to the household, yet this movement may also change women's sense of agency and access to choices. Further, this movement may also force a change in Bangladeshi society's definition of gender roles and spaces. Thus, women's role and women's empowerment in Bangladesh is in rapid flux.

### **3.2. Reproductive health among women in Bangladesh**

Even with the changing gender norms, women in Bangladesh, as in most societies, continue to be defined primarily by their reproductive role. Recent years have seen changes in reproductive patterns, such as decreased fertility, increased contraceptive use, and improvements to maternal health. The status of women's reproductive health and behaviors in Bangladesh is discussed here.

*Fertility, contraceptive use:* The total fertility rate in Bangladesh has declined sharply from relatively high levels in the 1970s at 6.3 births per woman, plateauing at 3.4 in the 1990s, and then declining again to the current 2.7 births per woman. (NIPORT et al., 2009) Bangladesh is widely recognized for its success in achieving this demographic transition, and analyses usually credit the activities of the national family planning program, initiated by the International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B) (Cleland et al., 1994; Robinson, 2007). The largest component of the program included the hiring and training of married women to provide family planning counseling and contraceptive delivery to rural women throughout Bangladesh. This service,

offered from 1978 to 1997, increased family planning awareness in addition to the uptake of contraceptives and the continuity of contraceptive use (Phillips & Hossain, 2003). Although a number of studies concluded that the door-to-door program empowered women by giving them some control of their fertility and by changing their perceptions of women's capabilities (Mazharul Islam, 1999; Simmons et al., 1988), alternate views suggest it only enforced the patriarchal system of purdah (Schuler & Hashemi, 1994; Schuler, Hashemi, & Jenkins, 1995) and removed men's involvement in family planning (Greene & Biddlecom, 2000; UN, 2005).

Consistent with the patriarchal family structures and women's limited economic mobility which obligate women to rely on their sons for protection and economic support, there exists a complex interplay between fertility, contraceptive use, and son preference. A recent study determined that desire for another child decreased and contraceptive use increased as the number of children and number of sons increased (Jayaraman, Mishra, & Arnold, 2009). Further evidence indicates that attaining the desired number of sons and the preferred sex composition within the family can lead to cessation of childbearing and female feticide (Arnold, Kishor, & Roy, 2002; Sudha & Rajan, 1999). Perhaps indicative of the changing gender landscape, data from the Matlab Demographic Surveillance System found no evidence that son preference influences contraceptive use (Bairagi, 2001).

Overall, 56% of currently married women in Bangladesh are currently using a contraceptive. Contraceptive use varies by age and background characteristics. Use increases with age until age 45-49 when it decreases, and use remains higher in urban areas than in rural areas (primarily due to increase use of the male condom). In contrast with older generations, younger women are showing a tendency to begin contraceptive use at lower parity. Although on the rise, the number of women adopting contraception to delay the first birth remains small (one in five). Other factors influencing women's contraceptive use include opposition to family planning (by themselves, their husband, or according to religious prohibitions) and the fear of side effects (NIPORT et al., 2009).

Other changing fertility patterns include increases in the time interval between births.

Between 1991 and 2007, the median birth interval increased by 26% such that the median interval for women is 44 months and births occurring less than 24 months apart are considered too closely spaced (NIPORT et al., 2009). Because women's fertility is so closely tied to their defined gender role, newly married women are typically under pressure to prove their fertility (Cain, 1984; Vlassoff, 1992). Indeed, the 2007 BDHS recorded that one-third of women age 15-19 have begun childbearing. The age at which women begin to have children may influence women's educational and economic opportunities and the health of the mother and child. Women's median age at first birth has increased only slightly in recent years from 18 to 19 (NIPORT et al., 2009).

*Abortion and menstrual regulation:* Abortion is illegal in Bangladesh except to save the life of the mother. Menstrual regulation (MR; a procedure in which NIPORT vacuum aspiration is used to evacuate the uterus within 12 weeks of a woman's last menses), however, is permitted and performed by physicians and paramedics throughout Bangladesh (Akhter, 1988; Amin, 2003; Singh, Cabigon, Hossain, Kamal, & Perez, 1997). The 2007 BDHS reports that the majority of women are aware of MR (80.5%) although only 5.5% of women have used it (NIPORT et al., 2009). In contrast, Singh Cabigon, Hossain, Kamal, and Perez (1997) estimated that 730,000 abortions occur annually in Bangladesh using data about women hospitalized with abortion complications. Further, there is evidence that access to MR services is poor and stigmatized in some areas (Bhandari, Hom, Rashid, & Theobald, 2008) and that women may receive MR/abortion services from untrained health workers or attempt to perform MR or the abortion themselves (Singh, Wulf, & Jones, 1997). Gipson and Hindin (2008) found that the number of terminated pregnancies was highest among couples in which both spouses did not want any more children (29%) although 6-7% of pregnancies were still aborted for couples in which only one spouse wanted more children. Many women reported previous attempts to terminate at least one pregnancy (Gipson & Hindin, 2008). Research indicates that some women may act autonomously according to their own desires, but the majority engages in joint

decision-making with their husbands (Ahmed, Islam, & Khanum, 1999; Caldwell, Ahmed, Nessa, & Haque, 1999; Gipson & Hindin, 2008).

Abortion may occur in relation to the woman's experience of IPV. Using 2004 BDHS data, one study found that women experiencing violence from their husbands were more likely to lose a pregnancy via miscarriage and induced abortion (Silverman, Gupta, Decker, Kapur, & Raj, 2007). Lee-Rife's (2009) research in India found women with a greater proportion of abortions were almost four times more likely to have experienced domestic violence in the previous 12 months even after controlling for empowerment resources and initial levels of empowerment. Lee-Rife further rationalizes that women may have sought an abortion in response to violence or may have experienced violence after their abortions were discovered.

### **3.3. Intimate partner violence (IPV) against women in Bangladesh**

Intimate partner violence (IPV) is perhaps the most common form of violence against women globally. Sometimes known as "domestic violence", IPV applies to abuse by a current or former spouse or intimate partner. It consists of any behavior within an intimate relationship that causes physical, sexual, or psychological harm to those in the relationship (Heise & Garcia-Moreno, 2002). IPV occurs in various settings; indeed in 48 population-based surveys from across the globe, between 10% and 69% of women reported being physically assaulted by an intimate male partner and between 3% to 52% reported being assaulted in the previous 12 months (Heise & Garcia-Moreno, 2002; Heise, Ellsberg, & Gottemoeller, 1999).

In Bangladesh, IPV is a prevalent phenomenon. A 2005 multi-country study conducted by the World Health Organization (WHO) found 53.4% of women in the Bangladeshi capital and 61.7% in a Bangladeshi province reported ever experiencing IPV (stratified random samples from Dhaka and Matlab, respectively). Furthermore, the study found the Bangladeshi provincial site to have higher rates of sexual violence by an intimate partner than physical violence and higher rates of sexual violence than all other country sites but two (N=17) (Garcia-Moreno et al., 2005). Data from the nationally representative Bangladesh Demographic Health Survey (BDHS) found 37% of married

men reported perpetrating violence against their wives in the past year; 1 in 13 reported perpetrating both physical and sexual IPV (NIPORT et al., 2009). Other research in Bangladesh presents similar findings. Schuler et al. (1996) found 47% of women participating in credit programs from six villages to report having ever been beaten by their husbands, 19% within the previous 12 months. Another study found about two-fifths of women in two study sites to have experienced IPV, 19% experiencing severe forms of IPV and 12% experiencing IPV during pregnancy (Naved, Azim, Bhuiya, & Persson, 2006). Finally, an investigation into the deaths of women of reproductive age in Matlab, Bangladesh within an 11 year period speaks to the severity of IPV in the region; 13% of the deaths of all women and 11% of the deaths of mothers were due to intentional (suicide, homicide) or unintentional injuries (Fauveau & Blanchet, 1989).

In Bangladesh, the high prevalence of IPV occurs as result of patriarchal structures evident in multiple levels of society which dictate the subordination and submission of women. Scholars are increasingly considering IPV within an ecological framework, such that factors are categorized according to the following levels: societal, familial, relational (within the wife-husband dyad), and individual (Heise & Garcia-Moreno, 2002; Heise, 1998; Koenig, Ahmed, Hossain, & Khorshed Alam Mozumder, 2003; Naved & Persson, 2005). These levels are examined here as they provide a context for which high rates of IPV occur in Bangladesh. Where data is not available in Bangladesh, evidence from other South Asian countries supplement the review.

*IPV, societal level:* According to Heise (1998), this macro-level refers to the cultural values and beliefs that permeate and inform other levels in the ecological framework. It provides the organizational structure and environmental influences which may be conducive to IPV. Factors on this level which may promote IPV include institutionalized gender inequalities, cultural notions of masculinity and femininity, societal norms tolerating violence, and a lack support services for IPV victims and perpetrators.

Gender inequality is institutionalized in legal, economic, and socio-cultural structures in Bangladesh; supporting evidence is discussed in **B.2.3**. Cultural notions of masculinity and femininity



also dictate gender roles in which women are subordinate to men. Challenges to these patriarchal gender norms may place women at increased risk for violence when men use IPV as a mechanism to reassert authority and reinforce the established gender order. This hypothesis stems from Status Inconsistency Theory in which those who perceive their status as inconsistent with social norms are most at-risk for using violence (Counts, Brown, & Campbell, 1992; Gelles, 1983; O'Brien, 1971; Rodman, 1972). Although data lacked details to support this hypothesis in Levinson's (1989) review of family violence in 90 different societies, it is supported in Counts et al. (1992) comparative study of IPV in 16 societies and in some research on Bangladeshi women's involvement in income-generating activities (Bates, Schuler, Islam, & Islam, 2004; Schuler et al., 1998). The relationship between gender roles, patriarchal authority, and IPV in Bangladesh is not entirely straightforward, however, since Naved et al. (2005) did not find women's attitudes towards gender roles to be associated with IPV and Koenig et al. (2003) found higher levels of women's autonomy within the community to be protective of IPV.

Studies also indicate that attitudes among both Bangladeshi men and women are accepting of IPV. Heise (1998) and others have hypothesized that social and community norms condoning violence lead to increased rates of IPV (Heise & Garcia-Moreno, 2002; Jewkes, 2002; Naved & Persson, 2005). In North India, Koenig et al. (2006) found high percentages of men believe physical isolation and punishment were justified when a wife disobeys her husband. The study found these community level norms condoning wife-beating were a strong predictor of IPV. Qualitative data from rural Bangladesh suggest a range of situations in which violence against wives is viewed as justifiable; women listed as many as 68 situations which could incite verbal abuse and 53 situations for physical abuse (Bhuiya, Sharmin, & Hanifi, 2003). In other studies women report the belief that violence is a husband's right (Naved et al., 2006), and the idea that husbands may use violence to teach or discipline their wives is widely accepted (Schuler & Islam, 2008). The BDHS found 36% of Bangladeshi men age 15-49 agree that violence against wives was justified for various reasons (NIPORT et al., 2009). Data empirically linking community attitudes towards violence to increased

rates of IPV is limited; however, studies which find high percentages of acceptance of violence also tend to find high percentages of abused women (Garcia-Moreno et al., 2005; Jewkes, 2002; NIPORT et al., 2009).

Schuler et al (2008) points out that women's accepting attitudes and responses to IPV are driven by a patriarchal culture where women's economic and social resources are derived from marriage and almost no life options exist outside of that arrangement. In a qualitative investigation of abused women's recourse seeking, Schuler found women's actions or decisions not to act reflected the social normalization of IPV within marriage and the lack of social controls to discourage IPV. Specifically, women discussed the limited possibility of legal reprimand, punishment, fines, or loss of social status for abusive men whereas the costs of recourse for women were almost certain loss of children, loss of economic support, loss of family honor, social stigma, increased violence and anger from their current husband or a new marriage to a potentially more abusive spouse (Schuler, Bates, & Islam, 2008; Schuler & Islam, 2008).

Indeed, few abused women ever completely leave an abusive relationship or seek help for IPV (Schuler et al., 2008; Zaman, 1999). The BDHS found only one in four disclose their abuse (NIPORT et al., 2009). A study conducted in a rural and an urban setting in Bangladesh found 66% of abused women never told anyone about their experiences of IPV, and almost no one told any institutional sources about the abuse (Naved et al., 2006). When women do speak, they often talk to relatives and family (Bhuiya et al., 2003; Garcia-Moreno et al., 2005; Naved et al., 2006). Ethnographies and other research suggest people may intervene on women's behalf to lessen the abuse and restore the marriage (Hartmann & Boyce, 1983; Schuler et al., 2008). The BDHS reports that about half of women who experience IPV receive assistance from someone regardless of direct disclosure (NIPORT et al., 2009). A study in rural Bangladesh found the neighbors sometimes advised the husband to stop violence although in a larger percentage of cases, the neighbors were indifferent or not sympathetic to the women (Bhuiya et al., 2003). Naved et al. (2006) suggests

women may use disclosure to these parties as a coping strategy to relieve the stress from abuse rather than to seek assistance to end it.

There are limited sources of formal assistance for women experiencing IPV in Bangladesh. Additionally, women's mobility to seek assistance through official channels may be constrained by gender rules, and women may not be aware of either the laws against IPV or institutional resources (NIPORT et al., 2009). The government has established one-stop crisis centers in some districts in Bangladesh with counseling services for abused women, yet there is scarcity of trained professionals in the Bangladeshi healthcare setting equipped to address IPV or trained to report it to the legal system (Johnston & Naved, 2008). Nearly all of the abused women who sought assistance from institutional sources in a 2006 study reported that no one tried to help them (Naved et al., 2006). Finally, there are no formal resources to rehabilitate men who perpetrate IPV (Johnston & Naved, 2008).

Theorists have also considered levels of overall violence or violent culture within a community to increase the prevalence of IPV (Heise, 1998; Jewkes, 2002; Levinson, 1989). Certainly, Bangladesh has had a violent past in the hands of British colonialism, rule by Pakistan, and in the Bangladesh Liberation War in 1971; however, there is no empirical evidence in Bangladesh or South Asia to confirm this association (Levinson, 1989; Naved & Persson, 2005). Thus, the macro-level factors emerging from patriarchal foundations (strict gender roles, pervasive gender inequality, and the lack of legal or social controls to prevent IPV) provide the context in which IPV exists in Bangladesh and the framework in which micro-level factors operate in the family, wife-husband relationship, and individual.

*IPV, familial level:* Factors within the familial level found to influence IPV include household socioeconomic status, family structure, and support networks. Studies in various settings have demonstrated that poorer households are disproportionately affected by IPV (Ellsberg, Pena, Herrera, Liljestrand, & Winkvist, 1999; Straus, Gelles, & Steinmetz, 1980.; Sugarman & Hotaling, 1989). In South Asia, this finding is substantiated in India (Jejeebhoy & Cook, 1997; Koenig,

Stephenson, Ahmed, Jejeebhoy, & Campbell, 2006; Martin, Tsui, Maitra, & Marinshaw, 1999; Panda & Agarwal, 2005) and in Bangladesh (Bates et al., 2004; Koenig et al., 2003; NIPORT et al., 2009). A common hypothesis is that frustrations accompanying financial stress may mediate the relationship between IPV and economic status. This is reflected in North India, where the role of economic pressure was significantly related to IPV, with men who reported having to borrow money in the previous year being more likely to beat their wives (Koenig et al., 2006). Alternatively, women in households of higher economic status may underreport IPV due to stigma associated with it.

Family structure and the support network it may or may not provide may also impact IPV incidence. In South Asia, women typically leave their natal home to reside with the husband or the husband's family (Hartmann & Boyce, 1983). Koenig et al (2003) found women living with extended family experienced less IPV than those in a nuclear family arrangement. Although a similar association has been documented in India (Visaria, 1999), Koenig states that this finding is unexpected. Indeed, qualitative research and anecdotal evidence document the varying attitudes in-laws have towards IPV, in some cases discouraging it (Bhuiya et al., 2003; Schuler et al., 2008), or in others instigating it or taking violent action themselves (Bhuiya et al., 2003; Naved & Persson, 2005; Zaman, 1999). Additionally, while women often seek refuge from IPV by fleeing to their natal family (Schuler et al., 2008), a reliance on the wife's natal family for support was found not to be related to IPV (Naved & Persson, 2005). Research in Cambodia and India indicate that the presence of a wife's family members was protective of IPV (Nelson & Zimmerman, 1996; Panda & Agarwal, 2005; Rao, 1997).

*IPV, relational (wife-husband dyad) level:* At the relationship level, marital conflict and communication between spouses are factors observed to be associated with IPV. There is limited research regarding marital communication in Bangladesh although situational evidence indicates IPV is acceptable if the wife talks back to the husband (Schuler & Islam, 2008), goes out without telling / getting permission from the husband (NIPORT et al., 2009), argues with the husband (Rani & Bonu, 2008), or questions the husband's fidelity (Panda & Agarwal, 2005). Naved and Persson (2005) found

a high level of spousal communication to be protective against IPV. In Thailand, marital conflict was found to be significantly related to IPV even after controlling for socioeconomic status, the husband's stress level, and markers of marital stability (Hoffman, Demo, & Edwards, 1994).

Marital conflict in Bangladesh often stems from dowry related disputes. As discussed earlier, dowries are illegal in Bangladesh, however laws pertaining to dowry exchange are rarely enforced and dowry agreements have increased in recent generations (Huda, 2006). In Bates et al (2004), women and their parents felt they would be vulnerable to abuse if the dowry brought to marriage was insufficient. Quantitative findings indicate dowry agreements are highly correlated with IPV (Bates et al., 2004; Naved & Persson, 2005; Schuler et al., 1998), and failure to pay dowry is frequently cited as a reason for IPV by both husbands and wives (Hadi, 2005; NIPORT et al., 2009; Panda & Agarwal, 2005). Schuler et al (1996) describes how the dowry system in Bangladesh has developed into one of institutionalized extortion in which violence, threats of violence, and even murder are used to extort money and property from the young wife's family (Schuler et al., 1996). The number of deaths of young women attributed to dowry related disputes is increasing (Zaman, 1999). Finally, dowry also works to confine women to marriage in that women's families often cannot afford a second dowry. Therefore, women cannot leave abusive relationships because their families cannot afford to marry them again (Schuler et al., 2008).

*IPV, individual level:* The majority of research in IPV has concentrated on the level of the individual. Factors operating on this level include age and lifecycle, education, wife's income, and intergenerational exposure to violence. A woman's relative youth and her position in marriage are important risk factors for IPV. As stated earlier, approximately two-thirds of women are married before age 18 (NIPORT et al., 2009), and studies have found that younger women are more likely to experience abuse (Bhuiya et al., 2003; Hadi, 2005; Koenig et al., 2003; Schuler et al., 1996). The high incidence of abuse early in marriage may reflect a women's low status and childlessness (Panda & Agarwal, 2005; Schuler et al., 1996); however, it may also be a mechanism in which the husband is enforcing his dominant position and establishing an environment of submission and obedience. Age

of husbands has not been found to be associated with IPV (Ahmed, van Ginneken, Razzaque, & Alam, 2004; Hadi, 2005).

Research typically demonstrates a negative relationship between education of the married couple and IPV (Hadi, 2000; Koenig et al., 2003). Limited research exists on differentials in education between husband and wife. One may suspect that an educated women married to a less educated man may be subject to more violence since she challenges the gender norms; alternatively, her education may gain her more respect from the husband. Panda and Agarwal (2005) did not find education differentials to be significantly associated with IPV although the authors attributed this to a non-diverse sample.

Women's income and household economic contribution in association with IPV has seen very divided results in the literature. Although women's earning capabilities are conventionally seen as empowering and comprise the goals of human rights groups, women's income may challenge Bangladeshi gender norms, increase marital conflict, and lead to IPV rather than increase her autonomy and respect (Schuler et al., 1998). Some studies have found women's participation in savings and credit groups to be positively related to abuse in urban (Naved & Persson, 2005) and rural areas (Bates et al., 2004) while this other studies have not found a significant relationship (Koenig et al., 2003). Further research has found that group-based credit programs may reduce IPV by making women's lives more public (Schuler et al., 1996). However, in settings where the majority of women are financially contributing to the household, IPV incidence is elevated (Schuler et al., 1998).

Exposure to family violence as a child is a risk factor for IPV in nearly every setting in South Asia. In an extensive study in India, Martin et al (2002) observed nearly one-third of IPV in the second generation of families was attributable to IPV in the first generation. This finding is echoed again in India (Koenig et al., 2006; Panda & Agarwal, 2005) and Bangladesh (Naved & Persson, 2005) for both men and women who saw their parents engage in IPV.

In conclusion, it is clear that a majority of women in Bangladesh have experienced IPV at some point in their married lifetime. This review suggests that IPV is the result of multiple factors which exist on interlocking levels. It also suggests that IPV against women may be used as a tool for addressing conflict or to reinforce the patriarchal structure. As such, it clearly forms a plausible relationship within the outlined model (Figure 1) discussed in the following section.

#### **B.4. Reproductive health, IPV, and pathways to empowerment: Conceptual framework**

In gendered settings like Bangladesh where women have traditionally been defined by their reproductive role, changes in reproductive health and behaviors at the individual level may variously affect a woman's empowerment. Figure 1 summarizes these potential relationships. Specifically, a woman's reproductive health at time -2 may influence her empowerment at time 0, both directly and indirectly through her risk of IPV at time -1. These are the primary relationships investigated in this dissertation; each pathway is discussed below.

*Direct pathways:* Some aspects of reproductive health, such as fertility, pregnancy termination, and contraceptive use, may influence a woman's empowerment directly. Son preference persists in many South Asian settings since males are critical to family economic security and social standing. Women are often under pressure to bear sons, and the birth of a son has been shown to improve a woman's position in her husband's household and in her community (Cain, 1984; Das Gupta, 1995; Das Gupta et al., 2003). Women are also under pressure to prove their fertility, usually, early in marriage (Nath, Land, & Goswami, 1999; Schuler et al., 1995). Childless women may be divorced by their husbands, or their husbands may marry a second wife. Both consequences may severely impact a woman's empowerment given the paucity of social and economic options for an unmarried woman or the low household position to which an infertile woman is relegated (Das Gupta et al., 2003; Nath et al., 1999). Family planning methods such as menstrual regulation, abortion, sterilization, and contraception may also influence a woman's empowerment although these may be conditioned by son preference, a woman's total fertility, the time from marriage to first birth, and the varying household and community pressures to conceive or space births (Abdullah & Zeidenstein, 1982;

Bairagi, 2001; Cain et al., 1979; Nath et al., 1999; Schuler et al., 1995). Research suggests some women feel empowered when they decide to use contraception; however, other women report potentially disempowering effects such as criticism and ostracism from family members and the clandestine or forced use of contraception (Schuler, Hashemi, Cullum, & Hassan, 1996).

*Indirect pathways:* Some aspects of reproductive health may influence a woman's empowerment indirectly, through their effects on a woman's risk of IPV (Bawah et al., 1999; Blanc, 2001; Ezeh, 1993; Sami & Ali, 2006). Considerable cross-sectional evidence indicates associations between aspects of reproductive health and IPV. Studies in India indicate positive relationships between women's contraceptive use and IPV (Martin, Kilgallen, et al., 1999; Rao & Waters, 1995; Wilson-Williams, Stephenson, Juvekar, & Andes, 2008). Attitudinal data from men and women in various settings suggests clandestine contraceptive use is an acceptable cause of IPV (Ezeh, 1993; International Institute for Population Sciences [IIPS] & Johns Hopkins University, 2005; Wood & Jewkes, 1997). Unplanned pregnancies are linked to IPV (Gazmararian et al., 2000; Martin, Kilgallen, et al., 1999); and pregnant women, in general, are at elevated risk for IPV (Gazmararian et al., 1996). Other aspects of reproductive health positively associated with IPV include sterilization (Rao, 1997), induced abortion and miscarriage (Evins & Chesceir, 1996; Garcia-Moreno et al., 2005; Glander, Moore, Michielutte, & Parsons, 1998), gynecologic morbidity (Schei, 1991; Schei & Bakketeig, 1989), STI and HIV acquisition (Dunkle et al., 2004), and adverse pregnancy outcomes (Campbell & Soeken, 1999; Jejeebhoy, 1998). As outlined in Figure 1, the dissertation moved beyond cross-sectional relationships and explored the influence of reproductive health on subsequent IPV and, ultimately, empowerment. Research investigating the influence of IPV on a woman's empowerment is limited although studies indicate very few of women seek recourse against IPV or attempt to leave violent relationships in Bangladesh (Naved et al., 2006; Schuler et al., 2008). Given the adverse psychological sequelae associated with IPV (Campbell, 2002), it seems likely that IPV could reduce a women's empowerment.

## **5. Rationale for research**



Women's empowerment is a human right, and it has strong implications for the health of women, children, and families (Grown et al., 2005; Kishor, 2000; Murthi et al., 1995). Research investigating the determinants of women's empowerment is limited (Malhotra et al., 2002). Although studies suggest aspects of a woman's fertility may contribute to her empowerment (Schuler et al., 1996), aspects of fertility are also shown to be associated with IPV (Bawah et al., 1999; Blanc, 2001; Ezeh, 1993; Sami & Ali, 2006). This research (a) identified direct and indirect pathways by which a woman's fertility affected her empowerment and (b) clarified the net effects of a woman's fertility on her empowerment as reduced by her risk for IPV. Further, this research advances understanding of effective strategies for improving women's reproductive and sexual health, reducing IPV, and promoting women's empowerment. The completed dissertation has substantial impact for family planning programs, maternal morbidity, child and family health, the reduction of IPV, and improvements to women's reproductive health since policy makers and program planners can prioritize aspects of fertility found to empower women and can incorporate more cautiously those aspects found to provoke IPV and/or lead to disempowerment.

The following three chapters will proceed by study and will be summarized in a final concluding chapter. Study 1 examined the pathways by which a woman's fertility and her conformity to community based fertility norms affect her empowerment. Study 2 considered three mediation models outlined in Figure 1 to determine the direct and indirect effects of various aspects of fertility on empowerment. Study 3 investigated how customary and contemporary resources were associated with empowerment.

## References

- Abdullah, T. A., & Zeidenstein, S. A. (1982). *Village women of Bangladesh: Prospects for change*. Oxford: Pergamon Press.
- Absar, S. (2001a). *Basic needs of women garment workers in Bangladesh: A narrative-based study*. (Doctoral Dissertation). The Australian National University, Canberra.
- Absar, S. (2001b). Problems surrounding wages: the ready made garments sector in Bangladesh. *Labour and Management in Development Journal*, 2(7), 2-17.
- Ackerly, B. A. (1995). Testing the tools of development: Credit programmes, loan involvement, and women's empowerment. *IDS Bulletin*, 26(3), 56-68.
- Adnan, S. (1989, January-February). Birds in a cage: Institutional change and women's position in Bangladesh, *ADAB News*.
- Ahmed, I. (2004). On securing women's security: Perspectives from South Asia In I. Ahmed (Ed.), *Women, Bangladesh and international security: Methods, discourses, and policies*. Dhaka: The University Press Ltd.
- Ahmed, M. K., van Ginneken, J., Razzaque, A., & Alam, N. (2004). Violent deaths among women of reproductive age in rural Bangladesh. *Social Science & Medicine*, 59(2), 311-319.
- Ahmed, S., Islam, A., & Khanum, P. (1999). Induced abortion: What's happening in rural Bangladesh. *Reproductive Health Matters*, 7(14), 19-29.
- Ahmed, S., & Khatun, M. (2008). Gender relations in postmodern societies: Impact of globalization on women's position. *Journal of Knowledge Globalization*, 1(2).
- Akhter, H. H. (1988). Abortion: Bangladesh. In P. Sachev (Ed.), *International handbook on abortion* (pp. 36-48). New York, NY: Greenwood Press.
- Akin, L., & Ozaydin, N. (2005). The relationship between males' attitudes to partner violence and use of contraceptive methods in Turkey. *European Journal of Contraception and Reproductive Health Care*, 10(3), 199-206.

- Al Riyami, A., Afifi, M., & Mabry, R. M. (2004). Women's autonomy, education and employment in Oman and their influence on contraceptive use. *Reproductive Health Matters*, 12, 144 - 154.
- Amin, S. (2003). Menstrual regulation in Bangladesh. In A. M. Basu (Ed.), *The sociocultural and political aspects of abortion* (pp. 153-166). Westport, CT: Praeger Publishers.
- Amin, S., & Lloyd, C. (2002). Women's lives and rapid fertility decline: Some lessons from Bangladesh and Egypt. *Population Research and Policy Review*, 21, 275-317.
- Arnold, F., Kishor, S., & Roy, T. (2002). Sex-selective abortions in India. *Population and Development Review*, 28(4), 759-785.
- Baden, S., Green, C., Goetz, A., & Guhathakurta, M. (1994). *Background report on gender issues in Bangladesh* (BRIDGE Report, 26). Retrieved from Institute of Development Studies, Brighton website: <http://www.bridge.ids.ac.uk/reports/re26c.pdf>
- Bairagi, R. (2001). Effects of sex preference on contraceptive use, abortion and fertility in Matlab, Bangladesh. *International Family Planning Perspectives*, 27(3), 137-143.
- Balk, D. (1994). Individual and community aspects of women's status and fertility in rural Bangladesh. *Population Studies*, 48, 21-45.
- Balk, D. (1997). Defying gender norms in rural Bangladesh: A social demographic analysis. *Population Studies*, 51, 153-172.
- Bangladesh Bureau of Statistics. (1992) *Report on Labour Force Survey, 1989*. Dhaka: Bangladesh Bureau of Statistics.
- Bangladesh Bureau of Statistics. (2004). *Report on Labour Force Survey*. Dhaka: Bangladesh Bureau of Statistics.
- Basu, A. M., & Basu, K. (1991). Women's economic roles and child survival: The case of India. *Health Transition Review*, 1(1) , 83-103.
- Bates, L. M., Schuler, S. R., Islam, F., & Islam, M. K. (2004). Socioeconomic Factors and Processes Associated with Domestic Violence in Rural Bangladesh. *International Family Planning Perspectives*, 30(4), 190-199.

- Batiwala, S. (1994). The meaning of women's empowerment: New concepts from action. In G. Sen, A. Germain & L. C. Chen (Eds.), *Population policies reconsidered: Health, empowerment, and rights*. Cambridge: Harvard University Press.
- Bawah, A. A., Akweongo, P., Simmons, R., & Phillips, J. F. (1999). Women's fears and men's anxieties: The impact of family planning on gender relations in northern Ghana. *Studies in Family Planning*, 30(1), 54-66.
- Beegle, K., Frankenberg, E., & Thomas, D. (1998). Bargaining power within couples and use of prenatal and delivery care in Indonesia. *Studies in Family Planning*, 32(2), 130.
- Bhandari, A., Hom, M., Rashid, S., & Theobald, S. (2008). Experiences of abortion in Nepal and menstrual regulation in Bangladesh: A gender analysis. *Gender and Development*, 16(2), 257-272.
- Bhuiya, A., Sharmin, T., & Hanifi, S. M. (2003). Nature of domestic violence against women in a rural area of Bangladesh: implication for preventive interventions. *Journal of Health, Population and Nutrition*, 21(1), 48-54.
- Bhuiyan, R. (1986). *Legal rights of Muslim women in marriage and divorce*. Dhaka: Women for Women.
- Blanc, A. K. (2001). The effect of power in sexual relationships on sexual and reproductive health: An examination of the evidence. *Studies in Family Planning*, 32(3), 189-213.
- Blanchet, T. (1986). *Rural women, savings and credit: An anthropological view*. Dhaka: USAID.
- Boserup, E., Kanji, N., Tan, S., & Toulmin, C. (2007). *Woman's role in economic development*. London: Earthscan/James & James.
- Cain, M. (1984). *Women's status and fertility in developing countries: Son preference and economic security*. Washington, DC: The World Bank.
- Cain, M., Khanam, S. R., & Nahar, S. (1979). Class, patriarchy, and women's work in Bangladesh. *Population and Development Review*, 5(3), 405-438.
- Caldwell, B., Ahmed, S., Nessa, F., & Haque, I. (1999). Pregnancy termination in a rural subdistrict of Bangladesh: A microstudy. *International Family Planning Perspectives*, 25(1), 34-43.
- Caldwell, J. (1982). *Theory of fertility decline*. London: Academic Press.

- Campbell, J. C. (2002). Health consequences of intimate partner violence. *Lancet*, 359(9314), 1331-1336.
- Campbell, J. K., & Soeken, K. (1999). Forced sex and intimate partner violence: Effects on women's health. *Violence Against Women*, 5, 1017-1035.
- CEDAW. (2003). *Consideration of Reports submitted by State Parties under Article 18 of the CEDAW*. Fifth Periodic Report of State Parties. Bangladesh. (CEDAW/C/BGD/5). New York: United Nations.
- Chacko, E. (2001). Women's use of contraception in rural India: A village-level study. *Health & Place*, 7(3), 197-208.
- Chakraborty, E. (2004). Marginality, modes of insecurity and indigenous women of northern Bangladesh. In I. Ahmed (Ed.), *Women, Bangladesh and international security: Methods, discourses and policies*. Dhaka: The University Press Ltd.
- Chen, M. (1986). Poverty, gender, and work in Bangladesh. *Economic and Political Weekly*, 217-222.
- Cleland, J., Phillips, J. F., Amin, S., & Kamal, G. M. (1994). *The determinants of reproductive change in Bangladesh: Success in a challenging environment*. Washington, DC: World Bank Regional and Sectoral Studies.
- Counts, D. A., Brown, J. K., & Campbell, J. K. (1992). *Sanctions and sanctuary: Cultural perspectives on the beating of wives*. Boulder, Colorado: Westview Press.
- Curtin, L. (1982). Status of women: A comparative analysis of twenty developing countries. *Population Reference Bureau: Reports on the World Fertility Survey* (Vol. 5). Washington, DC: Population Reference Bureau.
- Das Gupta, M. (1995). Life course perspectives on women's autonomy and health outcomes. *American Anthropologist*, 97(3), 481-491.
- Das Gupta, M., Zhenghua, J., Bohua, L., Zhenming, X., Chung, W., & Hwa-Ok, B. (2003). Why is son preference so persistent in East and South Asia? A cross-country study of China, India, and the Republic of Korea. *Journal of Development Studies* 40(2), 153-187.

- Das, M., Amin, S., Das Gupta, M., Johnson, K., & Hossain, A. (2008). Whispers to voices: Gender and social transformation in Bangladesh. *South Asia Region, South Asia Sustainable Development Department*.
- Dewan, R. (1999). Gender implications of the “new” economic policy: A conceptual overview. *Women's Studies International Forum*, 22(4), 425-429.
- Dunkle, K. L., Jewkes, R. K., Brown, H. C., Gray, G. E., McIntyre, J. A., & Harlow, S. D. (2004). Gender-based violence, relationship power, and risk of HIV infection in women attending antenatal clinics in South Africa. *Lancet*, 363(9419), 1415-1421.
- Ellsberg, M. C., Pena, R., Herrera, A., Liljestrand, J., & Winkvist, A. (1999). Wife abuse among women of childbearing age in Nicaragua. *American Journal of Public Health*, 89(2), 241-244.
- Evins, G., & Chesceir, N. (1996). Prevalence of domestic violence among women seeking abortion services. *Women's Health Issues*, 6, 204-210.
- Ezeh, A. C. (1993). The influence of spouses over each other's contraceptive attitudes in Ghana. *Studies in Family Planning*, 24(3), 163-174.
- Family Health International (FHI). (2009). Women's voices, women's lives: The impact of family planning. A synthesis of findings from the Women's Studies Project. Retrieved from: <http://www.fhi.org/en/RH/Pubs/wsp/synthesis/index.htm>
- Fauveau, V., & Blanchet, T. (1989). Deaths from injuries and induced abortion among rural Bangladeshi women. *Social Science & Medicine*, 29(9), 1121-1127.
- Fikree, F. F., Khanam, S. R., Kadir, M. M., Sajan, F., & Rahbar, M. H. (2001). What influences contraceptive use among young women in urban squatter settlements of Karachi, Pakistan? *International Family Planning Perspectives*, 27(3), 130-136.
- Folbre, N. (1983). Of patriarchy born: The political economy of fertility decisions. *Feminist Studies*, 9(261-284).
- Gain, P. (1990). *Women workers in Bangladesh garment industries*. Dhaka: Bamashop

- Garcia-Moreno, C., Jansen, H. A. F. M., Ellsberg, M., Heise, L., & Watts, C. H. (2005). *WHO Multicountry Study on women's health and domestic violence against women: Initial results on prevalence, health outcomes, and women's responses*. Geneva: World Health Organization. Retrieved from: [http://www.who.int/gender/violence/who\\_multicountry\\_study/en/](http://www.who.int/gender/violence/who_multicountry_study/en/)
- Gazmararian, J. A., Lazorick, S., Spitz, A. M., Ballard, T. J., Saltzman, L. E., & Marks, J. S. (1996). Prevalence of violence against pregnant women. *JAMA*, 275(24), 1915-1920.
- Gazmararian, J. A., Petersen, R., Spitz, A. M., Goodwin, M. M., Saltzman, L. E., & Marks, J. S. (2000). Violence and reproductive health: Current knowledge and future research directions. *Maternal and Child Health Journal*, 4, 79-84.
- Gelles, R. J. (1983). An exchange / social control theory. In D. Finkelhor, R. J. Gelles, G. T. Hotaling & M. A. Straus (Eds.), *The dark side of families: Current family violence research* (pp. 151-165). Beverly Hills, CA: Sage.
- Gipson, J., & Hindin, M. (2008). "Having another child would be a life or death situation for her": Understanding pregnancy termination among couples in rural Bangladesh. *American Journal of Public Health*, 98(10), 1827.
- Glander, S. S., Moore, M., Michielutte, R., & Parsons, L. (1998). The prevalence of domestic violence among women seeking abortion. *Obstetrics & Gynecology*, 91, 1002-1006.
- Goetz, A., & Gupta, R. (1996). Who takes the credit? Gender, power, and control over loan use in rural credit programs in Bangladesh. *World Development*, 24(1), 45-63.
- Greene, M. E., & Biddlecom, A. E. (2000). Absent and problematic men: Demographic accounts of male reproductive roles. *Population and Development Review*, 26(1), 81-115.
- Grown, C., Gupta, G. R., & Pande, R. (2005). Taking action to improve women's health through gender equality and women's empowerment. *Lancet*, 365(9458), 541-543.
- Haddad, L., & Hoddinott, J. (1994). Women's income and boy-girl anthropometric status in Cote d'Ivoire. *World Development*, 22(4), 543-553.

- Hadi, A. (2000). Prevalence and correlates of the risk of marital sexual violence in Bangladesh. *Journal of Family Violence, 15*(8), 787-805.
- Hadi, A. (2005). Women's productive role and marital violence in Bangladesh. *Journal of Family Violence, 20*(3), 181-189.
- Hartmann, B., & Boyce, J. K. (1983). *A quiet violence: View from a Bangladesh village* (4 ed.). London: Zed Books.
- Hashemi, S. M., Schuler, S. R., & Riley, A. P. (1996). Rural credit programs and women's empowerment in Bangladesh. *World Development, 24*(4), 635-653.
- Heise, L. L. (1998). Violence against women: an integrated, ecological framework. *Violence Against Women, 4*(3), 262-290.
- Heise, L. L., Ellsberg, M., & Gottemoeller, M. (1999). Ending violence against women *Population Reports*. Baltimore, MD: Johns Hopkins University School of Public Health, Center for Communications Programs.
- Heise, L. L., & Garcia-Moreno, C. (2002). Violence by intimate partners In L. L. Dahlberg (Ed.), *World report on violence and health* (pp. 89-121). Geneva: World Health Organization.
- Hoddinott, J., & Haddad, L. (1995). Does female income share influence household expenditures? Evidence from Cote d'Ivoire. *Oxford Bulletin of Economics and Statistics, 57*(1), 77-96.
- Hoffman, K. L., Demo, D. H., & Edwards, J. N. (1994). Physical wife abuse in a non-Western society: An integrated theoretical approach. *Journal of Marriage and the Family, 56*(1), 131-146.
- Hoque, M. N., & Murdock, S. H. (1997). Socioeconomic development, status of women, family planning, and fertility in Bangladesh: A district level analysis. *Social Biology, 44*(3-4), 179-197.
- Huda, S. (2006). Dowry in Bangladesh: Compromizing women's rights. *South Asia Research, 26*(3), 249-268.
- Inhorn, M. C. (1996). *Infertility and patriarchy: The cultural politics of gender and family life in Egypt*. Philadelphia, PA: University of Pennsylvania Press.



- International Institute for Population Sciences (IIPS) & Johns Hopkins University. (2005). *Final report of the 2003 NFHS-2 four-state follow-up survey*. Mumbai, India: IIPS.
- Islam, M. (1993). Female-headed households in rural Bangladesh: A survey. In J. P. Mencher & A. Okongwu (Eds.), *Where did all the men go?: Female-headed/female-supported households in cross-cultural perspective* (pp. 233). Boulder, CO: Westview Press.
- Jahan, R. (1989). *Women and development in Bangladesh: Challenges and opportunities*. Dhaka, Bangladesh: Ford Foundation/Bangladesh.
- Jamaly, R., & Wickramanayake, E. (1996). Women workers in the garment industry in Dhaka, Bangladesh. *Development in Practice*, 6(2), 156-161.
- Jayaraman, A., Mishra, V., & Arnold, F. (2009). The relationship of family size and composition to fertility desires: Contraceptive adoption and method choice in South Asia. *International Perspectives on Sexual and Reproductive Health*, 35(1), 29-38.
- Jejeebhoy, S. J. (1995). *Women's education, autonomy, and reproductive behavior: Experience from developing countries*. Oxford: Clarendon Press.
- Jejeebhoy, S. J. (1998). Associations between wife-beating and fetal and infant death: Impressions from a survey in rural India. *Studies in Family Planning*, 29, 300-308.
- Jejeebhoy, S. J. (2000). Women's autonomy in rural India: Its dimensions, determinants, and the influence of context. In H. Presser & G. Sen (Eds.), *Women's empowerment and demographic processes: Moving beyond Cairo*. Oxford: Clarendon Press.
- Jejeebhoy, S. J., & Cook, R. J. (1997). State accountability for wife-beating: the Indian challenge. *Lancet*, 349 Suppl 1, s110-12.
- Jewkes, R. (2002). Intimate partner violence: Causes and prevention. *Lancet*, 359(9315), 1423-1429.
- Johnston, H. B., & Naved, R. T. (2008). Spousal violence in Bangladesh: A call for a public-health response. *Journal of Health, Population and Nutrition*, 26(3), 366-377.
- Kabeer, N. (1988). Subordination and struggle: Women in Bangladesh. *New Left Review*, 168, 95-121.

- Kabeer, N. (1997). Women, wages, and intra-household power relations in urban Bangladesh. *Development and Change*, 28, 261-302.
- Kabeer, N. (1998). Money can't buy me love? Re-evaluating gender, credit and empowerment in rural Bangladesh. University of Sussex: Institute of Development Studies.
- Kabeer, N. (1999). Resources, agency, achievements: Reflections on the measurement of women's empowerment. *Development and Change*, 30, 435-464.
- Kabeer, N. (2001). Resources, agency, achievements: Reflections on the measurement of women's empowerment. *Discussing Women's Empowerment-Theory and Practice* (Vol. Sida Studies). Novum Grafiska AB, Stockholm
- Kabeer, N. (2005). Gender equality and women's empowerment: A critical analysis of the third millennium development goal. *Gender & Development*, 13(1), 13-24.
- Kabeer, N., Mahmud, S., & Tasneem, S. (2011). Does paid work provide a pathway to women's empowerment? Empirical findings from Bangladesh. *Institute for Developing Studies (IDS) Working Paper*. University of Sussex: IDS. Retrieved from: <http://www.ntd.co.uk/idsbookshop/details.asp?id=1246>
- Kandiyoti, D. (1988). Bargaining with patriarchy. *Gender & Society*, 2(3), 274-290.
- Kandiyoti, D. (Ed.). (1991). *Women, Islam, & the state*. Philadelphia: Macmillan Academic and Professional Ltd.
- Khandker, S. R. (1998). *Fighting poverty with microcredit: Experience in Bangladesh*. Washington, DC: World Bank.
- Kishor, S. (2000). Empowerment of women in Egypt and links to the survival and health of their infants. In H. Presser & G. Sen (Eds.), *Women's empowerment and demographic processes: Moving beyond Cairo*. Oxford: Clarendon Press.
- Kishor, S., & Lekha, S. (2008). Understanding women's empowerment: A comparative analysis of Demographic and Health Surveys (DHS) data *DHS Comparative Reports No. 20* Calverton, Maryland: Macro International Inc.

- Koenig, L. J., Whitaker, D. J., Royce, R. A., Wilson, T. E., Ethier, K., & Fernandez, M. I. (2006). Physical and sexual violence during pregnancy and after delivery: A prospective multistate study of women with or at risk for HIV infection. *American Journal of Public Health, 96*(6), 1052-1059.
- Koenig, M. A., Ahmed, S., Hossain, M. B., & Khorshed Alam Mozumder, A. B. (2003). Women's status and domestic violence in rural Bangladesh: Individual- and community-level effects. *Demography, 40*(2), 269-288.
- Koenig, M. A., Stephenson, R., Ahmed, S., Jejeebhoy, S. J., & Campbell, J. (2006). Individual and contextual determinants of domestic violence in North India. *American Journal of Public Health, 96*(1), 132-138.
- Kotalova, J. (1993). *Belonging to others: Cultural construction of womanhood among muslims in a village in Bangladesh*. Uppsala Sweden: Uppsala Studies in Cultural Anthropology.
- Kramsjö, B., & Wood, G. (1992). *Breaking the chains: Collective action for social justice among the rural poor of Bangladesh*. IT Publications, London.
- Larson, A., & Mitra, S. N. (1992). Family planning in Bangladesh: An unlikely success story. *International Family Planning Perspectives, 18*, 123-129.
- Lee-Rife, S. (2010). Women's empowerment and reproductive experiences over the lifecourse. *Social Science & Medicine, 71*, 634-642.
- Levinson, D. (1989). *Family violence in cross-cultural perspective*. (Vol. 1). Newbury Park: Sage Publications.
- Lewis, D. (1993). Going it alone: Female-headed households, rights and resources in rural Bangladesh. *European Journal of Development Research, 5*(2), 23-42.
- Lloyd, C. (1991). The contribution of the World Fertility Surveys to an understanding of the relationship between women's work and fertility. *Studies in Family Planning, 22*(3), 144-161.
- Mahmud, S. (2000). The gender dimensions of programme participation: Who joins a microcredit programme and why? *The Bangladesh Development Studies, 26*(2&3), 79-101.

- Mahmud, S. (2001). The labor use of women in rural Bangladesh. In R. Sobhan & N. Khundker (Eds.), *Globalization and gender: Changing patterns of women's employment in Bangladesh*. Dhaka: The University Press Ltd.
- Mahmud, S. (2003). Actually how empowering is microcredit? *Development and Change*, 34(4), 577-605.
- Malhotra, A., & Mather, M. (1997). Do schooling and work empower women in developing countries? Gender and domestic decisions in Sri Lanka. *Sociological Forum*, 12(4), 599-630.
- Malhotra, A., Schuler, S. R., & Boender, C. (2002). *Measuring women's empowerment as a variable in international development*. Paper commissioned by the World Bank, Gender and Development Group. Retrieved from:  
<http://siteresources.worldbank.org/INTGENDER/Resources/MalhotraSchulerBoender.pdf>
- Martin, S. L., Kilgallen, B., Tsui, A. O., Maitra, K., Singh, K. K., & Kupper, L. L. (1999). Sexual behaviors and reproductive health outcomes: Associations with wife abuse in India. *JAMA*, 282(20), 1967-1972.
- Martin, S. L., Moracco, K. E., Garro, J., Tsui, A. O., Kupper, L. L., Chase, J. L., & Campbell, J. C. (2002). Domestic violence across generations: Findings from northern India. *International Journal of Epidemiology*, 31(3), 560-572.
- Martin, S. L., Tsui, A. O., Maitra, K., & Marinshaw, R. (1999). Domestic violence in northern India. *American Journal of Epidemiology*, 150(4), 417-426.
- Mason, K. O. (1984). *The status of women: A review of its relationships to fertility and mortality*. New York: The Rockefeller Foundation.
- Mason, K. O. (1993). The impact of women's position on demographic change during the course of development. In N. Federici, K. O. Mason & S. Sogner (Eds.), *Women's position and demographic change* (pp. 19-42). Oxford: Clarendon Press.

- Mason, K. O. (1998). Wives' economic decision-making power in the family: Five Asian countries. In K. O. Mason (Ed.), *The changing family in comparative perspective: Asia and the United States*. Honolulu, HI: East-West Center.
- Mason, K. O., Chayovan, N., Jejeebhoy, S. J., Nagaraj, S., Raymundo, C., Sathar, Z., & Smith, H. L. (1995). *Determinants of women's power and autonomy in five asian countries*. Paper presented at the Annual Meeting of the Population Association of America, San Francisco.
- Mason, K. O., & Smith, H. L. (2000). Husbands' versus wives' fertility goals and use of contraception: The influence of gender context in five Asian countries. *Demography*, 37(3), 299-311.
- Mazharul Islam, M. (1999). Adolescent child-bearing in Bangladesh. *Asia-Pacific Population Journal*, 14(3), 73-87.
- Mizan, A. (1993). Women's decision making power in rural Bangladesh: A study of the Grameen Bank. In A. Wahid (Ed.), *The Grameen Bank: Poverty relief in Bangladesh* (pp. 97-126). Boulder: Westview.
- Moghadam, V. (1998). The feminization of poverty in international perspective. *The Brown Journal of World Affairs*, 5, 225-248.
- Moghadam, V. (2003). *Modernizing women: Gender and social change in the Middle East* (2nd ed.). Boulder, CO: Lynne Reinner Publishers, Inc.
- Moghadam, V. (2005). The feminization of poverty and women's human rights. *SHS Papers in Women's Studies/Gender Research*, No. 2. Retrieved from:  
[http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/SHS/pdf/Feminization\\_of\\_Poverty.pdf](http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/SHS/pdf/Feminization_of_Poverty.pdf)
- Morgan, S. P., Stash, S., Smith, H. L., & Mason, K. O. (2002). Muslim and non-Muslim differences in female autonomy and fertility: Evidence from four Asian countries. *Population and Development Review*, 28(3), 515-537.

- Moursund, A., & Oystein, K. (2003). Individual and community effects of women's education and autonomy on contraceptive use in India. *Population Studies*, 57, 285-301.
- Murthi, M., Guio, A. C., & Dreze, J. (1995). Mortality, fertility, and gender bias in India: A district-level analysis. *Population and Development Review*, 21(4), 745-782.
- Nath, D. C., Land, K. C., & Goswami, G. (1999). Effects of the status of women on the first-birth interval in Indian urban society. *Journal of Biosocial Science*, 31(01), 55-69.
- National Institute of Population Research and Training (NIPORT), Mitra and Associates, and Macro International. (2009). *Bangladesh Demographic and Health Survey 2007*. Dhaka, Bangladesh and Calverton, Maryland, USA.
- Naved, R. T., Azim, S., Bhuiya, A., & Persson, L. A. (2006). Physical violence by husbands: magnitude, disclosure and help-seeking behavior of women in Bangladesh. *Social Science & Medicine*, 62(12), 2917-2929.
- Naved, R. T., & Persson, L. A. (2005). Factors associated with spousal physical violence against women in Bangladesh. *Studies in Family Planning*, 36(4), 289-300.
- Nelson, E., & Zimmerman, C. (1996). Household survey on domestic violence in Cambodia. Phnom Penh, Cambodia: Ministry of Women's Affairs and Project Against Domestic Violence.
- Nussbaum, M. (2000). *Women and human development: The capabilities approach*. New York: Cambridge Press.
- O'Brien, J. E. (1971). Violence in divorce prone families. *Journal of Marriage and the Family*, 33, 692-698.
- Panda, P., & Agarwal, B. (2005). Marital violence, human development, and women's property status in India. *World Development*, 33(5), 823-850.
- Papreen, N., Sharma, A., Sabin, K., Begum, L., Ahsan, S. K., & Baqui, A. H. (2000). Living with infertility: Experiences among urban slum populations in Bangladesh. *Reproductive Health Matters*, 8(15), 33-44.

- Parreñas, R. S. (2001). *Servants of globalization: Women, migration, and domestic work*. California: Stanford University Press.
- Phillips, J. F., & Hossain, M. B. (2003). The impact of household delivery of family planning services on women's status in Bangladesh. *International Family Planning Perspectives*, 29(3), 138-145.
- Pitt, M. M., & Khandker, S. R. (1998). The impact of group-based credit programs on poor households in Bangladesh: Does the gender of participants matter? *Journal of Political Economy*, 106, 958-996.
- Pogge, T. (2002). *World poverty and human rights*. Oxford: Blackwell.
- Quisumbing, A. R., & Maluccio, J. A. (1999). Intrahousehold allocating and gender relations: New empirical evidence *Policy Research Report on Gender and Development, Working Paper Series No.2, World Bank Development Research Group/Poverty Reduction and Economic Management Network*. Washington, DC: World Bank.
- Rani, M., & Bonu, S. (2008). Attitudes toward wife beating: A cross-country study in Asia. *Journal of Interpersonal Violence*, 24(8), 1371-1397.
- Rao, V. (1997). Wife-beating in rural south India: A qualitative and econometric analysis. *Social Science & Medicine*, 44(8), 1169-1180.
- Rao, V., & Waters, B. A. (1995). *The link between female sterilization and wife-abuse in India: An ethnographic and statistical investigation*. Paper presented at the Population Association of America meeting, San Francisco, CA.
- Raschen, M., & Shah, F. (2006). *Bangladesh gender profile*. Frankfurt am Main: KfW Development Bank.
- Robinson, W. C. (2007). Family planning programs and policies in Bangladesh and Pakistan. In W. C. Robinson & J. A. Ross (Eds.), *The global family planning revolution: Three decades of population policies and programs*. Washington, DC: The World Bank.
- Rodman, H. (1972). Marital power and the theory of resources in cultural context. *Journal of Comparative Family Studies*, 3, 50-59.
- Rowlands, J. (1995). Empowerment examined. *Development in Practice*, 5(2), 101-107.

- Saleem, S., & Bobak, M. (2005). Women's autonomy, education and contraception use in Pakistan: A national study. *Reproductive Health, 2*(1), 8.
- Sami, N., & Ali, T. S. (2006). Psycho-social consequences of secondary infertility in Karachi. *Journal of the Pakistan Medical Association, 56*(1), 19-22.
- Santillán, D., Schuler, S., Anh, H., Minh, T., Trang, Q., & Duc, N. (2004). Developing indicators to assess women's empowerment in Vietnam. *Development in Practice, 14*(4), 534-549.
- Schei, B. (1991). Physically abusive spouse: A risk factor of pelvic inflammatory disease. *Scandinavian Journal of Primary Health Care, 9*, 41-45.
- Schei, B., & Bakketeig, L. S. (1989). Gynaecological impact of sexual and physical abuse by spouse. A study of a random sample of Norwegian women. *British Journal of Obstetrics and Gynaecology, 96*, 1379-1383.
- Schuler, S. R. (1999). The next chapter in Bangladesh's demographic success story: Conflicting readings. *Reproductive Health Matters, 7*(13), 145-153.
- Schuler, S. R., Bates, L. M., & Islam, F. (2008). Women's rights, domestic violence, and recourse seeking in rural Bangladesh. *Violence Against Women, 14*(3), 326-345.
- Schuler, S. R., & Hashemi, S. M. (1994). Credit programs, women's empowerment, and contraceptive use in rural Bangladesh. *Studies in Family Planning, 25*(2), 65-76.
- Schuler, S. R., Hashemi, S. M., & Badal, S. H. (1998). Men's violence against women in rural Bangladesh: Undermined or exacerbated by microcredit programmes? *Development in Practice, 8*(2), 148-157.
- Schuler, S. R., Hashemi, S. M., Cullum, A., & Hassan, M. (1996). The advent of family planning as a social norm in Bangladesh: Women's experiences. *Reproductive Health Matters, 7*, 66-78.
- Schuler, S. R., Hashemi, S. M., & Jenkins, A. H. (1995). Bangladesh's family planning success story: a gender perspective. *International Family Planning Perspectives, 21*(4), 132-137.



- Schuler, S. R., Hashemi, S. M., Riley, A. P., & Akhter, S. (1996). Credit programs, patriarchy and men's violence against women in rural Bangladesh. *Social Science & Medicine*, 43(12), 1729-1742.
- Schuler, S. R., & Islam, F. (2008). Women's acceptance of intimate partner violence within marriage in rural Bangladesh. *Studies in Family Planning*, 39(1), 49-58.
- Seabrook, J. (1996). *In the cities of the South: Scenes from a developing world*. New York: Verso Books.
- Sen, A. (1999). *Development as freedom*. Oxford: Oxford University Press.
- Sen, G. (1994). Women's empowerment and human rights: The challenges to policy. In F. Graham-Smith (Ed.), *Population, the complex reality: A report of the Population Summit of the World's Scientific Academies*. Golden, CO: Fulcrum.
- Sen, G., & Batliwala, S. (2000). Empowering women for reproductive rights. In H. Presser & G. Sen (Eds.), *Women's empowerment and demographic processes: Moving beyond Cairo*. Oxford: Clarendon Press.
- Silverman, J. G., Gupta, J., Decker, M. R., Kapur, N., & Raj, A. (2007). Intimate partner violence and unwanted pregnancy, miscarriage, induced abortion, and stillbirth among a national sample of Bangladeshi women. *British Journal of Obstetrics and Gynaecology*, 114(10), 1246-1252.
- Simmons, R., Baqee, L., Koenig, M., & Phillips, J. F. (1988). Beyond supply: The importance of family planning workers in rural Bangladesh. *Studies in Family Planning*, 19(1), 29-38.
- Singh, S., Cabigon, J., Hossain, A., Kamal, H., & Perez, A. (1997). Estimating the level of abortion in the Philippines and Bangladesh. *International Family Planning Perspectives*, 23(3), 100-144.
- Singh, S., Wulf, D., & Jones, H. (1997). Health professionals' perceptions about induced abortion in South Central and Southeast Asia. *International Family Planning Perspectives*, 23(2), 59-72.
- Straus, M. A., Gelles, R. J., & Steinmetz, S. K. (1980). *Behind Closed Doors: Violence in the American Family*. New York: Doubleday / Anchor.
- Sudha, S., & Rajan, S. I. (1999). Female demographic disadvantage in India 1981-1991: Sex selective abortions and female infanticide. *Development and Change*, 30(3), 585-618.

- Sugarman, D. B., & Hotaling, G. T. (1989). Violent men in intimate relationships: An analysis of risk markers. *Journal of Applied Social Psychology, 19*, 1034-1048.
- Thomas, D. (1990). Intrahousehold resource allocation: An inferential approach. *Journal of Human Resources, 26*, 635-664.
- Thomas, D. (1997). Incomes, expenditures, and health outcomes: Evidence on intrahousehold resource allocation. In L. Haddad, J. Hoddinott & H. Alderman (Eds.), *Intrahousehold resource allocation in developing countries: Models, methods, and policy*. Baltimore, MD: Johns Hopkins University Press.
- Unisa, S. (1999). Childlessness in Andhra Pradesh, India: Treatment-seeking and consequences. *Reproductive Health Matters, 7*(13), 54-64.
- United Nations (UN). (1994). *Report of the International Conference on Population and Development*. Cairo, Egypt: United Nations. Retrieved from:  
<http://www.un.org/popin/icpd/conference/offeng/poa.html>
- United Nations (UN). (1996). *Report of the Fourth World Conference on Women Beijing, 4-15 September 1995*. New York: United Nations. Retrieved from:  
<http://www.un.org/womenwatch/daw/beijing/pdf/Beijing%20full%20report%20E.pdf>
- United Nations (UN). (2005). *United Nation's common country assessment of Bangladesh*. Geneva: United Nations. Retrieved from: [http://web.undp.org/asia/country\\_programme/CCA/CCA-Bangladesh2005.pdf](http://web.undp.org/asia/country_programme/CCA/CCA-Bangladesh2005.pdf)
- United Nations Development Program (UNDP). (2008). *Empowered and Equal: Gender Equality Strategy 2008-2011*. Retrieved from:  
<http://www.peacewomen.org/assets/file/PWandUN/UNImplementation/ProgrammesAndFunds/UNDP/gender-equality-strategy-2008-2011.pdf>
- United Nations Development Program (UNDP). (2000). *Human development in South Asia, 2000: The gender question*. Karachi, Pakistan: Oxford University Press.

- United Nations General Assembly. (1979). *Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW)*. (United Nations, Treaty Series, vol. 1249, p. 13) Retrieved from: <http://www.unhcr.org/refworld/docid/3ae6b3970.html>
- Visaria, L. (1999). *Violence against women in India, Evidence from rural Gujarat*. Washington, DC: International Center for Research on Women.
- Vlassoff, C. (1992). Progress and stagnation: Changes in fertility and women's position in an Indian village. *Population Studies*, 46(2), 195-212.
- White, S. (1992). *Arguing with the crocodile: Gender and class in Bangladesh*. London: Zed Books.
- Wiest, R., & Mohiuddin, H. (2002). Shifting social relations and cultural changes in the livelihood strategies of women garment workers of Bangladesh. In M. Rahman (Ed.), *Globalization, environmental crisis, and social change in Bangladesh*. Dhaka: The University Press Ltd.
- Wilson-Williams, L., Stephenson, R., Juvekar, S., & Andes, K. (2008). Domestic violence and contraceptive use in a rural Indian village. *Violence Against Women*, 14(10), 1181-1198.
- Wolff, B., Blanc, A. K., & Gage, A. J. (2000). Who decides? Women's status and negotiation of sex in Uganda. *Culture, Health, and Sexuality*, 2(3), 303-322.
- Wood, K., & Jewkes, R. (1997). Violence, rape, and sexual coercion: Everyday love in a South African township. *Gender & Development*, 5(2), 23-30.
- World Bank. (1990) *Bangladesh: Strategies for enhancing the role of women in economic development*. A World Bank Country Study. Washington, DC: World Bank.
- World Bank. (2001). *Engendering development: Through gender equality in rights, resources, and voice*. World Bank policy research report. USA: Oxford University Press. Retrieved from: [http://publications.worldbank.org/index.php?main\\_page=product\\_info&products\\_id=216](http://publications.worldbank.org/index.php?main_page=product_info&products_id=216)  
57.
- Zaman, H. (1999). Violence against women in Bangladesh: Issues and responses. *Women's Studies International Forum*, 22(1), 37-48.

Zohir, S. C. (1998). *Gender implications of industrial reforms and adjustment in the manufacturing sector of Bangladesh*. (Doctoral Dissertation). University of Manchester, Manchester.

## **Study 1: The Effects of Women's Fertility on their Empowerment in Bangladesh**

### **Abstract**

In classic patriarchal settings, a woman's fertility is often assumed to be both cause and consequence of her empowerment. However, there is limited empirical research examining fertility as a determinant of empowerment. I used nationally representative data to examine the effects of aspects of a woman's fertility on a fundamental dimension of her empowerment, household decision making, in Bangladesh, a classic patriarchal setting undergoing substantial transformation with regard to societal gender norms. Findings indicate that women's involvement in household decision making remains low. Aspects of increased fertility were negatively associated with women's empowerment. Finally, fertility levels in a woman's surrounding community may have greater impact on empowerment than individual fertility. Findings provide direction to reproductive health and empowerment programs. Additional research examining predictors of high levels of empowerment is necessary.

### **Introduction**

Empirical evidence over the last three decades suggests women's empowerment, defined variously, and their fertility mutually influence one another (Balk, 1994; Cain, Khanam, & Nahar, 1979; Mason, 1997; Moursund & Oystein, 2003). Research on this relationship is most abundant in South Asia (Malhotra, Schuler, & Boender, 2002), an area Kandiyoti described as a classical patriarchy – characterized by patrilineal extended families (or the cultural idea thereof), patrilocal marriage, and restrictive codes of behavior for women (Kandiyoti, 1988). Historically in these settings, proof of fertility and the birth of sons have been critical for a woman's social standing and economic security according to women's financial dependence on male relatives, constrained sexuality, and confinement to the domestic sphere (Cain, 1984; Vlassoff, 1992).

This region, particularly Bangladesh, has undergone substantial transformation in recent years with respect to women's fertility (National Institute of Population Research and Training [NIPORT], Mitra and Associates, & Macro International, 2009) and possible venues for and expressions of women's empowerment, such as education, employment, and participation in microcredit programs (Das, 2008). The total fertility rate has declined enormously from 6.3 children in the 1980s to the current 2.7 (NIPORT et al., 2009). New research indicates daughter valuation is increasing with male out-migration and decreasing family size (Fraser, Kress, & Shenk, 2011). In contrast with earlier enforcement of *purdah* or women's seclusion, Labor Force statistics show women's participation in the formal agriculture and manufacturing sectors is growing substantially; women presence is especially prominent in the garment industry where they comprise 90% of the work force (Bangladesh Bureau of Statistics, 2004). Consequently, long-standing gender norms relating to both fertility and empowerment are increasingly challenged as women become more visible in the changing social and economic environment.

While fertility decline is often assumed to be both cause and consequence of women's increased empowerment, there remains limited empirical research examining empowerment as an outcome of fertility, particularly in the face of shifting gender rules. Given the demographic transition in Bangladesh and the changing sense of norms to which it contributes, I investigated the influence of a woman's individual fertility and her fertility relative to her community on her empowerment.

#### *Women's empowerment and their reproductive behavior*

A variety of terms have been used in the literature in the last several decades to represent concepts of women's freedom of choice and action and women's power relative to imposed gender constraints. Terms include women's status, position, autonomy, agency, power, empowerment, etc., and corresponding measurement may be equally varied (see Malhotra et al. 2002 for a review). After appearing intermittently in the literature, by the 1980s, women's status was widely considered to be an important influence on fertility (Mason, 1986). The majority of subsequent research focused on

fertility as an outcome of women's empowerment and found mixed results, underscoring the complexity of the relationship between fertility and empowerment.

For example, employment is often considered a proxy for empowerment, (Jejeebhoy, 2000; Malhotra et al., 2002) yet the relationship between a woman's work and her fertility has varied within countries, across a woman's life-cycle, and by occupational experience (Lloyd, 1991). Women's involvement in microcredit organizations is linked with empowerment and contraceptive use, (Balk, 1997; Hashemi, Schuler, & Riley, 1996; Kabeer, 1998; Mahmud, 2000; S Mahmud, 2003) but also with intimate partner violence and financial exploitation by male family members (Mahmud, 2000; Schuler, Hashemi, & Badal, 1998; Schuler, Hashemi, Riley, & Akhter, 1996). Studies measuring empowerment via a woman's freedom of movement or role in household decisions indicate negative (Moursund & Oystein, 2003), positive (Al Riyami, Afifi, & Mabry, 2004; Chacko, 2001; Saleem & Bobak, 2005), and null associations (Fikree, Khanam, Kadir, Sajjan, & Rahbar, 2001; Morgan, Stash, Smith, & Mason, 2002; Saleem & Bobak, 2005) with contraceptive use. Further, a growing body of research indicates that prevailing gender norms in a specific context influence the relationship between empowerment and fertility (Balk, 1997; Mason & Smith, 2000; Family Health International, 2009).

#### *Defining and measuring women's empowerment*

Kabeer (2001) defines empowerment as "the expansion in one's ability to make strategic life choices in a context where this ability was previously denied" (Kabeer, 2001). This definition joins elements common to the social science discussion on empowerment, including the ideas that empowerment encompasses both a sense of agency and the existence of control and choices. Empowerment literature has further determined that empowerment exists within multiple dimensions, and that an individual may be empowered within one or overlapping areas in life but not within others. Frameworks outlining such dimensions postulate that empowerment may occur within the following areas: economic, socio-cultural, familial, legal, political, and psychological. Further,

operationalizing empowerment within these dimensions requires indicators at various levels, such as at the household, community, regional, and national level (Malhotra et al., 2002).

In the present investigation, measurement of women's empowerment was specific to the household level and involved potentially overlapping dimensions, economic and familial; empowerment is represented by a commonly used indicator, women's involvement in household decision making. In accordance with Kabeer's (2001) empowerment definition, household decision making measures are supported by the assumption that "a person's ability to make strategic life choices is linked with her access to, and control over, economic and other resources and her ability to make smaller, quotidian decisions" (Malhotra et al., 2002: p. 27).

#### *Implications of women's empowerment*

Women's empowerment is increasingly recognized as necessary to global health and development. Many prominent institutions, including the World Bank and the United Nations, have incorporated women's empowerment and gender equity into program policies and goals, citing women's empowerment as vital to poverty reduction and economic growth (World Bank, 2001; United Nations Development Program, 2008). In recent decades, several policy statements have emerged from international conferences (e.g. Beijing Platform for Action (United Nations, 1996), Cairo Programme of Action (United Nations, 1994), Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW, 2003)) in support of women's empowerment for human welfare and as a human right.

Furthermore, women's empowerment is empirically shown to have broad implications for the health and welfare of women, children, and families. Studies in various settings show women's empowerment is linked to decreases in child mortality (Basu & Basu, 1991), better height and weight outcomes for children (Haddad & Hoddinott, 1994), and increases in children's schooling (Khandker, 1998; Pitt & Khandker, 1998), and education expenditures (Quisumbing & Maluccio, 1999). With regard to household well-being, women's empowerment is associated with increases in money spent on food (Hoddinott & Haddad, 1995), increases in assets held by women (Khandker,



1998; Pitt & Khandker, 1998), and increases in household nutrient intake (Thomas, 1990, 1997). In some settings, empowered women have enhanced sexual negotiation skills (Wolff, Blanc, & Gage, 2000) and are more likely to access prenatal and delivery care (Beegle, Frankenberg, & Thomas, 1998).

Considering the gravity of women's empowerment in improving global health and welfare, the lack of empirical research examining fertility determinants of empowerment, and the shifting gender norms in South Asia, I investigated the impact of a woman's cumulative fertility on her current empowerment. Specifically, I tested the effects of a woman's individual fertility, her community's fertility, and her fertility relative to her community on her current involvement in household decision making in Bangladesh. I hypothesized that in the context of lower fertility norms, these aspects of a woman's fertility would have an inverse relationship with her empowerment.

## **Methods**

### *Data*

I used data from the 2007 Demographic and Health Survey from Bangladesh (BDHS). The 2007 BDHS was implemented by the National Institute of Population Research and Training (NIPORT) and Mitra & Associates, a Bangladeshi research firm, with technical support from ICF Macro. Data collection took place from 24 March to 11 August 2007.

The BDHS used a two-stage stratified sample based on the 2001 Bangladesh Census; enumeration areas established in the census served as the BDHS primary sampling units (PSUs). Twenty-two sampling strata were created by categorizing PSUs into rural and urban and then further dividing urban into metropolitan areas, municipalities, and other. In the first stage, 361 PSUs were selected with probability proportional to size and independently for each stratum. In the second stage, a household listing was conducted within each of the selected PSUs, and 10,819 households were selected using an equal probability systematic sampling technique.

This analysis used data exclusively from the BDHS' women's survey. All ever-married women age 10-49 who were de-facto residents in selected households were eligible for the women's

survey. Since the number of surveyed women age 10-14 was extremely low, these women were excluded from the BDHS dataset. A total of 10,996 women were interviewed. Findings presented here are limited to those women who were currently married and 15-49 years of age (N=10,146). Additional detail relevant to sampling is available in the BDHS summary report (NIPORT et al., 2009).

### *Measures*

Women's current empowerment was indicated by the four questions in the 2007 BDHS measuring women's participation in household decision making. Specifically, respondents were asked who in their household usually makes decisions about the following issues: a) health care for yourself [the respondent's], b) making major household purchases, c) making purchases for daily household needs, and d) visits to your [the respondent's] family or relatives. Women could respond by answering that the decision is made by themselves, by their husband, by someone else, by joint decision between themselves and their husband, or by joint decision between themselves and someone else. Women's decision making for each question rated a score of 2 to indicate exclusive decision making (specifically: respondent alone), 1 to indicate joint involvement in decision making (specifically: respondent and husband, respondent and someone else), and 0 to indicate non-involvement in decision making (specifically: husband, someone else, other). Women's scores for all four questions were summed, and further categorized to low, medium, and high involvement in decision making (a score of 0-3, 4, 5-8, respectively).

Fertility measures were adapted from the BDHS birth history module which records each woman's births and the corresponding survival statuses complete to the time of the survey. Fertility measures included a measure of individual fertility, of community mean fertility, and of each woman's fertility relative to her community mean. Individual fertility was represented by the total number of live-births a woman completed current to the BDHS; it does not include deceased children, incomplete pregnancies, or perinatal deaths. In preliminary analyses, individual fertility was found to have a curvilinear relationship with empowerment, suggesting the shape of a concave

downward curve. After centering the individual fertility term at the sample's mean, a quadratic fertility term was added to analyses.

To capture the changing gender norms with respect to fertility and the degree to which women met those norms, I included two additional measures of a women's fertility. Community mean fertility was represented by the mean number of live-births in each PSU. There were an average 28.7 households within each PSU (range: 15-43), and participants' individual fertility did not contribute to the calculation of their respective community mean fertility. Fertility relative to the community was a nominal variable constructed by comparing each woman's individual fertility to the mean fertility in her community. A woman whose fertility fell within  $\pm 0.5$  standard deviations from her community's mean was considered to conform to the community fertility norm and was categorized as *normative*. A woman whose fertility was between 0.5 and 1.5 standard deviations above her community's mean was considered *deviant above* the fertility norm, and a woman whose fertility was more than 1.5 standard deviations above the community mean was considered *extremely deviant above* the mean. Likewise, a woman was considered *deviant* or *extremely deviant below* the mean for fertility said standard deviations below her community mean.

Finally, several characteristics were identified in the literature as predictive of the variables of interest. Analysis controlled for these, including the respondents' age and years of education, spousal difference in years of education, length of marriage, rural or urban status, membership in a women's organization, and employment within the last year. In preliminary analyses, age was highly correlated with length of marriage (*Pearson*  $r=0.954$ ). To avoid multicollinearity, I dichotomized length of marriage at the median (13 years). Additionally, with the increase in male out-migration in Bangladesh in recent years, I controlled for whether or not the woman's husband was living at home.

### *Analysis*

Analyses were conducted using Stata 11.2 (StataCorp LP, College Station, TX). Univariate analyses were conducted with all covariates, the outcome, and variables from which analytic covariates were derived to assess their completeness and distributions. Missing data was coded as

such; no variable was missing more than 0.2% of data. Bivariate associations between covariates were estimated and potential collinearities among these variables were assessed. Sample weights and robust variance estimators accounted for the complex sample design of the BDHS.

I estimated a generalized ordered logit model to test the association between aspects of a woman's fertility and her involvement in household decision making. Data violated the proportional odds assumptions for an ordered logit model which imply that each predictor's beta coefficient is the same across all levels of the dependent variable (Long & Freese, 2006). Therefore, to account for the assumption violation, a partial proportional odds model was estimated. This model allows parameters which violate the proportional odds assumption to vary across all levels of the dependent variable while constraining parameters which do not violate the assumptions. Such a model permits us to consider the differences in the effect of each predictor on the range of the ordinal outcome (Williams, 2006). The partial proportional odds model can be written as:

$$\Pr(Y_i > j) = \frac{\exp(a_j + Fert_{ij}\beta_{Fertij} + Fert^2_{ij}\beta_{Fert2ij} + CFert_{ij}\beta_{CFert_{ij}} + RFert_{ij}\beta_{RFert_{ij}} + C_{ij}\beta_{C_{ij}})}{1 + \exp(a_j + Fert_{ij}\beta_{Fertij} + Fert^2_{ij}\beta_{Fert2ij} + CFert_{ij}\beta_{CFert_{ij}} + RFert_{ij}\beta_{RFert_{ij}} + C_{ij}\beta_{C_{ij}})}, \quad (1)$$

where  $j$  is the levels of the dependent variable (low [0], medium [1], and high [2] levels of decision making),  $i$  denotes the respondent,  $Fert$  and  $Fert^2$  represents the respondent's cumulative fertility (linear and quadratic term, respectively),  $CFert$  represents the respondent's community's mean fertility,  $RFert$  represents the respondent's fertility relative to her community, and  $C$  represents a set of socio-demographic controls.

Generalized ordered logit models can be interpreted similarly to a series of binary logistic regressions where categories of the dependent variable can be combined. In our model, low involvement in decision making is contrasted with medium and high involvement and low and medium involvement is contrasted with high involvement, resulting in two beta coefficients for unconstrained predictors. Parameters which did not violate the proportional odds assumption are

constrained and have one beta coefficient. Partial proportional odds models are particularly advantageous because they are not so restrictive as to violate the assumptions necessary for ordinal regression while being more parsimonious than an unconstrained ordered logit model or multinomial models which may estimate more parameters than necessary (Williams, 2006).

Additionally, I generated predicted probabilities based on the estimated model in equation (1). Specifically, I estimated the probability of each type of decision making involvement for women of various categorizations of relative fertility and in communities of varying levels of fertility. In these estimations, all non-varying predictors were set to their mean or mode. These predicted probabilities helped to illustrate how these aspects of fertility may predict women's optimal involvement in decision making or women most at risk for low involvement.

## **Results**

### *Sample Characteristics*

The majority of women reported low involvement in decision making (N=4,749, 46.84%). Smaller percentages of women reported medium and high involvement (29.83% and 23.34%, respectively). An investigation of each of the four decision making questions individually indicates that decision making occurs most often between the husband and the respondent jointly followed by the husband alone. Women reported exclusive decision making in the majority for daily household purchases only; exclusive decision making was minimal in the other three decision making indicators.

Women had an average of 2.43 living children (range=0-12). The mean fertility across communities ranged from 1.21-4.40. Slightly more than a third of women were categorized as normative relative to their community mean fertility (N=3,687, 36.34%). Another third were categorized as having fertility deviant above their community mean fertility; 20.48% were deviant above and 8.95% were extremely deviant above the mean. The remaining 29.64% of women were categorized as deviant below the mean, and 4.59% were extremely deviant below their community mean.

Participant mean age was 29.96 (median=29, l.s.e.=0.113). Women had an average of 4.38 years of school (range=0.17, l.s.e.=0.091), and the majority of women had less education than their spouse (N=7,188, 70.85%). A small percentage of women reported that their husband was living away from home (N=1,123, 11.07%). The median length of marriage was 13 years (range=0-39.5 years). Most women were currently living in a rural setting (N=6,342, 62.51%). Approximately a third of participants reported employment in the last twelve months (N=3,065, 30.22%), and involvement in a women's organization (N=3,739, 36.83%) such as a microcredit program. Additional characteristics are presented in Table 1.

#### *Multivariate results*

Results from the partial proportional odds model are provided in Table 2. Odds ratios ( $e^{(\beta \text{ coef.})}$ ) rather than coefficients are presented to facilitate interpretation of each independent variable's impact on decision making. The proportional odds assumption was violated for both the linear and quadratic fertility term, community mean fertility, and the control variable husband away from home. When the proportional odds assumption is not met, the effect of a predictor is not constant across all transitions of the dependent variable. Parameters for these predictors are left unconstrained to vary across all levels of the dependent variable, and therefore, two odds ratios are presented. The first odds ratio (with superscript 'a') predicts medium or high involvement in decision-making as opposed to low, and the second odds ratio (with superscript 'b') predicts high involvement compared to medium and low involvement.

Both the linear and quadratic individual fertility terms were significantly associated with decision making. Odds ratios (ORs) were greater than one for the linear term (OR=<sup>a</sup>1.133, <sup>b</sup>1.234) and less than one for the quadratic term (OR=<sup>a</sup>0.980, <sup>b</sup>0.965) in both comparisons indicating a predominately positive concave downward relationship between individual fertility and all levels of decision making. The odds of transitioning from low to at least a medium level of involvement in decision making were less extreme than those of transitioning to high level of involvement. Therefore, as individual fertility increases, the probability of having at least medium level of decision

making involvement increases but eventually declines. The same trend is true for having high opposed to low or medium level of decision making involvement, but the increase and the subsequent decline are more dramatic.

Community mean fertility also significantly predicted at least a medium level of decision making involvement. Specifically, a one unit increase in community mean fertility corresponded to a 22% decrease (OR=0.782) in the odds of having at least a medium level of involvement in decision making. Community mean fertility did not significantly predict a woman's high level of involvement in decision making. Fertility relative to the norm did not violate the proportional odds assumption, so this parameter was constrained. Women deviant above and extremely above their community's fertility were approximately 30% less likely to have increased decision making involvement relative to women with fertility normative to their community (OR=0.715, 0.699 respectively). Decision making was not significantly different between fertility normative women compared to women with fertility deviant below their community's mean.

A number of socio-demographic variables were significantly associated with women's involvement in household decision making. The odds of increased involvement increased minimally with age (OR=1.022) and respondents' years of education (OR=1.039). Higher odds were noted for women of longer marital duration relative to those of shorter duration (OR=1.287), women with membership in a women's organization such as Proshika or Grameen Bank (OR=1.175), and for women employed within the previous twelve months (OR=1.275). The strongest predictor of women's increased involvement in decision making was absence of the husband in the home. Relative to women with husbands at home, women with absent husbands were 2.451 times more likely to have at least a medium level of decision making and 5.698 times more likely to have high level of involvement in decision making. Women with more years of education than their husband, relative to those with less, were 22% less likely to have increased involvement in decision making.

Women living in a rural setting were 27% less likely to have increased involvement in decision making.<sup>1,2</sup>

*Graphed predicted probabilities*

Based on the partial proportional odds model estimates, predicted probabilities were generated for each level of involvement in household decision making by individual fertility. Estimates are presented in Figure 1 for women extremely deviant above and normative to their community's mean fertility in three community settings of low, medium, and high fertility levels. Several trends may be noted from the predicted probability graphs in Figure 1. Individual fertility maintains a quadratic relationship with decision making as evidenced by the concave lines in each graph. The probability of low involvement in decision making is highest at fertility extremes: when women have no children or high numbers of children. Correspondingly, the probability of medium levels of involvement in decision making is the opposite; the probability is lowest when women have low or high fertility and is highest at a mid-level of fertility. The probability of women having high

---

<sup>1</sup> A partial proportional odds model was also estimated for the summative decision making score (range 0-8) before categorization to low, medium, and high levels of involvement. Bonferroni adjusted post-hoc testing determined that the majority of unconstrained parameters for the summative score were not significantly different from one another.

<sup>2</sup> We also estimated partial proportional odds models with each individual decision making indicator on the same set of fertility and control variables to address the possibility that the constructed decision making score might mask the differential effects of predictors on distinct aspects of decision making (Malhotra et al., 2002). Beta coefficients for community mean fertility and relative fertility were similar in significance, direction, impact, and proportional odds assumption violation for each individual decision making indicator. Coefficients for individual fertility differed only in significance in two transitions (low compared to medium and high involvement) for decisions about major household purchases and visits to family and relatives. Thus, we concluded the constructed decision making score did not mask differential aspects of decision making. Results are available on request.



involvement in decision making is very small. These trends appear across all three community types.

Low community mean fertility has improved impact on women's decision making involvement. The probability of a medium level of decision making is highest in communities with low mean fertility, and the probability of respondents reporting low involvement in decision making is highest in communities with high mean fertility. The probability of a high decision making score is similar across all community fertility levels; indeed, as presented in Table 2, community mean fertility is not significantly associated with high involvement in decision making compared to medium and low levels.

Across all three community settings, women with normative fertility have higher probability of both medium and high involvement in decision making and a lower probability of low involvement than women with fertility deviant extremely above their community. Since the predicted probabilities for high involvement is so small, perhaps the optimal decision making situation estimated by the model is for normative women in communities with low fertility. Women with these characteristics have the highest probability for medium involvement in decision making.

## **Discussion**

In classic patriarchal settings, such as Bangladesh, women's fertility has historically been crucial to a woman's standing within her family and community, yet demographic transition suggests gender norms relating to both fertility and empowerment are increasingly challenged. I used nationally representative data from Bangladesh to test the influence of a woman's fertility on a fundamental dimension of her empowerment, household decision making. I found that aspects of a women's cumulative fertility were significantly associated with her current involvement in household decision making. For the most part, increased fertility had a negative impact on women's empowerment.

Women's cumulative individual fertility exhibited a quadratic association with current involvement in household decision making. Our results demonstrated a predominantly positive

concave downward curve indicating that women at both low and high fertility extremes in Bangladesh were less empowered than women with mid-levels of fertility. Although the quadratic individual fertility terms significantly predicted empowerment, it is worth noting that the odds ratios were close to 1.000 (OR=<sup>a</sup>0.980, <sup>b</sup>0.965) and, therefore, suggest only marginal impact. The association between lower fertility and lower empowerment is consistent with the low percentage of voluntary infertility in Bangladesh (NIPORT et al., 2009) and the social sanctions inferred on infertile women (Papreen et al., 2000; Sami & Ali, 2006). However, the association between higher fertility and lower empowerment is interesting considering earlier theory and research has generally found more children or more sons increased a woman's empowerment (Das Gupta, 1995; Jejeebhoy, 2000; Kishor, 2000; Mumtaz & Salway, 2005). The finding that having mid-level fertility is optimal for empowerment may suggest the fertility-empowerment relationship is impacted by the lowered fertility norms concurrent with Bangladesh's demographic transition.

Women living in communities with higher mean fertility were less likely to achieve medium or high involvement in decision making. Further, the negative effect of community fertility norms (OR=0.782) on empowerment was greater than that of individual level fertility (OR= <sup>a</sup>0.980). Consistent with cross-country research (Jejeebhoy & Sathar, 2001; Mason, 1998; Mason & Smith, 2000), this finding suggests that community level factors may be a stronger influence on women's empowerment than individual level factors and, consequently, may provide better direction for empowerment and reproductive health policy and programmatic efforts. This finding also suggests that the fertility-limiting efforts of women in high fertility contexts may have minimal immediate impact on their empowerment although such efforts may gradually influence change within the community's collective consciousness over time. The community level fertility impact on women's individual empowerment also adds insight to the demographic transition and fertility decline in Bangladesh; in communities which potentially experienced less of the national fertility decline, women remain less empowered.

Women with fertility deviant above the norm in their community were also less likely to attain increased involvement in decision making. Conversely, having fertility deviant below others in one's community did not significantly predict women's empowerment. Taken together, these results again support our other findings that increased fertility is negatively associated with empowerment. Separately, these results suggest additional interpretation. First, this aspect of a woman's fertility had greater impact on her empowerment than did women's individual fertility (OR=0.715, 0.699 versus OR=<sup>a</sup>0.980, <sup>b</sup>0.965). Similar to the empowerment effects of community fertility, this finding suggests that women's fertility relative to their surrounding environment has greater impact on empowerment than individual level effects. Second, the null empowerment effect of women with lower relative fertility suggests that women are not experiencing negative consequences to this specific dimension of their empowerment for their fertility limiting behaviors. While there is evidence of mixed effects of empowerment on contraceptive use (Kishor, 2000; Mason & Smith, 2000), there remains considerable literature supporting a positive association between the two behaviors (Govindasamy & Malhotra, 1996; S. R. Schuler & Hashemi, 1994; S. R. Schuler, Hashemi, & Riley, 1997). There is limited to no research examining the impact of various aspects contraceptive use on women's empowerment.

These effects are also apparent in Figure 1, graphs of the predicted probabilities estimated from multivariate analyses. The predicted probabilities revealed that women with fertility normative to their community were consistently more likely to have increased empowerment in all community types. Of additional insight to the fertility-empowerment relationship, the probability of a woman achieving a high level of involvement in decision making was low overall. Indeed, nearly half of participants surveyed reported low involvement. This finding likely reflects the need for continued improvement in women's empowerment – even within the household sphere traditionally assigned to women. Further, this finding may indicate fertility's limited or specific impact on empowerment in that the graphed probabilities show fertility to have distinguishable effects only on low and medium levels of decision making. Recent research from India, has found that empowerment at marriage is a

stronger predictor of current empowerment than some reproductive events (Lee-Rife, 2010; MacQuarrie, 2009). Similar research investigating the impact of predictors on specific levels of empowerment may clarify how women achieve and progress to higher levels.

#### *Limitations*

Study limitations are mostly attributed to difficulties inherent in measuring women's empowerment. Household decision making represents one of many possible dimensions of empowerment, and according to Malhotra (2002: p.27) "the extent to which decision making merely reflects women's implementation of tasks relegated to them by convention remains a question." Additionally, this dimension of empowerment was reported solely by the women respondents and views of the spouse, family, or other representatives of patriarchal authority were not considered. Finally, although the present investigation established temporal precedence in that it tested the association of women's cumulative fertility and their current empowerment, data was not longitudinal and could not fully assess empowerment as a process.

#### *Conclusions*

In Bangladesh, a classic patriarchal setting undergoing substantial transition with respect to women's fertility and empowerment, I found that a woman's increased individual, community, and relative fertility were negatively associated with her empowerment. These findings contribute to the limited empirical research examining fertility as a determinant of empowerment in addition to providing direction to empowerment and reproductive health policy and programmatic efforts. Additional research is needed to examine what factors may predict high levels of women's empowerment.

**Table 1. Sample Characteristics**

	N	(%)	Mean	(linearized s.e.)	Range
<b>Dependent Variables</b>					
Categorized decision making score					
Low	4,749	(46.84)			
Medium	3,024	(29.83)			
High	2,366	(23.34)			
<b>Independent Variables</b>					
Cumulative individual fertility (linear) <sup>1</sup>					
			2.432	(0.023)	0-12
Community mean fertility <sup>1</sup>					
			2.432	(0.023)	1.208-4.400
Fertility relative to community <sup>1</sup>					
Extreme above the mean	908	(8.95)			
Above the mean	2,078	(20.48)			
Normative	3,687	(36.34)			
Below the mean	3,007	(29.64)			
Extreme below the mean	466	(4.59)			
<b>Control Variables</b>					
Age					
			29.961	(0.113)	15-49
Education (years)					
			4.384	(0.091)	0-17
Spousal difference in education					
wife < husband	7,188	(70.85)			
wife = husband	1,177	(11.60)			
wife > husband	1,781	(17.55)			
Husband away from home					
	1,123	(11.07)			
Long marital duration (>13 years)					
	5,369	(52.92)			
Rural					
	6,342	(62.51)			
Women's organization membership					
	3,739	(36.83)			
Recent employment					
	3,065	(30.22)			
Wealth index					
(1) poorest	1,600	(15.77)			
(2)	1,837	(18.11)			
(3)	1,950	(19.22)			
(4)	2,070	(20.40)			
(5) richest	2,689	(26.50)			

**Table 2. Effects of Fertility on Household Decision Making, Generalized Ordered Logistic Regression (constrained)**

N= 10,110

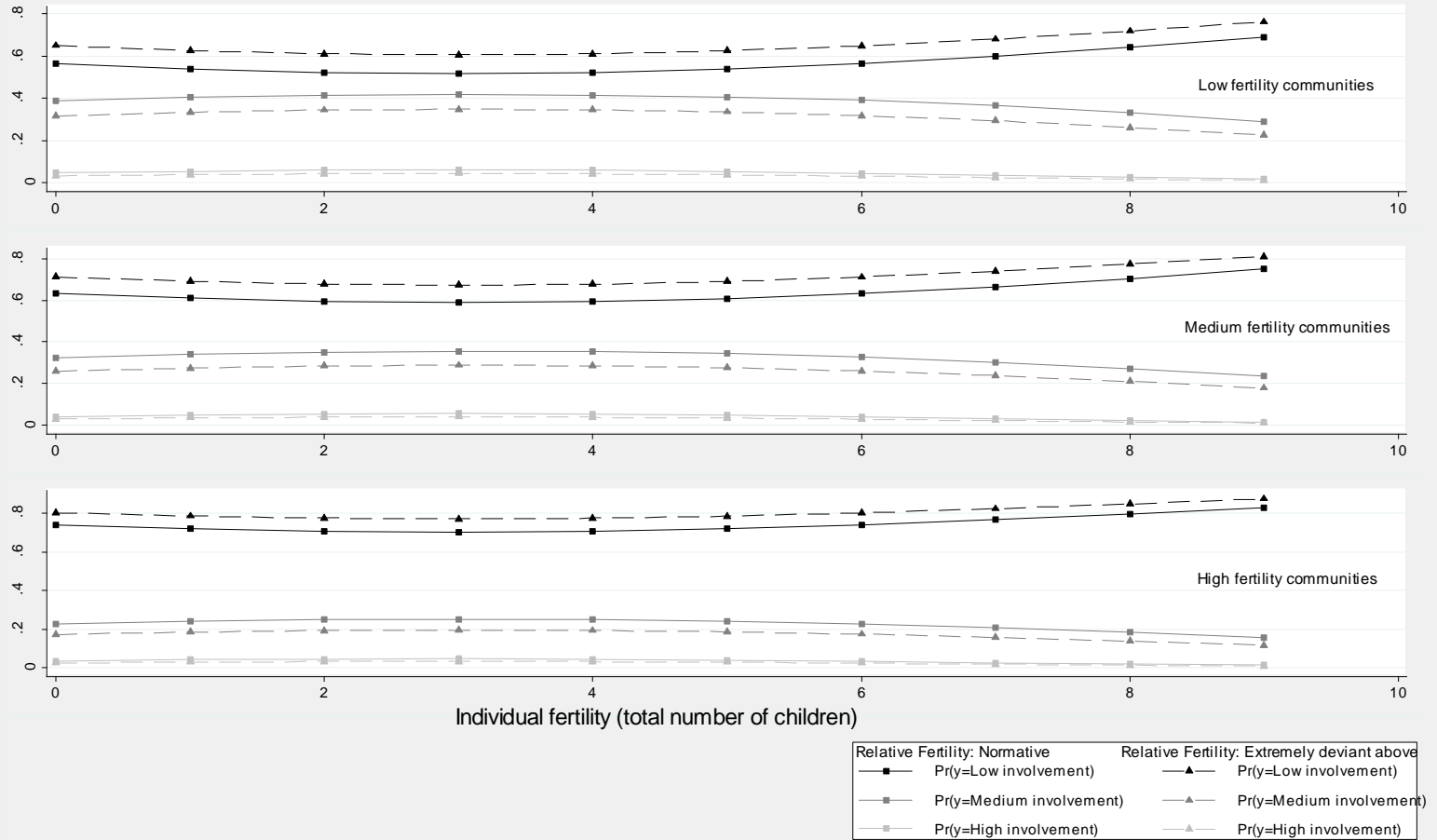
Predictor	OR	(Robust s.e.)	Confidence Interval
Cumulative individual fertility (linear)	<sup>a</sup> 1.133**	(0.049)	1.040 - 1.234
	<sup>b</sup> 1.234***	(0.056)	1.129 - 1.350
Cumulative individual fertility (quadratic)	<sup>a</sup> 0.980*	(0.008)	0.964 - 0.995
	<sup>b</sup> 0.965***	(0.009)	0.946 - 0.983
Community mean fertility	<sup>a</sup> 0.782**	(0.058)	0.675 - 0.905
	<sup>b</sup> 0.904	(0.079)	0.760 - 0.931
Fertility relative to community, ref: normative			
Extreme above the mean	0.699*	(0.101)	0.604 - 0.846
Above the mean	0.715***	(0.061)	0.526 - 0.929
Below the mean	0.998	(0.092)	0.833 - 1.196
Extreme below the mean	0.998	(0.170)	0.713 - 1.397
Age (years)	1.022***	(0.004)	1.013 - 1.030
Education (years)	1.039***	(0.007)	1.025 - 1.053
Education relative to husband, ref: wife < husband			
wife = husband	0.948	(0.078)	0.807 - 1.114
wife > husband	0.786**	(0.059)	0.677 - 0.912
Husband away from home	<sup>a</sup> 2.451***	(0.195)	2.096 - 2.866
	<sup>b</sup> 5.698***	(0.492)	4.811 - 6.753
Long marital duration	1.287**	(0.099)	1.106 - 1.496
Rural	0.738***	(0.051)	0.645 - 0.845
Membership in women's organization	1.175**	(0.069)	1.047 - 1.319
Recent employment	1.275***	(0.064)	1.156 - 1.408

\* $p \leq .05$ , \*\* $p \leq .01$ , \*\*\* $p \leq .001$

<sup>a</sup>Results for a response Low vs. Medium, High level of decision making

<sup>b</sup>Results for any response Low, Medium vs. High level of decision making

Figure 1. Predicted probabilities of women's involvement in household decision making by individual fertility and relative fertility.



## References

- Al Riyami, A., Afifi, M., & Mabry, R. M. (2004). Women's autonomy, education and employment in Oman and their influence on contraceptive use. *Reproductive Health Matters*, 12, 144 - 154.
- Balk, D. (1994). Individual and community aspects of women's status and fertility in rural Bangladesh. *Population Studies*, 48, 21-45.
- Balk, D. (1997). Defying gender norms in rural Bangladesh: A social demographic analysis. *Population Studies*, 51, 153-172.
- Bangladesh Bureau of Statistics. (2004). *Report on Labour Force Survey*. Dhaka: Bangladesh Bureau of Statistics.
- Basu, A. M., & Basu, K. (1991). Women's economic roles and child survival: The case of India. *Health Transition Review*, 1(1), 83-103.
- Beegle, K., Frankenberg, E., & Thomas, D. (1998). Bargaining power within couples and use of prenatal and delivery care in Indonesia. *Studies in Family Planning*, 32(2), 130-146.
- Cain, M. (1984). *Women's status and fertility in developing countries: Son preference and economic security*. Washington, DC: The World Bank.
- Cain, M., Khanam, S. R., & Nahar, S. (1979). Class, patriarchy, and women's work in Bangladesh. *Population and Development Review*, 5(3), 405-438.
- CEDAW. (2003). *Consideration of Reports submitted by State Parties under Article 18 of the CEDAW*. Fifth Periodic Report of State Parties. Bangladesh. (CEDAW/C/BGD/5). New York: United Nations.
- Chacko, E. (2001). Women's use of contraception in rural India: A village-level study. *Health & Place*, 7(3), 197-208.
- Das Gupta, M. (1995). Life course perspectives on women's autonomy and health outcomes. *American Anthropologist*, 97(3), 481-491.
- Das, M. (2008). Whispers to voices: Gender and social transformation in Bangladesh. *Bangladesh Development Series*. Washington, DC: The World Bank.



- Family Health International (FHI). (2009). Women's voices, women's lives: The impact of family planning. A synthesis of findings from the Women's Studies Project. Retrieved from: <http://www.fhi.org/en/RH/Pubs/wsp/synthesis/index.htm>
- Fikree, F. F., Khanam, S. R., Kadir, M. M., Sajan, F., & Rahbar, M. H. (2001). What influences contraceptive use among young women in urban squatter settlements of Karachi, Pakistan? *International Family Planning Perspectives*, 27(3), 130-136.
- Fraser, R. S., Kress, H., & Shenk, M. K. (2011). *Daughters are good in every way: Fertility decline and changing child gender preference in rural Bangladesh*. Paper presented at the Population Association of America 2011 Annual Meeting, Washington, DC.
- Govindasamy, P., & Malhotra, A. (1996). Women's position and family planning in Egypt. *Studies in Family Planning*, 27(6), 328-340.
- Haddad, L., & Hoddinott, J. (1994). Women's income and boy-girl anthropometric status in Cote d'Ivoire. *World Development*, 22(4), 543-553.
- Hashemi, S. M., Schuler, S. R., & Riley, A. P. (1996). Rural credit programs and women's empowerment in Bangladesh. *World Development*, 24(4), 635-653.
- Hoddinott, J., & Haddad, L. (1995). Does female income share influence household expenditures? Evidence from Cote d'Ivoire. *Oxford Bulletin of Economics and Statistics*, 57(1), 77-96.
- Jejeebhoy, S. J. (2000). Women's autonomy in rural India: Its dimensions, determinants, and the influence of context. In H. Presser & G. Sen (Eds.), *Women's empowerment and demographic processes: Moving beyond Cairo*. Oxford: Clarendon Press.
- Jejeebhoy, S. J., & Sathar, Z. A. (2001). Women's autonomy in India and Pakistan: The influence of religion and region. *Population & Development Review*, 27, 687-712.
- Kabeer, N. (1998). *Money can't buy me love? Re-evaluating gender, credit and empowerment in rural Bangladesh*. University of Sussex: Institute of Development Studies.

- Kabeer, N. (2001). Resources, agency, achievements: Reflections on the measurement of women's empowerment. *Discussing Women's Empowerment-Theory and Practice* (Vol. Sida Studies). Novum Grafiska AB, Stockholm
- Kandiyoti, D. (1988). Bargaining with patriarchy. *Gender & Society*, 2(3), 274-290.
- Khandker, S. R. (1998). *Fighting poverty with microcredit: Experience in Bangladesh*. Washington, DC: World Bank.
- Kishor, S. (2000). Empowerment of women in Egypt and links to the survival and health of their infants. In H. Presser & G. Sen (Eds.), *Women's empowerment and demographic processes: Moving beyond Cairo*. Oxford: Clarendon Press.
- Lee-Rife, S. (2010). Women's empowerment and reproductive experiences over the lifecourse. *Social Science & Medicine*, 71, 634-642.
- Lloyd, C. (1991). The contribution of the World Fertility Surveys to an understanding of the relationship between women's work and fertility. *Studies in Family Planning*, 22(3), 144-161.
- Long, J. S., & Freese, J. (2006). *Regression models for categorical dependent variables using Stata* (2nd ed.). College Station, TX: Stata Press.
- MacQuarrie, K. (2009). *Women's empowerment across the life course in Madhya Pradesh, India: The influence of time-varying and fixed-time covariates*. Paper presented at the Population Association of America 2009 Annual Meeting, Detroit, MI.
- Mahmud, S. (2000). The gender dimensions of programme participation: Who joins a microcredit programme and why? *The Bangladesh Development Studies*, 26(2&3), 79-101.
- Mahmud, S. (2003). Actually how empowering is microcredit? *Development and Change*, 34(4), 577-605.
- Malhotra, A., Schuler, S. R., & Boender, C. (2002). *Measuring women's empowerment as a variable in international development*. Paper commissioned by the World Bank, Gender and Development Group. Retrieved from:  
<http://siteresources.worldbank.org/INTGENDER/Resources/MalhotraSchulerBoender.pdf>

- Mason, K. O. (1986). The status of women: Conceptual and methodological issues in demographic studies. *Sociological Forum*, 1, 284 - 300.
- Mason, K. O. (1997). How family position influences married women's autonomy and power in five Asian countries. In M. E. Cosio-Zavala (Ed.), *Women and families: Evolution of the status of women as factor and consequence of changes in family dynamics* (pp. 353-370). Paris: CICRED.
- Mason, K. O. (1998). Wives' economic decision-making power in the family: Five Asian countries. In K. O. Mason (Ed.), *The changing family in comparative perspective: Asia and the United States*. Honolulu: East-West Center.
- Mason, K. O., & Smith, H. L. (2000). Husbands' versus wives' fertility goals and use of contraception: The influence of gender context in five Asian countries. *Demography*, 37(3), 299-311.
- Morgan, S. P., Stash, S., Smith, H. L., & Mason, K. O. (2002). Muslim and non-Muslim differences in female autonomy and fertility: Evidence from four Asian countries. *Population and Development Review*, 28(3), 515-537.
- Moursund, A., & Oystein, K. (2003). Individual and community effects of women's education and autonomy on contraceptive use in India. *Population Studies*, 57, 285-301.
- Mumtaz, Z., & Salway, S. (2005). 'I never go anywhere': Extricating the links between women's mobility and uptake of reproductive health services in Pakistan. *Social Science & Medicine*, 60, 1751 - 1765.
- National Institute of Population Research and Training (NIPORT), Mitra and Associates, and Macro International. (2009). Bangladesh Demographic and Health Survey 2007. Dhaka, Bangladesh and Calverton, Maryland, USA.
- Papreen, N., Sharma, A., Sabin, K., Begum, L., Ahsan, S. K., & Baqui, A. H. (2000). Living with infertility: Experiences among urban slum populations in Bangladesh. *Reproductive Health Matters*, 8(15), 33-44.

- Pitt, M. M., & Khandker, S. R. (1998). The impact of group-based credit programs on poor households in Bangladesh: Does the gender of participants matter? *Journal of Political Economy*, 106, 958-996.
- Quisumbing, A. R., & Maluccio, J. A. (1999). Intrahousehold allocating and gender relations: New empirical evidence. *Policy Research Report on Gender and Development, Working Paper Series No.2, World Bank Development Research Group/Poverty Reduction and Economic Management Network*. Washington, DC: World Bank.
- Saleem, S., & Bobak, M. (2005). Women's autonomy, education and contraception use in Pakistan: A national study. *Reproductive Health*, 2(1), 8.
- Sami, N., & Ali, T. S. (2006). Psycho-social consequences of secondary infertility in Karachi. *Journal of the Pakistan Medical Association*, 56(1), 19-22.
- Schuler, S. R., & Hashemi, S. M. (1994). Credit programs, women's empowerment, and contraceptive use in rural Bangladesh. *Studies in Family Planning*, 25(2), 65-76.
- Schuler, S. R., Hashemi, S. M., & Badal, S. H. (1998). Men's violence against women in rural Bangladesh: Undermined or exacerbated by microcredit programmes? *Development in Practice*, 8(2), 148-157.
- Schuler, S. R., Hashemi, S. M., & Riley, A. P. (1997). The influence of women's changing roles and status in Bangladesh's fertility transition: Evidence from a study of credit programs and contraceptive use. *World Development*, 25(4), 563-575.
- Schuler, S. R., Hashemi, S. M., Riley, A. P., & Akhter, S. (1996). Credit programs, patriarchy and men's violence against women in rural Bangladesh. *Social Science & Medicine*, 43(12), 1729-1742.
- Thomas, D. (1990). Intrahousehold resource allocation: An inferential approach. *Journal of Human Resources*, 26, 635-664.
- Thomas, D. (1997). Incomes, expenditures, and health outcomes: Evidence on intrahousehold resource allocation. In L. Haddad, J. Hoddinott & H. Alderman (Eds.), *Intrahousehold resource*

*allocation in developing countries: Models, methods, and policy*. Baltimore, MD: Johns Hopkins University Press.

United Nations (UN). (1994). *Report of the International Conference on Population and Development*. Cairo, Egypt: United Nations. Retrieved from:

<http://www.un.org/popin/icpd/conference/offeng/poa.html>

United Nations (UN). (1996). *Report of the Fourth World Conference on Women Beijing, 4-15 September 1995*.

New York: United Nations. Retrieved from:

<http://www.un.org/womenwatch/daw/beijing/pdf/Beijing%20full%20report%20E.pdf>

United Nations Development Program (UNDP). (2008). *Empowered and Equal: Gender Equality Strategy 2008-2011*. Retrieved from:

<http://www.peacewomen.org/assets/file/PWandUN/UNImplementation/ProgrammesAndFunds/UNDP/gender-equality-strategy-2008-2011.pdf>

Vlassoff, C. (1992). Progress and stagnation: Changes in fertility and women's position in an Indian village. *Population Studies*, 46(2), 195-212.

Williams, R. (2006). Generalized ordered logit/ partial proportional odds models for ordinal dependent variables. *The Stata Journal*, 6(1), 58-82.

Wolff, B., Blanc, A. K., & Gage, A. J. (2000). Who decides? Women's status and negotiation of sex in Uganda. *Culture, Health, and Sexuality*, 2(3), 303-322.

World Bank. (2001). *Engendering development: Through gender equality in rights, resources, and voice*. World Bank policy research report. USA: Oxford University Press. Retrieved from:

[http://publications.worldbank.org/index.php?main\\_page=product\\_info&products\\_id=216](http://publications.worldbank.org/index.php?main_page=product_info&products_id=216)

57.

## **Study 2: Effects of Women's Fertility on Empowerment and Intimate Partner Violence: A Mediation Analysis**

### **Abstract**

Women's empowerment is a human right and has positive implications for public health. In patriarchal settings, gender norms have historically viewed fertility as central to women's role and responsibility, and research suggests motherhood can be empowering for women since it fulfills their assigned gender role. Women who challenge fertility-related gender norms in these settings may be at-risk for intimate partner violence (IPV) since violence may be used as a mechanism to reestablish the patriarchal gender order. Using nationally representative data, I investigated the direct and indirect effects of women's fertility on their empowerment, measured via household decision making, in Bangladesh, a patriarchal setting with a historically strict gender system. I found that cumulative fertility matters only very modestly and that women are no longer empowered by high fertility the way they may have been in previous years. Having at least one child, though not necessarily a son, remains important for women's empowerment. IPV does not mediate the relationship between fertility and women's empowerment; however, analysis revealed an association between increased fertility and IPV and between IPV and increased empowerment. These findings contribute to our overall understanding of the complex interplay between fertility and empowerment and provide guidance to empowerment promotion efforts. Additional research is needed to examine fertility and IPV's association with additional dimensions of empowerment and within societies undergoing demographic transition.

### **Introduction**

Women's empowerment, defined as women's agency or ability to make strategic life choices in a context where this ability was previously denied (Kabeer, 2001), is a human right (United Nations, 1994) and is shown globally to have positive implications for women's (Beegle,

Frankenberg, & Thomas, 1998; Wolff, Blanc, & Gage, 2000), children's (Basu & Basu, 1991; Haddad & Hoddinott, 1994), and household health (Hoddinott & Haddad, 1995; Thomas, 1990, 1997). In order to efficiently promote women's empowerment, efforts must be made to understand factors that influence it. In patriarchal settings, data suggests fertility can play a strong role in women's empowerment since motherhood is shown to improve a woman's status within the household and the larger community (Cain, 1984; Das Gupta, 1995; Kishor, 2000; Vlassoff, 1992).

There are many reasons fertility could influence women's empowerment in patriarchal settings. One explanation may be fertility's importance to the fulfillment of women's defined gender roles, specifically in settings classified as "classic patriarchies." Classic patriarchies refer to settings characterized by patrilineal descent, patrilocal extended families, and strictly defined gender norms. The label was first used by Kandiyoti (1988, 1991) to describe systems of male dominance in North Africa, the Middle East, and South Asia. Gender norms in these classic patriarchies and their associated codes of behavior are, in part, driven by a powerful ideology linking family honor to female virtue, good conduct, and premarital virginity (Kabeer, 1988). In attitudes and appearance, women are expected to be modest and self-effacing – virginal before marriage and matronly thereafter (Kabeer, 1988; Moghadam, 2003). Childbearing is viewed as the essence of woman-hood and is considered central to a wife's duty and value (Inhorn, 1996; Moghadam, 2003). In addition to fulfilling expectations of normative femininity, producing children can provide economic security, a measure of the husband's masculinity, and continuation of the family name (Inhorn, 1996). In classic patriarchies, therefore, women usually practice some degree of veiling or physical segregation from men, nearly universal marriage, high fertility, and son preference (Kandiyoti, 1988; Moghadam, 2003).

Parallel to women's gender role, men in classic patriarchies are tasked with protecting and maintaining family honor through their control over female family members (Kabeer, 1988; Moghadam, 1992). When a woman's behavior is perceived to challenge or deviate from societal gender norms, such behavior may reflect negatively on her and her family. Violence against such "deviant" women may be a strategic response to reinforce the established gender order. This idea is

supported by Status Inconsistency Theory which posits that those who perceive their status as inconsistent with social norms are most at-risk for using violence (Counts, Brown, & Campbell, 1992; Rodman, 1972). Specifically, women who fail to meet fertility-related gender norms may incur partner violence when husbands perceive this failure to threaten their honor and status.

Indeed, research indicates various aspects of fertility and reproductive behavior are associated with intimate partner violence (IPV). In South Asia, studies demonstrate a positive and systematic association between physical and sexual abuse and men's reports that their wives had one or more unplanned pregnancies (Martin et al., 1999). Other studies in the same geographic region have shown a positive relationship between family violence and perceived infertility (Papreen et al., 2000; Sami & Ali, 2006; Unisa, 1999) and between partner violence and the wife's sterilization (Rao, 1997). Finally, evidence from Africa and the Middle East suggests contraceptive use can precipitate IPV (Akin & Ozaydin, 2005; Bawah, Akweongo, Simmons, & Phillips, 1999; Blanc, 2001; Ezeh, 1993).

Given the complex relationship between empowerment, fertility, and adherence to fertility-related gender norms, I investigated the direct and indirect effects of fertility on women's empowerment. I investigated these relationships in Bangladesh, a classic patriarchal setting with historically high rates of fertility and IPV. I hypothesized that aspects of fertility and conformity to fertility norms would empower women directly and that deviance from fertility norms would provoke IPV and thereby disempower women.

## **Methods**

### *Data sources*

I conducted a secondary data analysis with data from the 2007 Bangladesh Demographic and Health Survey (BDHS) women's questionnaire. The analysis was limited to currently married women of reproductive age (15-49 years) who were randomly selected and interviewed for the IPV survey module (4,195 of 10,146 currently married women). Detailed explanation of the complex sampling design and the ethical considerations for both the full survey and the IPV module is included in the



BDHS report (National Institute of Population Research and Training [NIPORT], Mitra and Associates, & Macro International, 2009).

#### *Sequential ordering of measures*

Mediation analyses were conducted to examine the effect of various aspects of fertility on empowerment as mediated by IPV. Measures included in analyses were temporally recorded by the 2007 BDHS in such a way as to allow their sequential ordering. As outlined in Figure 1, women's fertility was limited to 1+ years before the survey, experience of IPV was specific to the year immediately preceding the BDHS, and empowerment was measured current to the time of the survey. Corresponding to the temporal limit to women's fertility, I further limited the sample to women who had been married for at least one year (N=4,052). Although the sequential ordering of constructs is not sufficient to infer causality, the ordering provides an additional layer for interpretation and discussion.

#### *Dependent variable*

Women's empowerment was assessed with a commonly used proxy measure, women's involvement in household decision making. Specifically, women were asked who in their household makes decisions about the following: healthcare for themselves [the respondent], major household purchases, purchases for daily household needs, and visits to [the respondent's] family or relatives. Response options included the respondent, the respondent and husband jointly, the respondent and someone else jointly, the respondent's husband, or someone else. Decisions made exclusively by the respondent were coded 2, those made jointly by the respondent and another party were coded 1, and those made by another party completely were coded 0. Scores for all four household indicators were summed (range 0-8) and then categorized as low, medium, and high.<sup>3,4</sup>

---

<sup>3</sup> Generalized ordered logit models were also estimated for the summative decision making score (range 0-8) before its categorization to low, medium, and high levels of involvement. Bonferroni adjusted post-hoc testing determined that the majority of unconstrained parameters for the summative score were not significantly

### *Independent variables*

All fertility measures were obtained from the BDHS birth history which contains a retrospective history of respondents' pregnancies, births, and the corresponding survival status. In the first mediation model, fertility measures included a linear and quadratic term representing women's individual cumulative fertility and a nominal fertility variable representing women's conformity to the norm. Individual fertility corresponds to the total number of live-births a woman completed; it does not include deceased children, incomplete pregnancies, or perinatal deaths. In bivariate analyses, individual fertility was found to have a curvilinear relationship with empowerment, so a centered quadratic fertility term was added to analyses. The nominal fertility variable representing women's conformity to the norm was constructed by comparing each woman's individual fertility to the mean fertility in her community (BDHS primary sampling unit). A woman whose fertility fell within  $\pm 0.5$  standard deviations from her community's mean was considered to conform to the community fertility norm and was categorized as *normative*. A woman whose fertility was between 0.5 and 1.5 standard deviations above her community's mean was considered *deviant above* the fertility norm, and a woman whose fertility was more than 1.5 standard deviations above the community mean was considered *extremely deviant above* the mean. Likewise, a woman was considered *deviant* or *extremely deviant below* the mean for fertility said standard deviations below her community

---

different from one another, and therefore the ordinal low/medium/high score was considered an accurate and more parsimonious representation of the summative score.

<sup>4</sup> I also estimated generalized ordered logit models with each individual decision making indicator on the same set of fertility and control variables to address the possibility that the constructed decision making score might mask the differential effects of predictors on distinct aspects of decision making. Beta coefficients for individual fertility and relative fertility were similar in significance, direction, impact, and proportional odds assumption violation for each individual decision making indicator. Thus, I concluded the constructed decision making score did not mask differential aspects of decision making. Results available on request.

mean. In the second and third mediation models respectively, fertility measures included having at least one living child and having at least one living son.

#### *Mediating variable*

The potential mediator, recent IPV, was measured by a modified Conflict Tactics Scale (CTS) (Straus, 1990) and is based on women's report of whether or not their husband had committed one or more of the following acts against them within the past twelve months: a) push you, shake you, or throw something at you, b) slap you, c) twist your arm or pull your hair, d) punch you with his fist or with something that could hurt you, e) kick you, drag you, or beat you up, f) try to choke you or burn you on purpose, g) threaten or attack you with a knife, gun, or any other weapon, h) physically force you to have sexual intercourse with him even when you did not want to. The CTS has high reliability and construct validity across varied cultural contexts (Straus, 2007). If a woman responded "yes" to at least one of these violent acts, she was considered to have experienced IPV within the past twelve months.

#### *Control variables*

A number of controls identified in the literature as predictive of the variables of interest were included in the mediation analysis, specifically: respondents' age, years of education, spousal difference in education, rural or urban status, absence of husband from the home, and economic involvement (in paid employment or in a microcredit organization). Analyses also investigated potential demographic controls which were eventually excluded from the model since these controls remained non-significant in model building and did not impact the beta coefficients or significance of other predictors. These variables included wealth index, marital duration, observing violence between one's parents, and birth within the year immediately preceding the BDHS.

#### *Data analysis*

All data analyses were conducted with Stata/IC version 12.0 (StataCorp LP). Univariate statistics were examined to assess the completeness and distributions of all original and derived variables in the analysis. Bivariate associations between covariates were estimated and potential

collinearities among these variables were assessed. Sample weights and robust variance estimators accounted for the complex sample design of the BDHS. Three separate mediation models were estimated to test the hypothesis that a woman's experience of IPV mediates the relationship between aspects of her fertility and her empowerment. These multivariate analyses proceeded in a series of steps as outlined by Baron and Kenny (1986). The steps and their corresponding equations are outlined, as follows, for the first mediation model focused on women's cumulative fertility and their conformity to local fertility norms. The second and third mediation models proceeded similarly, except fertility was represented by having at least one child and having at least one son, respectively.

*Step 1:* Generalized ordered logistic regression was used to establish the effect of women's fertility on their empowerment. Since the empowerment dependent variable is ordinal, this relationship was first tested using ordinal regression. However, data violated the proportional odds assumption for ordinal regression; this violation indicates that the beta coefficients for one or more predictors differ across levels of the dependent variable and that the ordinal regression model is overly restrictive. The use of a generalized ordered logit model allows parameters which violate the assumption to vary across all levels of the dependent variable while constraining parameters that do not violate the assumption. Such a model permits us to consider the differences in the effect of each predictor on the range of the dependent variable. The generalized ordered logit equation used in *Step 1* can be written as (Williams, 2006):

$$\Pr(Y_i > j) = \frac{\exp(a_j + Fert_{ij}\beta_{Fertij} + Fert^2_{ij}\beta_{Fert2ij} + RFert_{ij}\beta_{RFertij} + C_{ij}\beta_{C_{ij}})}{1 + \exp(a_j + Fert_{ij}\beta_{Fertij} + Fert^2_{ij}\beta_{Fert2ij} + RFert_{ij}\beta_{RFertij} + C_{ij}\beta_{C_{ij}})} , \quad (1)$$

where  $i$  denotes the respondent,  $Y_i$  the outcome of interest for respondent  $i$ ,  $j$  is the levels of the dependent variable (low [0], medium [1], and high [2] levels of decision making),  $Fert$  and  $Fert^2$  represents the respondent's cumulative fertility (linear and quadratic term, respectively),  $RFert$

represents respondents' fertility relative to their community norm, and  $C$  represents a set of socio-demographic controls.

Generalized ordered logit models can be interpreted similarly to a series of binary logistic regressions where categories of the dependent variable can be combined. In our model, low involvement in decision making is contrasted with medium and high involvement and low and medium involvement is contrasted with high involvement, resulting in two beta coefficients for unconstrained predictors. Parameters that did not violate the proportional odds assumption are constrained and have one beta coefficient (Williams, 2006).

*Step 2:* Logistic regression was used to establish the association between women's fertility and their experience of IPV since IPV is a binary variable. Specifically,

$$\Pr(Y_i = 1) = \frac{1}{1 + \exp(a_j + Fert_i \beta_{Ferti} + Fert_i^2 \beta_{Fert2i} + RFert_i \beta_{RFerti} + C_i \beta_{C_i})}, \quad (2)$$

where  $i$  denotes the respondent,  $Y_i$  the outcome of interest (experience of IPV [1]) for respondent  $i$ ,  $Fert$  and  $Fert^2$  represents the respondent's cumulative fertility (linear and quadratic term, respectively),  $RFert$  represents respondents' fertility relative to their community norm, and  $C$  represents a set of socio-demographic controls.

*Step 3:* Generalized ordered logistic regression was used to establish the effect of the mediating variable, IPV, on women's empowerment while controlling for fertility. As in *Step 1*, the empowerment dependent variable is ordinal; thus, *Step 3* is represented by equation (1) with the addition of IPV as a predictor.

*Step 4:* The effects estimated in *Step 1-3* permit the assessment of whether experience of IPV mediates the relationship between a woman's fertility and her empowerment. A mediation effect is

established if the association between fertility and empowerment established in *Step 1* becomes non-significant and/or decreases in *Step 3* when IPV is added to the model.

## Results

### *Sample characteristics*

The majority of women reported low involvement in household decision making (N=1,796, 44.3%) with fewer women reporting medium involvement (N=1,257, 31.0%) and high involvement (N=999, 24.7%). The individual decision making indicators indicate that joint decision making between the respondent and the husband occurs most frequently followed by the husband's exclusive decision making. Women's exclusive decision making was in the majority only for daily household purchases. On average, women had 2.8 children (range 0-9). Relative to their community's fertility-related gender norm, 1,593 (39.3%) women were categorized as normative. Similar numbers of women were classified as deviant below (30.7%) and deviant above (30.0%) their community norm. A majority of women had at least one living child (89.4%), and a majority of women had at least one living son (73.3%). Approximately one-quarter of respondents reported experiencing IPV within the year preceding the BDHS.

Respondents' mean age was 30.3 years. Respondents had completed 4.2 years of schooling on average, and the majority of women had less education than their spouse (N=2,951, 72.8%). Husbands were absent from approximately 9% of respondents' homes (N=352). Women were married a mean 15 years. Approximately 60% were from rural settings, and about half (55.9%) maintained some form of economic involvement via employment or women's development organizations. Additional respondent characteristics are available in Table 1.

### *Mediation Analysis*

Results of the three mediation analyses are presented in Table 2. Odds ratios  $e^{|\beta \text{ coef.}|}$  (OR) are presented to facilitate interpretation of each predictors' association with the dependent variable. *Step 1* and *Step 3* were modeled using generalized ordered logistic regression. In each step, a few variables violated the proportional odds assumption indicating that the effect of these variables was

not constant across all levels of the outcome, women's involvement in household decision making. Accordingly, these parameters were left unconstrained and two ORs are presented; The first odds ratio (with superscript 'a') predicts medium or high involvement in decision-making as opposed to low, and the second odds ratio (with superscript 'b') predicts high involvement compared to medium and low involvement. Each model is discussed step by step.

In *Model 1, Step 1*, the quadratic individual fertility term was the only fertility measure with a significant association with women's empowerment. Since the OR is less than one (0.977), it indicates women's individual fertility has an inverse relationship, concave downward, with all levels of decision making. Although significant, an odds ratio so close to one indicates fertility has only a modest association with involvement in household decision making. None of the measures of conformity to fertility-related gender norms were significant. In *Step 2*, again only one fertility measure was significant: the linear measure of women's individual fertility. For every one child increase in a woman's fertility in the 1+ years before the BDHS, she was 1.215 times more likely to experience IPV in the past year. As in *Step 1*, none of the measures of conformity to fertility-related gender norms were significantly associated with IPV. *Model 1, Step 3*: Since the IPV measure violated the assumption of proportional odds, two ORs are presented, but the association is only significant for high decision making. Specifically, women who experienced IPV in the past year were 1.326 times more likely to achieve high levels of decision making. Also, in *Step 3*, the quadratic measure of individual fertility was found to be significantly associated with involvement in household decision making. *Model 1, Step 4* indicated that IPV did not mediate the relationship between women's fertility and their empowerment. Women's fertility (quadratic term) was significantly associated with empowerment; however, after the addition of IPV to the regression model in *Step 3*, there was no change in the OR or statistical significance of women's fertility (OR=0.977,  $p < 0.05$ ). In addition, the nominal measure of women's conformity to fertility-related gender norms was never found to be

significantly associated with women's empowerment. Thus, there was no association established for IPV to mediate between gender norm conformity and empowerment.<sup>5</sup>

*Model 2, Step 1:* having at least one living child was significantly associated with women's empowerment. Specifically, women with at least one child were 43% more likely to have increased involvement in household decision making relative to childless women. In *Step 2*, having at least one child was not significantly associated with IPV. In *Step 3*, IPV violated the proportional odds assumption and two ORs are presented. Similar to *Model 1*, IPV is only significantly associated with high involvement in household decision making; women who reported experiencing IPV in the past year were 28% more likely to report high involvement in decision making. Also, in *Step 3*, having at least one child was significantly associated with women's increased involvement in household decision making. *Model 2, Step 4* indicated that IPV did not mediate the relationship between having at least one child and empowerment; there was no change in the OR or statistical significance of this aspect of women's fertility (OR=1.423,  $p \leq 0.05$ ).

*Model 3, Step 1:* having at least one living son was not associated with women's empowerment. Additionally, in *Step 2*, having at least one son was not associated with IPV. In *Step 3*, IPV again violated the proportional odds assumption and two ORs are presented. Similar to *Models 1 and 2*, IPV is only significantly associated with high involvement in household decision making. With IPV in the *Step 3* regression model, having at least one son remains insignificant. *Model 3, Step 4:*

---

<sup>5</sup> An additional mediation analysis was explored with contraceptive use. Similar to the nominal relative fertility variable, normative contraceptive use was established by community (categories were consistent non-user, consistent user, inconsistent user) using data from the BDHS contraceptive calendar. Women whose contraceptive behavior matched the norm in their community were considered to conform to the norm, and women who did not were categorized as deviant. In Step 1 of mediation analysis, controlling for fertility and demographic predictors, no association was found for IPV to mediate between relative contraceptive use and decision making. Results made available on request.



Having at least one son was never found to be significantly associated with women's empowerment. Since there was no association established between having at least one son and empowerment for IPV to mediate, there is no evidence of mediation.

## **Discussion**

Using nationally representative data from Bangladesh, a classic patriarchal setting, I tested the direct and indirect effects of aspects of women's fertility on their empowerment. I found that only limited aspects of a woman's fertility influenced her subsequent empowerment and that a woman's recent experience of intimate partner violence did not mediate the relationship between her past fertility and current empowerment. Although these findings do not fully support the original hypotheses, on closer examination, they may still be useful to understanding the complex relationship between aspects of women's fertility, reproductive related gender norms, and empowerment.

Both mediation *Models 1* and *2* found some aspects of women's past fertility directly influenced their current empowerment. In *Model 1*, unexpectedly, results indicated null associations between women's conformity to their community's fertility levels and their empowerment. The quadratic term for women's cumulative individual fertility was the only measure of fertility in this model found to have significant direct association with women's current involvement in household decision making. Specifically, the negative odds ratio indicated that fertility maintained an inverse quadratic relationship with empowerment. As women demonstrated initial and low levels of fertility, their empowerment increased; however, empowerment eventually declined with increasing fertility. This finding was supplemented by *Model 2* which found a strong association between having a least one child and women's involvement in household decision making, further suggesting that childlessness and demonstrating fertility are critical aspects for women in Bangladesh. *Model 3* did not indicate an association between having a son and women's empowerment.

These complimentary findings may reflect the changing demographics and norms in Bangladesh. Historically a country with high fertility levels, family planning efforts throughout recent decades have drastically reduced total fertility from an average 6.3 children per woman in the 1980s

to the current 2.7 (NIPORT et al., 2009). Recent research also indicates daughter valuation is increasing (Fraser, Kress, & Shenk, 2011) suggesting a change in the classic patriarchal gender norms which favor high fertility and son preference. The question of whether fertility decline and fertility control may influence gender systems was formerly posed by Malhotra (2009) in her related conceptual framework. This framework suggests that such demographic changes can act as a lever for both empowerment and more equitable gender norms. In classic patriarchies like Bangladesh, it is possible that fertility decline and accompanying demographic shifts have transformed societal norms such that high fertility and the birth of a son is no longer expected of women. Our findings concerning childlessness and fertility's inverse quadratic relationship with empowerment suggest that past fertility still has an impact on current empowerment and that there is a threshold fertility level at which empowerment is maximized.

Perhaps additional evidence of Bangladesh's shifting demographic landscape: in *Model 1, Step 2* the linear term for women's cumulative individual fertility was positively and significantly associated with women's recent experience of IPV. Contrary to our original hypothesis, increased fertility placed women at increased risk for IPV and (non-)conformity to fertility norms did not predict IPV. The relationship between women's reproductive health and behavior is complex and difficult to further disentangle from societal gender roles. Extensive literature on the relationship suggests that both demonstration of fertility and efforts at its control are associated with violence. Studies in India indicate positive relationships between women's contraceptive use and IPV (Martin et al., 1999; Wilson-Williams, Stephenson, Juvekar, & Andes, 2008). Attitudinal data from men and women in various settings suggests clandestine contraceptive use is an acceptable cause of IPV (Bawah et al., 1999; International Institute for Population Sciences & Johns Hopkins University, 2005; Wood & Jewkes, 1997). Unplanned pregnancies are linked to IPV (Gazmararian et al., 2000; Martin et al., 1999), and pregnant women, in general, are at elevated risk for IPV (Gazmararian et al., 1996). Other aspects of reproductive health positively associated with IPV include sterilization (Rao, 1997), induced abortion and miscarriage (Evins & Chesceir, 1996; Garcia-Moreno, Jansen, Ellsberg,

Heise, & Watts, 2005; Glander, Moore, Michielutte, & Parsons, 1998), and adverse pregnancy outcomes (Campbell & Soeken, 1999; Jejeebhoy, 1998).

Research investigating the influence of IPV on a woman's empowerment is limited, but given the adverse physical and psychological sequelae associated with IPV (Campbell, 2002), it seems likely that IPV could reduce a women's empowerment. However, our findings indicate the opposite; in each model, women's experience of IPV in the past year positively predicted high levels of empowerment. This finding may be explained in conjunction with the limitations to our measure of empowerment which was exclusive to women's involvement in household decision making. It is possible that recent IPV positively predicts this dimension of women's empowerment while acting to disempower women in other dimensions (i.e. freedom of movement, access to economic resources, etc.). Of additional consideration, in classic patriarchal settings, women's assigned role is specific to the domestic sphere. Thus, women's experience of IPV in the past year may operate to further confine them to the household and thereby inflate their involvement in household decision making. Alternatively, highly empowered women may simply be more likely to recognize and report IPV. This finding may also be tied to differences in joint versus exclusive decision making; research among married couples in the Philippines found that one partner's dominance in particular household decisions was more likely to increase the occurrence of IPV (Hindin & Adair, 2002). Finally, in the BDHS, women's experience of IPV is measured specific to the 12 months preceding the survey and women are asked about their empowerment current to the time of the survey. Therefore, it is also possible that women's experience of IPV in the past year coincides with some untested predictor of empowerment. Our analysis attempted to avoid spurious conclusions by controlling for a number of suspected confounders, including employment, involvement in microcredit organizations, and (where applicable) duration of the husband's recent absence.

### *Limitations*

Study limitations are primarily due to the difficulty inherent to measuring empowerment. Women's empowerment was assessed with a commonly used proxy measure, women's involvement

in household decision making. While this measure was specific to the household level and involves potentially overlapping dimensions of empowerment (e.g. economic and familial dimensions), it does not take into account empowerment within legal, political, or community arenas. Of additional concern, this measure is static and does not address the change implied in Kabeer's (2001) definition in which empowerment is considered an 'expansion' or growth in a person's ability. As such, the measure is limited in its ability to truly assess women's empowerment as a process. However, daily household decision making as a proxy measure for empowerment is supported by the assumption that "a person's ability to make strategic life choices is linked with her access to, and control over, economic and other resources and her ability to make smaller, quotidian decisions" (Malhotra, Schuler, & Boender, 2002: p. 27).

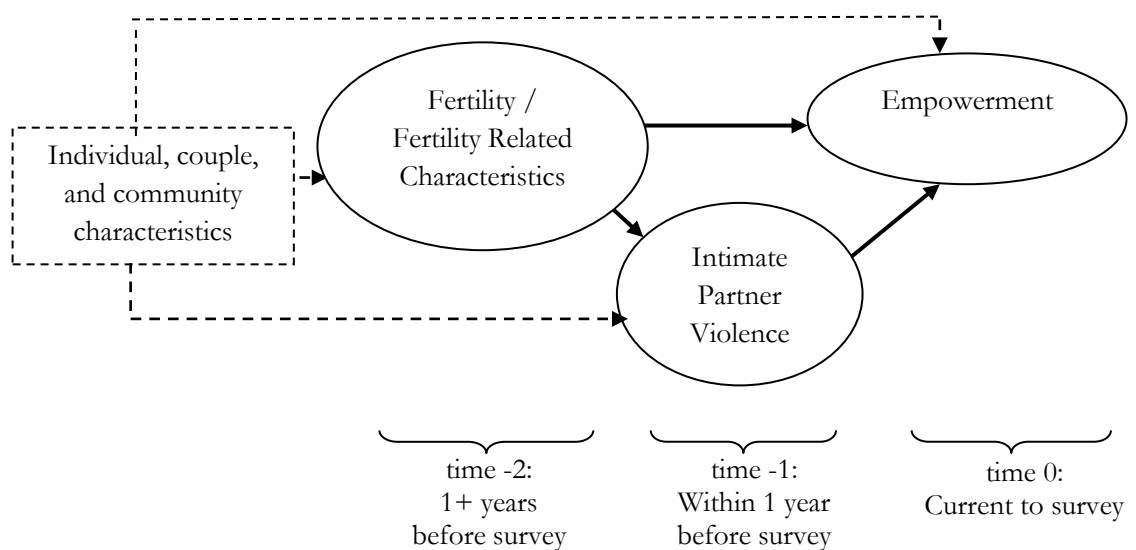
Fear or shame may have prevented some women from disclosing sensitive events, such as experiences of IPV or an adverse pregnancy outcome. Although IPV is likely universally underreported (Heise, Ellsberg, & Gottmoeller, 2002), interviewers in the 2007 BDHS were trained extensively in the use of the modified CTS, which gives women multiple opportunities to report specific acts and so tends to encourage disclosure (Straus, 2007). Interviewers were also given extensive training in probing techniques designed to help respondents report reproductive information accurately (NIPORT et al., 2009), and retrospective data from the DHS is generally considered to be of high quality (Curtis & Blanc, 1997). Finally, data did not allow us to consider respondents' household structure (i.e. presence of in-laws) or family violence, both aspects which may influence fertility, IPV, and empowerment.

### *Conclusion*

This study investigated the direct and indirect effects of women's fertility on their empowerment in Bangladesh, a classic patriarchy with a historically strict gender system supporting high fertility. Perhaps corresponding with changing norms and national fertility decline, I found that cumulative fertility matters only very modestly and that women are no longer empowered by high fertility the way they may have been in previous years. Having at least one child, though not

necessarily a son, remains important for women's empowerment. IPV does not mediate the relationship between fertility and women's empowerment. Analysis also revealed an association between increased fertility and IPV and between IPV and high levels of empowerment. These findings contribute to our overall understanding of the complex interplay between fertility and empowerment, and they may serve to support empowerment efforts engaged in fertility control. Additional research is needed to examine fertility and IPV's association both with dimensions of empowerment beyond household decision making and with changing gender expectations in societies undergoing rapid demographic transitions.

**Figure 1. Conceptual Fertility-IPV-Empowerment Model.**



Note. Bolded arrows indicate pathways of interest. Dashed arrows indicate pathways to control.

<b>Table 1. Sample Characteristics</b>		<b>Sample (<i>n</i>=4,052)</b>			
		(linearized			
		Mean	s.e.)	Range	
<b>Dependent Variables</b>		N	(%)		
Categorized decision making score					
Low	1,796	44.32			
Medium	1,257	31.02			
High	999	24.65			
<b>Independent Variables</b>					
Fertility relative to community					
Extreme above the mean	358	8.84			
Above the mean	859	21.20			
Normative	1,593	39.31			
Below the mean	1,197	29.54			
Extreme below the mean	45	1.11			
Cumulative individual fertility (linear)		2.765	0.044	0-9	
>=1 living child	8,696	89.39			
>=1 living son	7,134	73.33			
<b>Mediating Variable</b>					
IPV, experienced in last year	984	24.28			
<b>Control Variables</b>					
Age		30.278	0.188	15-49	
Education (years)		4.167	0.115	0-17	
Spousal difference in education					
wife < husband	2,951	72.83			
wife = husband	461	11.38			
wife > husband	640	15.79			
Husband away from home	352	8.69			
Marital duration (years)		15.005	0.198	1.083-39.500	
Rural	2,548	62.88			
Economic involvement: (employment or women's organization)	2,265	55.90			
Wealth index					
poorest	724	17.87			
poorer	788	19.45			
middle	765	18.8			
richer	779	19.23			
richest	996	24.58			

**Table 2. Fertility-IPV-Empowerment Mediation Models      Sample (n=4,052)**

- (1) Generalized ordered logistic regression: Fertility regressed on Empowerment  
 (2) Logistic regression: fertility regressed on IPV (potential mediator)  
 (3) Generalized ordered logistic regression: Fertility and IPV regressed on Empowerment

	Predictor	OR	(Robust s.e.)	Confidence Interval
<b>Mediation Model 1</b>	(1) Fertility relative to community, ref = normative			
	Extreme above the mean	1.229	(0.270)	0.798 - 1.893
	Above the mean	0.931	(0.119)	0.724 - 1.198
	Below the mean	0.759	(0.119)	0.557 - 1.034
	Extreme below the mean	<sup>a</sup> 0.428	(0.194)	0.176 - 1.042
		<sup>b</sup> 0.649	(0.340)	0.232 - 1.820
	Cumulative individual fertility (linear)	<sup>a</sup> 0.973	(0.054)	0.872 - 1.085
		<sup>b</sup> 1.033	(0.062)	0.918 - 1.162
	Cumulative individual fertility (quadratic)	0.977*	(0.011)	0.956 - 0.998
	(2) Fertility relative to community, ref = normative			
	Extreme above the mean	0.929	(0.279)	0.516 - 1.679
	Above the mean	0.740	(0.137)	0.514 - 1.063
	Below the mean	1.317	(0.229)	0.937 - 1.853
	Extreme below the mean	1.982	(0.945)	0.784 - 5.073
	Cumulative individual fertility (linear)	1.215**	(0.089)	1.052 - 1.405
	Cumulative individual fertility (quadratic)	0.991	(0.011)	0.969 - 1.014
	(3) IPV, experienced in last year	<sup>a</sup> 0.932	(0.093)	0.766 - 1.133
		<sup>b</sup> 1.326**	(0.135)	1.084 - 1.621
Fertility relative to community, ref = normative				
Extreme above the mean	1.232	(0.271)	0.799 - 1.898	
Above the mean	0.936	(0.120)	0.727 - 1.206	
Below the mean	0.760	(0.118)	0.559 - 1.033	
Extreme below the mean	0.459	(0.220)	0.179 - 1.177	
Cumulative individual fertility (linear)	<sup>a</sup> 0.970	(0.054)	0.869 - 1.083	
	<sup>b</sup> 1.034	(0.061)	0.920 - 1.163	
Cumulative individual fertility (quadratic)	0.977*	(0.011)	0.956 - 0.997	

continued on next page.

Table 2 continued.

	Predictor	OR	(Robust s.e.)	Confidence Interval
Mediation Model 2	(1) $\geq 1$ living child	1.429*	(0.212)	1.066 - 1.914
	(2) $\geq 1$ living child	1.072	(0.167)	0.789 - 1.456
	(3) IPV, experienced in last year	<sup>a</sup> 0.931	(0.093)	0.764 - 1.133
		<sup>b</sup> 1.281*	(0.129)	1.050 - 1.562
	$\geq 1$ living child	1.423*	(0.210)	1.064 - 1.904
Mediation Model 3	(1) $\geq 1$ living son	1.131	(0.098)	0.953 - 1.342
	(2) $\geq 1$ living son	1.195	(0.139)	0.951 - 1.502
	(3) IPV, experienced in last year	<sup>a</sup> 0.929	(0.093)	0.762 - 1.132
		<sup>b</sup> 1.280*	(0.129)	1.049 - 1.562
	$\geq 1$ living son	1.132	(0.099)	0.953 - 1.344

\* $p \leq 0.05$ , \*\* $p \leq 0.01$ , \*\*\* $p \leq 0.001$ .

<sup>a</sup>Results for a response Low vs. Medium, High level of decision making

<sup>b</sup>Results for a response Low, Medium vs. High level of decision making



## References

- Akin, L., & Ozaydin, N. (2005). The relationship between males' attitudes to partner violence and use of contraceptive methods in Turkey. *European Journal of Contraception and Reproductive Health Care, 10*(3), 199-206.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*(6), 1173-1182.
- Basu, A. M., & Basu, K. (1991). Women's economic roles and child survival: The case of India. *Health Transition Review, 1*(1), 83-103.
- Bawah, A. A., Akweongo, P., Simmons, R., & Phillips, J. F. (1999). Women's fears and men's anxieties: The impact of family planning on gender relations in northern Ghana. *Studies in Family Planning, 30*(1), 54-66.
- Beegle, K., Frankenberg, E., & Thomas, D. (1998). Bargaining power within couples and use of prenatal and delivery care in Indonesia. *Studies in Family Planning, 32*(2), 130-146.
- Blanc, A. (2001). The effect of power in sexual relationships on sexual and reproductive health: An examination of the evidence. *Studies in Family Planning, 32*, 189-213.
- Cain, M. (1984). *Women's status and fertility in developing countries: Son preference and economic security*. Washington, DC: The World Bank.
- Campbell, J. C. (2002). Health consequences of intimate partner violence. *Lancet, 359*(9314), 1331-1336.
- Campbell, J. K., & Soeken, K. (1999). Forced sex and intimate partner violence: Effects on women's health. *Violence Against Women, 5*, 1017-1035.
- Counts, D. A., Brown, J. K., & Campbell, J. K. (1992). *Sanctions and sanctuary: Cultural perspectives on the beating of wives*. Boulder, Colorado: Westview Press.

- Curtis, S. L., & Blanc, A. K. (1997). Determinants of contraceptive failure, switching, and discontinuation: An analysis of DHS contraceptive histories *DHS Analytical Reports*. Calverton, MD: Macro International Inc.
- Das Gupta, M. (1995). Life course perspectives on women's autonomy and health outcomes. *American Anthropologist*, 97(3), 481-491.
- Evins, G., & Chesceir, N. (1996). Prevalence of domestic violence among women seeking abortion services. *Women's Health Issues*, 6, 204-210.
- Ezeh, A. C. (1993). The influence of spouses over each other's contraceptive attitudes in Ghana. *Studies in Family Planning*, 24(3), 163-174.
- Fraser, R. S., Kress, H., & Shenk, M. K. (2011). *Daughters are good in every way: Fertility decline and changing child gender preference in rural Bangladesb*. Paper presented at the Population Association of America 2011 Annual Meeting, Washington, DC.
- Garcia-Moreno, C., Jansen, H. A. F. M., Ellsberg, M., Heise, L., & Watts, C. H. (2005). *WHO Multicountry Study on women's health and domestic violence against women: Initial results on prevalence, health outcomes, and women's responses*. Geneva: World Health Organization. Retrieved from: [http://www.who.int/gender/violence/who\\_multicountry\\_study/en/](http://www.who.int/gender/violence/who_multicountry_study/en/)
- Gazmararian, J. A., Lazorick, S., Spitz, A. M., Ballard, T. J., Saltzman, L. E., & Marks, J. S. (1996). Prevalence of violence against pregnant women. *JAMA*, 275(24), 1915-1920.
- Gazmararian, J. A., Petersen, R., Spitz, A. M., Goodwin, M. M., Saltzman, L. E., & Marks, J. S. (2000). Violence and reproductive health: Current knowledge and future research directions. *Maternal and Child Health Journal*, 4, 79-84.
- Glander, S. S., Moore, M., Michielutte, R., & Parsons, L. (1998). The prevalence of domestic violence among women seeking abortion. *Obstetrics & Gynecology*, 91, 1002-1006.
- Haddad, L., & Hoddinott, J. (1994). Women's income and boy-girl anthropometric status in Cote d'Ivoire. *World Development*, 22(4), 543-553.

- Heise, L., Ellsberg, M., & Gottmoeller, M. (2002). A global overview of gender-based violence. *International Journal of Gynaecology & Obstetrics*, 78 Suppl 1, S5-14.
- Hindin, M. J., & Adair, L. S. (2002). Who's at risk? Factors associated with intimate partner violence in the Philippines. *Social Science & Medicine*, 55(8), 1385-1399.
- Hoddinott, J., & Haddad, L. (1995). Does female income share influence household expenditures? Evidence from Cote d'Ivoire. *Oxford Bulletin of Economics and Statistics*, 57(1), 77-96.
- Inhorn, M. C. (1996). *Infertility and patriarchy: The cultural politics of gender and family life in Egypt*. Philadelphia, PA: University of Pennsylvania Press.
- International Institute for Population Sciences (IIPS) & Johns Hopkins University. (2005). *Final report of the 2003 NFHS-2 four-state follow-up survey*. Mumbai, India: IIPS.
- Jejeebhoy, S. J. (1998). Associations between wife-beating and fetal and infant death: Impressions from a survey in rural India. *Studies in Family Planning*, 29, 300-308.
- Kabeer, N. (1988). Subordination and struggle: Women in Bangladesh. *New Left Review*, 168, 95-121.
- Kabeer, N. (2001). Resources, agency, achievements: Reflections on the measurement of women's empowerment *Discussing Women's Empowerment-Theory and Practice* (Vol. Sida Studies ). Novum Grafiska AB, Stockholm
- Kandiyoti, D. (1988). Bargaining with patriarchy. *Gender & Society*, 2(3), 274-290.
- Kandiyoti, D. (Ed.). (1991). *Women, Islam, & the state*. Philadelphia: Macmillian Academic and Professional Ltd.
- Kishor, S. (2000). Empowerment of women in Egypt and links to the survival and health of their infants. In H. Presser & G. Sen (Eds.), *Women's empowerment and demographic processes: Moving beyond Cairo*. Oxford: Clarendon Press.
- Malhotra, A. (2009). *Remobilizing the gender and fertility connection: The case for examining the impact of fertility control and fertility declines on gender equality*. Paper presented at the International Union for the Scientific Study of Population (IUSSP) Meetings, Marrakech, Morocco.

- Malhotra, A., Schuler, S. R., & Boender, C. (2002). *Measuring women's empowerment as a variable in international development*. Paper commissioned by the World Bank, Gender and Development Group available at <http://siteresources.worldbank.org/INTGENDER/Resources/MalhotraSchulerBoender.pdf>
- Martin, S. L., Kilgallen, B., Tsui, A. O., Maitra, K., Singh, K. K., & Kupper, L. L. (1999). Sexual behaviors and reproductive health outcomes: Associations with wife abuse in India. *JAMA*, 282(20), 1967-1972.
- Moghadam, V. (1992). Fundamentalism and the woman question in afghanistan. In L. Kaplan (Ed.), *Fundamentalism in comparative perspective* (pp. 126-151). Amherst, MA: University of Massachusetts Press.
- Moghadam, V. (2003). *Modernizing women: Gender and social change in the Middle East* (2nd ed.). Boulder, CO: Lynne Rienner Publishers, Inc.
- National Institute of Population Research and Training (NIPORT), Mitra and Associates, and Macro International. (2009). *Bangladesh Demographic and Health Survey 2007*. Dhaka, Bangladesh and Calverton, Maryland, USA.
- Papreen, N., Sharma, A., Sabin, K., Begum, L., Ahsan, S. K., & Baqui, A. H. (2000). Living with infertility: Experiences among urban slum populations in Bangladesh. *Reproductive Health Matters*, 8(15), 33-44.
- Rao, V. (1997). Wife-beating in rural south India: A qualitative and econometric analysis. *Social Science & Medicine*, 44(8), 1169-1180.
- Rodman, H. (1972). Marital power and the theory of resources in cultural context. *Journal of Comparative Family Studies*, 3, 50-59.
- Sami, N., & Ali, T. S. (2006). Psycho-social consequences of secondary infertility in Karachi. *Journal of the Pakistan Medical Association*, 56(1), 19-22.

- Straus, M. A. (1990). Measuring intrafamily conflict and violence. The conflict tactic scales. In M. A. Straus & R. J. Gelles (Eds.), *Physical violence in American families: Risk factors and adaptations to violence in 8145 families* (pp. 29-47). New Brunswick, New Jersey: Transaction Publishers.
- Straus, M. A. (2007). Conflict Tactics Scales. In N. A. Jackson (Ed.), *Encyclopedia of domestic violence* (pp. 190-197). New York: Routledge: Taylor & Francis Group.
- Thomas, D. (1990). Intrahousehold resource allocation: An inferential approach. *Journal of Human Resources*, 26, 635-664.
- Thomas, D. (1997). Incomes, expenditures, and health outcomes: Evidence on intrahousehold resource allocation. In L. Haddad, J. Hoddinott & H. Alderman (Eds.), *Intrahousehold resource allocation in developing countries: Models, methods, and policy*. Baltimore, MD: Johns Hopkins University Press.
- Unisa, S. (1999). Childlessness in Andhra Pradesh, India: Treatment-seeking and consequences *Reproductive Health Matters*, 7(13), 54-64.
- United Nations (UN). (1994). *Report of the International Conference on Population and Development*. Cairo, Egypt: United Nations. Retrieved from:  
<http://www.un.org/popin/icpd/conference/offeng/poa.html>
- Vlassoff, C. (1992). Progress and stagnation: Changes in fertility and women's position in an Indian village. *Population Studies*, 46(2), 195-212.
- Williams, R. (2006). Generalized ordered logit/ partial proportional odds models for ordinal dependent variables. *The Stata Journal*, 6(1), 58-82.
- Wilson-Williams, L., Stephenson, R., Juvekar, S., & Andes, K. (2008). Domestic violence and contraceptive use in a rural Indian village. *Violence Against Women*, 14(10), 1181-1198.
- Wolff, B., Blanc, A. K., & Gage, A. J. (2000). Who decides? Women's status and negotiation of sex in Uganda. *Culture, Health, and Sexuality*, 2(3), 303-322.
- Wood, K., & Jewkes, R. (1997). Violence, rape, and sexual coercion: Everyday love in a South African township. *Gender & Development*, 5(2), 23-30.

### **Study 3: Resources for Women's Empowerment via Household Decision Making in Bangladesh**

#### **Abstract**

The promotion and study of women's empowerment is particularly important in classic patriarchal settings where strict systems of male dominance and gender rules prevail. In Bangladesh, a historical classically patriarchal setting, social and economic changes are transforming these systems and have various potential impacts on women's societal role and pathways to empowerment. Using nationally representative data from the 2007 Bangladesh Demographic and Health Survey, we conducted a cross-sectional analysis to understand contemporary factors associated with empowerment, measured via household decision making. Contemporary resources, specifically, women's recent employment and non-governmental organization membership had the strongest and most consistent associations with women's empowerment. Customary resources including absence of the husband, urban residence, and longer marital duration also positively predicted empowerment, especially high levels of empowerment and women's dominance of household decisions. Age, fertility, and education held modest associations. Efforts to enhance women's empowerment should consider the rapidly changing economic environment and the significance of women's economic participation to their empowerment. Additional research should investigate changes in household power dynamics that are associated with the presence or absence of the husband. Empowerment studies should be hesitant to rely on age and education as proxy measures for empowerment or as resources for empowerment.

#### **Introduction**

Women's empowerment is a key focus in international health and development. Recognized as necessary for poverty reduction and economic growth, a number of global institutions, including the World Bank and the United Nations, incorporate women's empowerment and gender equity into

program policies and goals (World Bank, 2001; United Nations, 2011; United Nations Development Program, 2008). Increasingly, evidence links women's empowerment with increases in household savings and investments (Duflo, 2003; Hoddinott & Haddad, 1995; Thomas, 1990, 1994) and in women's and children's health (Baden, Green, Goetz, & Guhathakurta, 1994; Basu & Basu, 1991; Beegle, Frankenberg, & Thomas, 1998; Haddad & Hoddinott, 1994; Hoddinott & Haddad, 1995; Quisumbing & Maluccio, 1999; Thomas, 1990, 1997). Internationally supported agendas (e.g. Beijing Platform for Action, Cairo Programme of Action, Convention on the Elimination of All Forms of Discrimination Against Women) recognize women's empowerment as a human right and critical for human welfare (CEDAW, 2003; United Nations, 1994; United Nations, 1996).

Corresponding with international organizations' focus on women's empowerment to advance development, scholars' efforts to conceptualize and quantify empowerment frequent scientific and policy discussion. Conceptualizations typically converge on two key elements: the idea of control and the intrinsic notion of agency or self-efficacy (Batliwala, 1994; N Kabeer, 2001; Nussbaum, 2000; Rowlands, 1995; A. Sen, 1999; G. Sen, 1994). Kabeer's (2001) definition captures these common elements in that she describes empowerment as "the expansion in one's ability to make strategic life choices in a context where this ability was previously denied" (p. 19). Kabeer further elaborates that this ability to make choices occurs within three inter-related dimensions: resources, agency, and achievements. Resources, the focus of this investigation, refer to the conditions under which choices are made and may be material, cognitive, or relational. Material resources might describe land, financial capital, equipment, or other conventional forms of economic support. In contrast, cognitive and relational resources are those which intrinsically enhance the ability to exercise choice. These encompass characteristics of the individual and the individual's relationships, such as: (cognitive) knowledge, skills, creativity; and (relational) the claims, obligations, expectations inherent to an individual's relationships. The second inter-related dimension, agency, represents the ability to define and act on choices. It refers to observable actions, such as individual decision making, and to a wider range of purposive actions including bargaining, negotiation,

resistance, protest, and cognitive processes like reflection and analysis. The third dimension, achievement, is the outcome of an individual's choice; essentially, the application of their resources and agency (Kabeer, 2001).

Empowerment, including that which constitutes its inter-related dimensions, is further determined by rules, norms, and practices within specific cultural contexts. In classic patriarchal settings, for example, women become more empowered over the life-course as they accrue critical resources for empowerment. 'Classic patriarchies,' a term applied by sociologist Deniz Kandiyoti (1988, 1991), describes systems of male dominance specific to countries in North Africa, the Middle East, and parts of South and East Asia. These regions are distinguished by structures which economically and culturally devalue women and thereby restrict them to reproductive and domestic roles. Family name and property are transferred through males, and households may be comprised of extended families with authority vested in the senior most male. Marriage effectively separates women from their natal family as they are absorbed into their husband's household; in some regions, this move includes cost of a dowry. High priority is given to family honor which is synonymous with female virtue, and women observe varying degrees of veiling, seclusion, and domestic confinement in accordance with cultural expectations of femininity. This deprivation of property rights, economic participation, and cultural value forces women's dependence on male relatives and places women in a position of economic and moral liability to their families. Classic patriarchies, therefore, are characterized by nearly universal marriage, high fertility, and son preference in addition to gender disparities in education, employment, and health (Cain, 1984; Kabeer, Mahmud, & Tasneem, 2011; Kandiyoti, 1988; Moghadam, 2003).

Bangladesh, situated within the so-called "patriarchal belt" (Caldwell, 1982; Kandiyoti, 1988), is generally categorized as a classic patriarchy but has experienced substantial social and economic transformation in recent decades. Historically, Bangladeshi women entered marriage and the extended family household disempowered relative to their male and female in-laws. Women became increasingly empowered as they had children, especially sons, and as they aged and eventually



assumed the role of mother-in-law in the household. Resources for women's empowerment are therefore, customarily, fertility, age, and household structure (Cain, Khanam, & Nahar, 1979). The social and economic changes in Bangladesh over the last decades, however, are likely to have affected women's societal role and resources for their empowerment. For instance, family planning policies instituted in the 1970s contributed to a dramatic decline in fertility: from 6.3 births per woman in 1975 to the current 2.7. Contraceptive use increased steadily (14% to 80% in the same period). Although still low, women's age at first marriage increased from a median 14.1 years in the early 1980s to the current median of 16.4 years (National Institute of Population Research and Training [NIPORT], Mitra and Associates, & Macro International, 2009). Government educational interventions, including stipends for girls' secondary schooling, greatly increased female educational attainment (Das, 2008; NIPORT et al., 2009). Microcredit schemes and other non-governmental development programs became increasingly popular throughout the 1970s and 80s and had substantial impact in women's economic participation via informal activities in and outside the home (Kabeer et al., 2011). Finally, a growth in export-oriented industrialization, especially garment manufacturing, propelled women from lower household asset quintiles into factory work as an inexpensive labor force (Baden et al., 1994; Das, 2008).

In effect, women are having fewer children, marrying later, and becoming increasingly visible in the economic and public domain. These changes are likely to have an influence on women's dependence on male relatives and their assigned economic and cultural value. Thus, in the rapidly changing patriarchal environment, the customary resources historically associated with empowerment may be losing strength, and contemporary resources may be emerging as a new focal point for empowerment policy and assistance efforts. Accordingly, to better understand resources for women's empowerment in contemporary Bangladesh, this study examines a cross-sectional analysis of customary and contemporary resources using nationally representative data.

## **Methods**

This study used data from the 2007 Bangladesh Demographic and Health Survey (BDHS) women's questionnaire. Demographic and Health Surveys (DHS) are nationally representative household surveys that collect data on a range of indicators in demographics, health, and nutrition. The 2007 BDHS used a multistage cluster sample design based on the 2001 Bangladesh Census, and collected data from 10,996 women age 15-49 in 10,400 households. Our analysis is limited to currently married women, age 15-49 (N=10,146). Additional details regarding the sampling procedure can be found in the BDHS report (NIPORT et al., 2009).

*Women's empowerment, Household decision making patterns*

Operationalizing empowerment is inherently complex, considering it encompasses the expression of agency and choice and exists in multiple dimensions. The majority of empowerment studies, including those using DHS questions, are constrained to measures of household decision making, which assess economic and familial levels. Many scholars view household decision making as an effective representation of agency since measures of decision making are intended to capture one's ability to make choices (Malhotra & Mather, 1997; Mason, 1998; Mason & Smith, 2000) and may be evidence of the outcomes and achievements of the empowerment process (Kishor, 2000; Kishor & Lekha, 2008). However, household decision making measures also are limited in that it is unclear if these decisions are strategic to women's interests or if women's participation actually influences the final decision made. It may be further important to consider women's level of participation in decision making (e.g. alone or joint) as these may represent empowerment differently (Kishor & Lekha, 2008). Additional views on household decision making consider it to be an indication of household power allocation (Ashraf, 2009), husband and wife interpersonal relationships, and spousal dominance (Hindin & Adair, 2002).

Accordingly, we derived four measures of empowerment from questions about household decision making in the BDHS women's questionnaire. These questions asked women who in their household makes decisions about the following: healthcare for themselves [the respondent], major household purchases, purchases for daily household needs, and visits to [the respondent's] family or

relatives. Response options included the respondent, the respondent's husband, the respondent and husband jointly, someone else, or the respondent and someone else jointly.

The first measure of empowerment was an ordinal measure assessing women's level of involvement in household decision making. Decisions made exclusively by the female respondent were coded 2, those made jointly by the respondent and another party were coded 1, and those made by another party completely were coded 0. Scores for all four household indicators were summed (range 0-8) and then categorized as low, medium, and high. The summative score was categorized as low to high since, in preliminary models, Bonferroni adjusted post-hoc testing determined that the majority of parameters for the summative score were not significantly different from one another. Therefore, the ordinal low/medium/high score was considered an accurate and more parsimonious representation of the summative score.

The other three measures of empowerment were binary indications of the dominant type of decision making occurring within each respondent's household. Households in which all four decisions were made exclusively by the female respondent were determined to be wife dominated. Respondents who reported that all four decisions were made exclusively by the respondent's husband were determined to be husband dominated. Finally, when all four decisions were made jointly by the husband and wife, joint decision making was said to dominate the household. Decisions made by other parties or by a combination of another party and the husband or wife were not considered.

#### *Potential customary and contemporary resources for empowerment*

A number of socio-demographic measures were investigated as potential customary and contemporary resources for empowerment. Customary resources were calculated as follows. The respondents' age and age at first marriage were measured in years. Age relative to the respondents' spouse was also determined by subtracting the respondents' age from their husbands' (therefore, negative values indicated the wife was older than her husband). A measure of fertility, the total number of living children the respondent had, was adapted from the BDHS birth history module

which records each woman's births and the corresponding survival statuses complete to the time of the survey. In preliminary analyses, fertility was found to have a curvilinear relationship with decision making, suggesting the shape of a concave downward curve. After centering the fertility term at the sample's mean, a quadratic fertility term was added to analyses. A measure of marital duration was included, but due to its high correlation with age, it was split at the median (13 years). A binary indicator of rural/urban residency was included as were household wealth quintiles calculated by the BDHS based on household assets and dwelling characteristics.

Contemporary resources for empowerment include education, measured in years completed, and education relative to the respondents' spouse. Spousal difference in education was a categorical variable; respondents were categorized as having more, less, or equal education to their husband. The reference was set to the most frequent category, the wife having less education than the husband. Three binary measures were included: women's employment, non-governmental organization (NGO) membership, and whether the husband was currently living with the respondent or elsewhere. Specifically, women were asked if they had done any work in the last 12 months. 'Work' was previously described accordingly: "As you know, some women take up jobs for which they are paid in cash or kind. Others sell things, have a small business or work on the family farm or in the family business. Have you done any of these things or any other work?" NGO membership was recorded by asking respondents if they belonged to any of the following organizations: Grameen Bank, BRAC, BRDB, ASHA, PROSHIKA, Mother's Club, or other (such as microcredit).<sup>6</sup> Each of these

---

<sup>6</sup> Grameen Bank provides microcredit programs and relevant training to poor individuals and communities in Bangladesh. Its mission is to use credit as a cost effective weapon to fight poverty and promote socio-economic development. BRAC, formerly known as Bangladesh Rehabilitation Assistance Committee, aims to empower people and communities in situations of poverty, illiteracy, disease and social injustice. BRAC's social enterprises, strategically linked to their development programs, range from agriculture to handicrafts. BRDB, the Bangladesh Rural Development Board, organizes cooperative farming communities and income generating activities in rural areas. ASHA sponsors schools in rural communities and provides financing programs to start

organizations offers activities or programs intended to promote development and/or health, some of which are targeted exclusively to women. Women reporting membership in at least one organization were categorized as having NGO membership.

#### *Data analyses*

All data management and analyses were conducted with Stata/IC version 12.0 (StataCorp LP). Univariate statistics were examined for missing data and variable distribution; no variable was missing more than 0.2% of data. Bivariate associations between covariates were estimated and potential collinearities among these variables were assessed. Sample weights and robust variance estimators accounted for the complex sample design of the BDHS.

Multivariate regression models were estimated for each of the four dependent variables. A multinomial model was estimated with the categorical indicator of women's involvement in household decision making to test which customary or contemporary resources were associated with each level of household decision making. Multinomial logit models are a type of nominal regression; these models essentially estimate a separate logistic regression for each pair of outcome categories with respect to a reference category. Low involvement in decision making is designated as the reference category, and the log odds of membership in the reference category is compared to membership in medium and in high decision making categories. Logistic regression was used to examine the effect of customary and contemporary resources on each type of dominant decision making: wife, husband, and joint dominated patterns of decision making.

## **Results**

#### *Sample characteristics*

---

and support small-scale employment initiatives. PROSHIKA's mission is to conduct participatory processes of sustainable development through empowerment of the poor. Programs include organization building, education and training, health education, health infrastructure building, and environmental protection. Mother's club creates settings for rural women to gather and provides programs in health education, nutrition education, and home gardening. Information contained in this footnote is derived from each organization's website.

Table 1 displays frequencies for the individual decision making indicators. Joint decision making involving the respondent and husband was reported most frequently for decisions about the respondents' healthcare, visits to the respondents' family, and major household purchases. After joint decision making, the husband was most frequently reported to make these decisions. Women alone decided most frequently about purchases for daily household needs; women rarely act as the exclusive decision maker in decisions about major household purchases.

Other demographic characteristics of the sample are further detailed in Table 2. Naturally, the constructed decision making measures reflected women's responses to the individual decision making indicators. The majority of women reported low involvement in household decision making (N=4,749, 46.8%) with smaller numbers reporting medium (N=3,024, 29.8%) and high involvement in decision making (N=2,366, 23.3%). Small numbers of women reported that all four decisions were dominated exclusively by themselves (N=518, 5.1%), by their husbands (N=860, 8.5%), or by joint effort (N=1,552, 15.3%).

On average, women were 30.0 years of age and were married by age 16. The mean age difference between husbands and wives was 9.3 years. The spousal age difference ranged from -17 to 50 years; negative values indicate cases in which the wife was older than the husband. Women had an average 2.5 children. The majority of women lived in rural settings (N=6,342, 62.5%). Women had 4.4 years of school, on average, and the majority of women has less education than their husband (N=7,188, 70.9%). Smaller numbers reported equal years of education (N=1,177, 11.6%) and more education (N=1,781, 17.6%) than their spouse. About one-third reported recent employment (N=3,065) and NGO membership (N=3,739); just over 10% of women reported their husbands did not currently live with them (N=1,123)

#### *Multivariate results*

Results from the four regression models are presented in Table 3. A number of customary and contemporary resources for empowerment were significantly associated with the categorized score of women's level of involvement in decision making. Relative to low involvement, women were

more likely to have medium involvement (OR=1.017) and high involvement (OR=1.029) in decision making as their age increased. Similar results were found for increase in years of women's education. The quadratic fertility term was modestly associated with medium (OR=0.985) and with high involvement in decision making (OR=0.956) indicating a concave downward relationship between total number of living children and levels of decision making. Relative to low levels of decision making, the odds of achieving at least a medium level of involvement were less extreme than those of achieving a high level. That is, as individual fertility increased, the probability of having at least a medium level of decision making involvement increased but eventually declined. The same trend was found for high opposed to low level of decision making involvement, but the increase and the subsequent decline were more dramatic. Living in a rural setting decreased the odds of achieving a medium level of involvement by 22% and a high level by 35%. Women who reported recent employment were approximately 30% more likely to achieve a medium (OR=1.304) or a high level of involvement (OR=1.380) in household decision making.

Some resources were associated with women's high involvement in decision making, specifically. Women were 31% less likely to have a high level of involvement in decision making if they had more education than their spouse (OR=.696). Women of longer marital duration, with NGO membership, and with husbands absent from the home were more likely to have high involvement in decision making.

Both customary and contemporary resources were also associated with dominant patterns of decision making. Women were more likely to exclusively dominate decisions as they grew older (OR=1.033); however, as age at first marriage increased, women were less likely to dominate household decisions (OR=0.919). The linear and quadratic fertility terms were modestly associated with wife dominated decisions indicating a predominately positive concave downward relationship between total number of living children and the log odds of wife dominated decision making. Women living in a rural setting were 37% less likely to dominate decisions (OR=0.633) while women with absent husbands were much more likely to dominate decision making (OR=21.606).

Husbands were more likely to dominate decision making as age difference between spouses increased (OR=1.028) and as women's age at marriage increased (OR=1.051). Similar to wife dominated decisions, the linear and quadratic fertility terms were modestly associated with husband dominated decisions. The odds ratios indicated a predominately positive concave downward relationship between total number of living children and the log odds of husband dominated decision making. Both customary and contemporary resources decreased the odds of husband dominated decision making, including: the husband's absence from the home (OR=0.052), the wife's increased education (OR=0.918), her employment in the recent year (OR=0.556), and her NGO membership (OR=0.835).

Joint involvement was more likely to dominate household decision making with longer marital duration (OR=1.474) and women's membership in an NGO (OR=1.159). The husband's absence from the home decreased the odds of joint decision making (OR=0.296). Across all four multivariate models, fertility was the customary resource most frequently associated with decision making while rural/urban residency was the strongest. Contemporary resources, specifically women's employment, NGO membership, and husband's absence from the home, were both frequently and strongly associated with women's involvement in decision making.

## **Discussion**

Women's societal roles and expectations are shifting in Bangladesh, a historically classically patriarchal setting that has been undergoing substantial social and economic change in recent decades. Using nationally representative data, we investigated potential customary and contemporary resources for empowerment in effort to understand current influences on women's empowerment in the changing environment. Overall, women reported low involvement in household decision making. Although we did not find many households exclusively dominated by one spouse, approaches suggestive of more equal power balance, such as husband and wife joint decision making, were the dominant pattern in only 15% of households. With consideration to the individual decision making questions, it is alarming to note that only a minority of women have exclusive decision making power



in their own healthcare or visits to their own family. Barriers to accessing these resources could have important implications for women's physical and mental health. In fact, women's exclusive decision making power for these ranked third most frequent after joint and husband.

The contemporary resources women's employment and their NGO membership had strong and consistent associations with women's empowerment. Our models found that recently employed women were nearly 40% more likely to achieve a high level of empowerment and 44% less likely to have only husband dominated decisions. Membership in an NGO increased women's chances of attaining a high level of empowerment and of joint dominated decisions in addition to decreasing the chances for husband dominated decisions. The economic and development landscape in Bangladesh continues to change dramatically with respect to these two resources. The mechanization of agricultural tasks traditionally assigned to women, increasing landlessness, and men's migration for employment is driving women's participation in the agricultural sector (Jahan, 1989; World Bank, 1990). Women comprise 90% of the garment industry work force, and their presence in the manufacturing sector is growing (Raschen & Shah, 2006). Non-governmental organizations, microcredit schemes, and other development programs have since expanded their range of opportunities to specifically target women (Kabeer et al., 2011).

Despite these findings associating contemporary resources with empowerment, the relationship between women's economic participation and broader dimensions of empowerment is often contested and certainly not straightforward (Ahmed, 2004; Boserup, Kanji, Tan, & Toulmin, 2007; Chakraborty, 2004; Kabeer et al., 2011; Pogge, 2002). Although our research suggest an increase in the household decision making dimension of empowerment alone, individual women may experience both gain and loss of power in association with their economic participation. For example, research indicates some Bangladeshi garment industry employees migrate to factories for additional income (Absar, 2001a, 2001b) while others are driven out of severe impoverishment (Ahmed & Khatun, 2008; Dewan, 1999) or under familial remittance demands (Wiest & Mohiuddin, 2002). After employment, Bangladeshi women report growing sensitivity to their subordinate gender

status but also to the threat of losing social standing (Baden et al., 1994) and traditional household entitlements (e.g. shelter, dowry) (Wiest & Mohiuddin, 2002). Similar contradictory implications are recorded for NGO membership since microcredit is linked to both women's empowerment (Hashemi, Schuler, & Riley, 1996; Mizan, 1993) and to their financial exploitation by family members (Goetz & Gupta, 1996).

Kabeer (2008, 2011) summarizes additional conflicting viewpoints from the literature. Women's paid economic participation can provide both instrumental and intrinsic gains including positive implications for women's sense of identity and self-worth and a sense of security outside of parental or spousal controls. However, women continue to face gender segmentation in the workforce via restriction to jobs consistent with their wife/mother role, exclusion from managerial tasks, and economic regard as an inexpensive, powerless labor force (Kabeer, 2008). In a recent mixed methods study of Bangladeshi women, authors found that access to paid work positively impacted women's lives, but the impact was most strong and consistent in cases where employment was characterized by visibility, regularity, and social benefits (Kabeer et al., 2011). A qualitative examination of NGO membership in Bangladesh found that NGOs with a social justice agenda beyond service provision (e.g. microcredit) were most effective at both increasing women's material, cognitive, and relational dimensions of empowerment and at stimulating women's awareness of and willingness to act on their rights. Female NGO members' acted collectively against injustices within familial and formal/informal structures of governance. Members were less active, however, against injustices within the economic domain because their informal economic activity provided little impact on prevailing gender segmented economic structures (Kabeer, 2011).

Our measures for employment and NGO membership were limited in that they did not assess these described characteristics of economic or NGO participation. Given the shifts in industrialization and the continuing growth of foreign and local NGO work in Bangladesh, future research of these contemporary resources would be improved by considering these facets and their significance in the societal context in which they occur. Beyond these limitations, our findings

contribute evidence to the literature linking contemporary empowerment resources with women's increased involvement in household decision making.

Considering the frequency with which we found that husbands dominated individual household decisions, it is not surprising that husbands' absence from the home was also strongly and consistently associated with women's decision making. Our measures did not record the reason for the husbands' absence which may have been due to migrant labor, abandonment, or other purpose. It could be of great interest to empowerment studies and development policy to understand how empowerment (via decision making and other dimensions) changes over the course and type of husbands' absence. Given the growth in rural-urban and international labor migration in Bangladesh, such absence is increasingly studied in South Asia (Hadi, 1999; Rahman, 2002), and may create an environment for change in women's lives. Husbands' remittances and potential exposure to outside cultures can enhance the standard of living for women at home and provide greater access to resources that subsequently enable them to change their position (Hugo, 2000). Indeed, research both from Bangladesh and nations beyond the patriarchal belt report increases in women's decision making (Hadi, 2001; Yabiku, Agadjanian, & Sevoyan, 2010), daughters' education, and reduced dowry practices in association with husbands' migration (Hadi, 2001). Debate remains, however, about whether these aspects of women's lives are specific to the husband's absence or continue after his return (Hugo, 2000; Yabiku et al., 2010). Additionally, it is unclear if indicators of women's empowerment are only a reflection of the changed conditions in which they are forced to live (Hugo, 2000). Qualitative research reports pressure for women to take on roles that are not yet socially acceptable and therefore cause considerable anxiety. This and the burden of increased responsibility may be difficult to consider as fully empowering (Gordon, 1981; Rao, 2012). Finally, greater decision-making created by men's absence may be buffered by substitute authority from different sources, such as other community members or in-laws (Rao, 2012). Therefore, it is important to consider this finding carefully amongst these caveats and to highlight the need for further research to clarify the relationship between husbands' absences and women's empowerment.

Despite the modest association between education and various representations of empowerment, it is interesting to note that women with more education than their husband were 30% less likely to attain a high level of empowerment. While these findings certainly warn against the use of age and education as proxy measures for empowerment, they also question the assumption that women access education as an empowerment resource (Jejeebhoy, 2000; Kabeer, 1999). Women's higher education relative to their spouse may be viewed as a threat to patriarchal family systems, and in some places, is linked to intimate partner violence (Abramsky et al., 2011). In Bangladesh, considerable policy has focused on increasing girls schooling, to the extent that more girls attend school than boys. This gender disparity in education reverses at secondary school when most girls leave (Das, 2008; NIPORT et al., 2009), trapped by the patriarchal structure in which a more educated daughter requires an even more educated spouse and a larger dowry (Rao, 2012). Education is also valued in the marriage market; educated wives are considered more capable of managing domestic affairs and caring for in-laws in the absence of the husband (Fan & Li, 2002; Rao, 2012). Therefore, it seems necessary that other societal structures need to shift in order for women to truly utilize education as an empowerment resource.

Finally, the remaining customary resources in the four multivariate models were not as strongly or consistently associated with women's empowerment. Residency and longer marital duration were both associated with high levels of empowerment and with wife dominated decision making. Rural women were less likely than their urban peers to attain either categorization of empowerment; this appears to be an international trend and may be driven by less exposure to new ideas or contemporary empowerment resources (Kishor & Lekha, 2008). Longer marital duration, a continuous measure dichotomized at the median due to its high collinearity with age, was more strongly associated with empowerment than was age. This perhaps reflects a marital duration threshold for which women achieve higher empowerment. Age, itself, was only modestly associated with empowerment and was not consistent across models. For example, women's likelihood of achieving medium or high empowerment increased modestly with age as did their chances of

dominating household decisions. Accordingly, one may expect to see age positively associated with joint decision making and negatively associated with husband dominated decisions; however, this was not the case.

#### *Limitations*

This investigation could have benefited from additional measures of other empowerment domains, including women's mobility, political and social participation, and attitudes towards gender equality. As mentioned in the methods section, there are limitations to using household decision making as a representation of empowerment. Although these measures provide some insight into women's agency, they may not access other aspects of agency, such as bargaining, subversion, negotiation, or manipulation (Kabeer, 1999). As Kabeer (1999) stated, "statistical perspectives on decision making should be remembered for what they are: simple windows on complex realities." Beyond the limitations inherent to measurement of empowerment, the addition of a household structure measure would have added interesting information to the analyses as this may be considered a customary empowerment resource.

#### *Conclusion*

Using nationally representative data from Bangladesh, this study conducted an investigation of customary and contemporary resources for women's empowerment, measured via household decision making. We found women continue to have low levels of involvement in decision making; decisions are most frequently dominated by husbands or joint husband-wife efforts. Contemporary resources, overall, had a stronger association on women's empowerment than customary resources. Women's employment and NGO membership, for example, were both positively associated with empowerment. However, situated within the broader development literature, these resources appear to remain constrained to varying degrees by the over-arching patriarchal structure in Bangladesh even amidst its changing nature. Absence of the husband from the home had very strong, positive associations with women's household decision making, as could be expected. These findings highlight both the need to expand our understanding of contemporary resources' pathways to

empowerment and also the need for better, more elaborate measures of each. The modest and negative associations between empowerment and education suggest education may not be truly accessible to women as an empowerment resource, and it remains necessary for other societal structures to shift in women's favor.

This research offers insight into the improvement of women's lives in a rapidly changing classical patriarchal setting. Customary resources for empowerment which historically have contributed to women's increased decision making in a classically patriarchal family system seem to lose strength in the current setting, and contemporary resources appear to matter more in conjunction with the transformation of classically patriarchal structures. Empowerment and development efforts should consider the rapidly changing economic environment and the significance of women's economic participation to their empowerment. Additional research should expand on measures of economic participation and changes in household power dynamics surrounding husbands' absences. Empowerment studies should be hesitant to rely on age and education as proxy empowerment measures or as resources for empowerment.

**Table 1. Decision Making, Individual Indicators****Sample (n=10,146)**

Who usually makes decisions about...	Respondent		Husband		Joint: Respondent & Husband		Someone else		Joint: Respondent & Someone else	
	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)
Healthcare [for respondent]?	1,489	(14.68)	3,218	(31.72)	4,230	(41.70)	535	(5.27)	673	(6.63)
Major household purchases?	938	(9.25)	2,635	(25.98)	4,637	(45.72)	925	(9.12)	1,008	(9.94)
Purchases for daily household needs?	3,291	(32.45)	2,061	(20.32)	2,997	(29.55)	1,031	(10.16)	763	(7.52)
Visits to [respondent's] family or relatives?	1,419	(13.99)	2,638	(26.01)	4,495	(44.33)	768	(7.57)	821	(8.10)

**Table 2. Sample Characteristics** **Sample (n=10,146)**

	N	(%)	Mean	zed s.e.)	Range
<b>Dependent Variables</b>					
Categorized decision making score					
Low	4,749	(46.84)			
Medium	3,024	(29.83)			
High	2,366	(23.34)			
Wife dominates decisions	518	(5.11)			
Husband dominates decisions	860	(8.48)			
Joint decisions dominate	1,552	(15.30)			
<b>Independent Variables</b>					
<i>Customary resources</i>					
Age			29.96	0.11	15-49
Age at first marriage			15.522	0.03	
Spousal age difference			9.33	0.08	-17-50
Total living children			2.45	0.02	0-12
Long marital duration (>13 years)	5,369	(52.92)			
Rural	6,342	(62.51)			
Wealth index					
poorest	1,600	(15.77)			
poorer	1,837	(18.11)			
middle	1,950	(19.22)			
richer	2,070	(20.40)			
richest	2,689	(26.50)			
<i>Contemporary resources</i>					
Education			4.38	0.09	0-17
Spousal difference in education					
wife < husband	7,188	(70.85)			
wife = husband	1,177	(11.60)			
wife > husband	1,781	(17.55)			
Employment within past 12 months	3,065	(30.22)			
NGO membership	3,739	(36.86)			
Husband away from home	1,123	(11.07)			



**Table 3. Resources for Empowerment via Household Decision Making in Bangladesh**

<b>Predictor</b>	<i>Medium Involvement</i>		<i>High Involvement</i>	
	<b>OR</b>	<b>(Robust s.e.)</b>	<b>OR</b>	<b>(Robust s.e.)</b>
<i>Customary resources</i>				
Age	1.017**	(0.005)	1.029***	(0.006)
Age at first marriage	1.012	(0.012)	1.007	(0.014)
Spousal age difference	0.993	(0.005)	1.004	(0.006)
Total living children (linear)	1.014	(0.026)	1.150***	(0.035)
Total living children (quadratic)	0.985*	(0.007)	0.956***	(0.010)
Long marital duration (>13 years)	1.153	(0.102)	1.477**	(0.176)
Rural	0.779**	(0.071)	0.654***	(0.064)
Wealth index (poor - rich)	0.985	(0.027)	0.997	(0.030)
<i>Contemporary resources</i>				
Education	1.023*	(0.009)	1.061***	(0.011)
Spousal difference in education, ref: wife < husband				
wife = husband	1.070	(0.105)	0.859	(0.100)
wife > husband	0.879	(0.083)	0.696***	(0.073)
Employment within past 12 months	1.294***	(0.088)	1.377***	(0.093)
NGO membership	1.115	(0.078)	1.291**	(0.102)
Husband away from home	0.895	(0.110)	5.766***	(0.512)

\*p<= 0.05, \*\*p<= 0.01, \*\*\*p<= 0.001

**Table 3 continued. Resources for Empowerment via Household Decision Making in Bangladesh**  
**Sample (n =10,146)**

Predictor	Wife dominates		Husband dominates		Joint dominates	
	OR	(Robust s.e.)	OR	(Robust s.e.)	OR	(Robust s.e.)
<i>Customary resources</i>						
Age	1.033**	(0.010)	0.989	(0.011)	0.987	(0.007)
Age at first marriage	0.919**	(0.024)	1.051*	(0.022)	1.017	(0.014)
Spousal age difference	1.012	(0.010)	1.028***	(0.008)	0.999	(0.006)
Total living children (linear)	1.243**	(0.088)	1.214***	(0.056)	1.003	(0.032)
Total living children (quadratic)	0.930***	(0.018)	0.976*	(0.010)	0.985	(0.010)
Long marital duration (>13 years)	1.260	(0.314)	0.774	(0.121)	1.474***	(0.166)
Husband away from home	21.606***	(3.090)	0.052***	(0.022)	0.296***	(0.041)
Rural	0.633**	(0.099)	1.187	(0.159)	0.994	(0.083)
Wealth index (poor - rich)	1.042	(0.066)	0.924	(0.039)	1.016	(0.032)
<i>Contemporary resources</i>						
Education	0.972	(0.023)	0.918***	(0.014)	1.006	(0.011)
Spousal difference in education, ref: wife < husband						
wife = husband	0.975	(0.209)	0.836	(0.137)	0.875	(0.096)
wife > husband	1.272	(0.211)	1.290	(0.225)	0.952	(0.095)
Employment within past 12 months	1.190	(0.155)	0.556***	(0.064)	1.108	(0.095)
NGO membership	0.940	(0.138)	0.835*	(0.076)	1.159*	(0.077)

\*p<= 0.05, \*\*p<= 0.01, \*\*\*p<= 0.001

## References

- Abramsky, T., Watts, C., Garcia-Moreno, C., Devries, K., Kiss, L., Ellsberg, M., . . . Heise, L. (2011). What factors are associated with recent intimate partner violence? Findings from the WHO multi-country study on women's health and domestic violence. *BMC Public Health, 11*(1), 109.
- Absar, S. (2001a). *Basic needs of women garment workers in Bangladesh: A narrative-based study*. (Doctoral Dissertation). The Australian National University, Canberra.
- Absar, S. (2001b). Problems surrounding wages: the ready made garments sector in Bangladesh. *Labour and Management in Development Journal, 2*(7), 2-17.
- Ahmed, I. (2004). On securing women's security: Perspectives from South Asia In I. Ahmed (Ed.), *Women, Bangladesh and international security: Methods, discourses, and policies*. Dhaka: The University Press Ltd.
- Ahmed, S., & Khatun, M. (2008). Gender relations in postmodern societies: Impact of globalization on women's position. *Journal of Knowledge Globalization, 1*(2).
- Ashraf, N. (2009). Spousal control and intra-household decision making: An experimental study in the Philippines. *American Economic Review, 99*(4), 1245-1277.
- Baden, S., Green, C., Goetz, A., & Guhathakurta, M. (1994). *Background report on gender issues in Bangladesh* (BRIDGE Report, 26). Retrieved from Institute of Development Studies, Brighton website: <http://www.bridge.ids.ac.uk/reports/re26c.pdf>
- Basu, A. M., & Basu, K. (1991). Women's economic roles and child survival: The case of India. *Health Transition Review, 1*(1), 83-103.
- Batliwala, S. (1994). The meaning of women's empowerment: New concepts from action. In G. Sen, A. Germain & L. C. Chen (Eds.), *Population policies reconsidered: Health, empowerment, and rights*. Cambridge: Harvard University Press.
- Beegle, K., Frankenberg, E., & Thomas, D. (1998). Bargaining power within couples and use of prenatal and delivery care in Indonesia. *Studies in Family Planning, 32*(2), 130-146.

- Boserup, E., Kanji, N., Tan, S., & Toulmin, C. (2007). *Woman's role in economic development*. London: Earthscan/James & James.
- Cain, M. (1984). *Women's status and fertility in developing countries: Son preference and economic security*. Washington, DC: The World Bank.
- Cain, M., Khanam, S. R., & Nahar, S. (1979). Class, patriarchy, and women's work in Bangladesh. *Population and Development Review*, 5(3), 405-438.
- Caldwell, J. (1982). *Theory of fertility decline*. London: Academic Press.
- CEDAW. (2003). *Consideration of Reports submitted by State Parties under Article 18 of the CEDAW*. Fifth Periodic Report of State Parties. Bangladesh. (CEDAW/C/BGD/5). New York: United Nations.
- Chakraborty, E. (2004). Marginality, modes of insecurity and indigenous women of northern Bangladesh. In I. Ahmed (Ed.), *Women, Bangladesh and international security: Methods, discourses and policies* Dhaka: The University Press Ltd
- Das, M. (2008). Whispers to voices: Gender and social transformation in Bangladesh. *Bangladesh Development Series*. Washington, DC: The World Bank.
- Dewan, R. (1999). Gender implications of the “new” economic policy: A conceptual overview. *Women's Studies International Forum*, 22(4), 425-429.
- Duflo, E. (2003). Grandmothers and granddaughters: Old age pension and intra-household allocation in South Africa. *World Bank Economic Review*, 17(1), 1-25.
- Fan, C. C., & Li, L. (2002). Marriage and migration in transitional China: A field study of Gaozhou, western Guangdong. *Environment and Planning A*, 34(4), 619-638.
- Goetz, A., & Gupta, R. (1996). Who takes the credit? Gender, power, and control over loan use in rural credit programs in Bangladesh. *World Development*, 24(1), 45-63.
- Gordon, E. (1981). An analysis of the impact of labor migration on the lives of women in Lesotho. *Journal of Development Studies* 17(3), 59-76.

- Haddad, L., & Hoddinott, J. (1994). Women's income and boy-girl anthropometric status in Cote d'Ivoire. *World Development*, 22(4), 543-553.
- Hadi, A. (1999). Overseas migration and the well-being of those left behind in rural communities of Bangladesh. *Asia-Pacific Population Journal*, 14, 43-58.
- Hadi, A. (2001). International migration and the change of women's position among the left-behind in rural Bangladesh. *International Journal of Population Geography* 7, 53-61.
- Hashemi, S. M., Schuler, S. R., & Riley, A. P. (1996). Rural credit programs and women's empowerment in Bangladesh. *World Development*, 24(4), 635-653.
- Hindin, M. J., & Adair, L. S. (2002). Who's at risk? Factors associated with intimate partner violence in the Philippines. *Social Science & Medicine*, 55(8), 1385-1399.
- Hoddinott, J., & Haddad, L. (1995). Does female income share influence household expenditures? Evidence from Cote d'Ivoire. *Oxford Bulletin of Economics and Statistics*, 57(1), 77-96.
- Hugo, G. J. (2000). Migration and women's empowerment. In H. Presser & G. Sen (Eds.), *Women's empowerment and demographic processes: Moving beyond Cairo*. Oxford: Oxford University Press.
- Jahan, R. (1989). Women and development in Bangladesh: Challenges and opportunities. Dhaka, Bangladesh: Ford Foundation/Bangladesh.
- Jejeebhoy, S. J. (2000). Women's autonomy in rural India: Its dimensions, determinants, and the influence of context. In H. Presser & G. Sen (Eds.), *Women's empowerment and demographic processes: Moving beyond Cairo*. Oxford: Clarendon Press.
- Kabeer, N. (1999). *The conditions and consequences of choice: Reflections on the measurement of women's empowerment*. Geneva, Switzerland: United Nations Research Institute for Social Development (UNRISD).
- Kabeer, N. (1999). Resources, agency, achievements: Reflections on the measurement of women's empowerment. *Development and Change*, 30, 435-464.

- Kabeer, N. (2001). Resources, agency, achievements: Reflections on the measurement of women's empowerment. *Discussing Women's Empowerment-Theory and Practice* (Vol. Sida Studies ). Novum Grafiska AB, Stockholm
- Kabeer, N. (2008). Paid work, women's empowerment and gender justice: Critical pathways of social change. *Pathways of Women's Empowerment* (pp. 121). Sussex, UK: Institute for Development Studies (IDS).
- Kabeer, N. (2011). Between affiliation and autonomy: Navigating pathways of women's empowerment and gender justice in rural Bangladesh. *Development and Change*, 42(2), 499-528.
- Kabeer, N., Mahmud, S., & Tasneem, S. (2011). Does paid work provide a pathway to women's empowerment? Empirical findings from Bangladesh *Institute for Developing Studies (IDS) Working Paper*. Retrieved from: <http://www.ids.ac.uk/idspublication/does-paid-work-provide-a-pathway-to-women-s-empowerment-empirical-findings-from-bangladesh>
- Kandiyoti, D. (1988). Bargaining with patriarchy. *Gender & Society*, 2(3), 274-290.
- Kandiyoti, D. (Ed.). (1991). *Women, Islam, & the state*. Philadelphia: Macmillan Academic and Professional Ltd.
- Kishor, S. (2000). Empowerment of women in Egypt and links to the survival and health of their infants. In H. Presser & G. Sen (Eds.), *Women's empowerment and demographic processes: Moving beyond Cairo*. Oxford: Clarendon Press.
- Kishor, S., & Lekha, S. (2008). Understanding women's empowerment: A comparative analysis of Demographic and Health Surveys (DHS) data. *DHS Comparative Reports No. 20* Calverton, Maryland: Macro International Inc.
- Malhotra, A., & Mather, M. (1997). Do schooling and work empower women in developing countries? Gender and domestic decisions in Sri Lanka. *Sociological Forum*, 12(4), 599-630.
- Mason, K. O. (1998). Wives' economic decision-making power in the family: Five Asian countries. In K. O. Mason (Ed.), *The changing family in comparative perspective: Asia and the United States*. Honolulu: East-West Center.

- Mason, K. O., & Smith, H. L. (2000). Husbands' versus wives' fertility goals and use of contraception: The influence of gender context in five Asian countries. *Demography*, 37(3), 299-311.
- Mizan, A. (1993). Women's decision making power in rural Bangladesh: A study of the Grameen Bank. In A. Wahid (Ed.), *The Grameen Bank: Poverty relief in Bangladesh* (pp. 97-126). Boulder: Westview.
- Moghadam, V. (2003). *Modernizing women: Gender and social change in the Middle East* (2nd ed.). Boulder, CO: Lynne Reinner Publishers, Inc.
- National Institute of Population Research and Training (NIPORT), Mitra and Associates, and Macro International. (2009). *Bangladesh Demographic and Health Survey 2007*. Dhaka, Bangladesh and Calverton, Maryland, USA.
- Nussbaum, M. (2000). *Women and human development: The capabilities approach*. New York: Cambridge Press.
- Pogge, T. (2002). *World poverty and human rights*. Oxford: Blackwell.
- Programme of Action of the United Nations International Conference on Population & Development. United Nations International Conference on Population and Development (ICPD) 5-13 September 1994. Cairo, Egypt.
- Quisumbing, A. R., & Maluccio, J. A. (1999). Intrahousehold allocating and gender relations: New empirical evidence *Policy Research Report on Gender and Development, Working Paper Series No.2, World Bank Development Research Group/Poverty Reduction and Economic Management Network*. Washington, DC: World Bank.
- Rahman, M. (2002). *Globalization, environmental crisis and social change in Bangladesh*. Dhaka: University Press Ltd
- Rao, N. (2012). Breadwinners and homemakers: Migration and changing conjugal expectations in rural Bangladesh. *Journal of Development Studies*, 48(1), 26-40.

- Raschen, M., & Shah, F. (2006). Bangladesh Gender Profile. Frankfurt am Main: KfW Development Bank.
- Rowlands, J. (1995). Empowerment examined. *Development in Practice*, 5(2), 101-107.
- Sen, A. (1999). *Development as freedom*. Oxford: Oxford University Press.
- Sen, G. (1994). Women's empowerment and human rights: The challenges to policy. In F. Graham-Smith (Ed.), *Population, the complex reality: A report of the Population Summit of the World's Scientific Academies*. Golden, CO: Fulcrum.
- Thomas, D. (1990). Intrahousehold resource allocation: An inferential approach. *Journal of Human Resources*, 26, 635-664.
- Thomas, D. (1994). Like father, like son or like mother, like daughter: Parental education and child health. *Journal of Human Resources*, 29(4), 950-989.
- Thomas, D. (1997). Incomes, expenditures, and health outcomes: Evidence on intrahousehold resource allocation. In L. Haddad, J. Hoddinott & H. Alderman (Eds.), *Intrahousehold resource allocation in developing countries: Models, methods, and policy*. Baltimore, MD: Johns Hopkins University Press.
- United Nations (UN). (1994). *Report of the International Conference on Population and Development*. Cairo, Egypt: United Nations. Retrieved from:  
<http://www.un.org/popin/icpd/conference/offeng/poa.html>
- United Nations (UN). (1996). *Report of the Fourth World Conference on Women Beijing, 4-15 September 1995*. New York: United Nations. Retrieved from:  
<http://www.un.org/womenwatch/daw/beijing/pdf/Beijing%20full%20report%20E.pdf>
- United Nations. (2011). Millennium Development Goal 8. The Global Partnership for Development: Time to Deliver. *MDG Gap Task Force Report*. New York.
- United Nations Development Program (UNDP). (2008). *Empowered and Equal: Gender Equality Strategy 2008-2011*. Retrieved from:



<http://www.peacewomen.org/assets/file/PWandUN/UNImplementation/ProgrammesAndFunds/UNDP/gender-equality-strategy-2008-2011.pdf>

Wiest, R., & Mohiuddin, H. (2002). Shifting social relations and cultural changes in the livelihood strategies of women garment workers of Bangladesh. In M. Rahman (Ed.), *Globalization, environmental crisis, and social change in Bangladesh*. Dhaka: The University Press Ltd.

World Bank. (1990) *Bangladesh: Strategies for enhancing the role of women in economic development*. A World Bank Country Study. Washington, DC: World Bank.

World Bank. (2001). *Engendering development: Through gender equality in rights, resources, and voice*. World Bank policy research report. USA: Oxford University Press. Retrieved from:  
[http://publications.worldbank.org/index.php?main\\_page=product\\_info&products\\_id=21657](http://publications.worldbank.org/index.php?main_page=product_info&products_id=21657).

Yabiku, S. T., Agadjanian, V., & Sevoyan, A. (2010). Husbands' labour migration and wives' autonomy, Mozambique 2000–2006. *Population Studies*, 64(3), 293-306.

## Conclusion

The study and promotion of women's empowerment is critical to global health and development. Scholarly and policy efforts for empowerment may be particularly important in classic patriarchal settings; regions described by Kandiyoti (1988, 1991) to operate under systems of male dominance which economically and culturally devalue women. Historically in these settings, proof of fertility and the birth of sons have been critical for a woman's social standing and economic security according to women's financial dependence on male relatives, constrained sexuality, and confinement to the domestic sphere (Cain, 1984; Moghadam, 2003). In this region however, particularly in Bangladesh, social and economic changes are transforming these systems and have various potential impacts on women's societal role and pathways to empowerment. Using nationally representative data from the 2007 Bangladesh Demographic and Health Survey, this dissertation conducted three studies to examine the direct and indirect effects of fertility, customary and contemporary empowerment resources, and intimate partner violence (IPV) on a fundamental dimension of women's empowerment, household decision making.

Specifically, Study 1 examined the pathways by which a woman's fertility and her conformity to community based fertility norms affect her empowerment. Study 2 considered three mediation models outlined in Figure 1 to determine the direct and indirect effects of various aspects of fertility on empowerment as mediated by IPV. Upon reviewing results of studies 1 and 2, Study 3 investigated how customary and contemporary resources were associated with empowerment.

The first study found that women's involvement in household decision making remains low. Aspects of increased fertility, including having more children than the community norm, were negatively associated with women's empowerment. Findings suggest fertility levels in a woman's surrounding community may have greater impact on empowerment than her individual fertility.

The second study tested the hypothesis that women who challenge fertility-related gender norms in classic patriarchal settings may be at-risk for IPV since violence may be used as a mechanism to reestablish the gender order. Results indicated cumulative fertility has only modest

influence and that women are no longer empowered by high fertility the way they may have been in previous years. Having at least one child, though not necessarily a son, remained important for women's empowerment. IPV did not mediate the relationship between fertility and women's empowerment; however, analysis revealed an association between increased fertility and IPV and between IPV and increased empowerment.

Considering the modest association between fertility and empowerment in studies 1 and 2, the third study examined customary and contemporary resources for empowerment. Contemporary resources, specifically, women's recent employment, non-governmental organization membership, and absence of the husband had the strongest and most consistent associations with women's empowerment. Customary resources urban residence and longer marital duration were also positively associated with empowerment, especially high levels of empowerment and women's dominance of household decisions. Age, fertility, and education held modest associations.

This research offers insight into the improvement of women's lives in a rapidly changing classical patriarchal setting. Customary resources for empowerment which historically have contributed to women's increased decision making in a classically patriarchal family system seem to lose strength in the current setting, and contemporary resources appear to matter more in conjunction with the transformation of classically patriarchal structures. Empowerment and development efforts should consider the rapidly changing economic environment and the significance of women's economic participation to their empowerment. Additional research should expand on measures of economic participation and changes in household power dynamics surrounding husbands' absences. Empowerment studies should be hesitant to rely on age and education as proxy empowerment measures or as resources for empowerment.

#### *Limitations and strengths*

Study limitations are primarily due to the difficulty inherent to measuring empowerment. Women's empowerment was assessed with a commonly used proxy measure, women's involvement

in household decision making. While this measure was specific to the household level and involves potentially overlapping dimensions of empowerment (e.g. economic and familial dimensions), it does not take into account empowerment within legal, political, or community arenas. Of additional concern, this measure is static and does not address the change implied in Kabeer's (2001) definition in which empowerment is considered an 'expansion' or growth in a person's ability. As such, the measure is limited in its ability to truly assess women's empowerment as a process. However, daily household decision making as a proxy measure for empowerment is supported by the assumption that "a person's ability to make strategic life choices is linked with her access to, and control over, economic and other resources and her ability to make smaller, quotidian decisions" (Malhotra, Schuler, & Boender, 2002: p. 27)).

Fear or shame may have prevented some women from disclosing sensitive events, such as experiences of IPV or an adverse pregnancy outcome. Although IPV is likely universally underreported (Heise, Ellsberg, & Gottmoeller, 2002), interviewers in the 2007 BDHS were trained extensively in the use of the modified CTS, which gives women multiple opportunities to report specific acts and so tends to encourage disclosure (Straus, 2007). Interviewers were also given extensive training in probing techniques designed to help respondents report reproductive information accurately (National Institute of Population Research and Training [NIPORT], Mitra and Associates, Macro International, 2009), and retrospective data from the DHS is generally considered to be of high quality (Curtis & Blanc, 1997). Finally, data did not allow us to consider respondents' household structure (i.e. presence of in-laws) or family violence, both aspects which may influence fertility, IPV, and empowerment.

This dissertation research contributes to our overall understanding of the complex interplay between the demands of patriarchal structures and women's empowerment, measured via household decision making. In Bangladesh's rapidly changing environment, fertility remains influential, but contemporary resources for empowerment such as women's economic participation and household structure are more strongly associated with empowerment. Efforts to enhance women's

empowerment should consider the changing economic landscape and the significance of women's economic participation. Findings may serve to support empowerment efforts engaged in fertility control. Further research is recommended to examine fertility and IPV's association with additional dimensions of empowerment and within societies undergoing demographic transition. Research should also investigate changes in household power dynamics associated with the presence or absence of the husband.

## References

- Cain, M. (1984). *Women's status and fertility in developing countries: Son preference and economic security*. Washington, DC: The World Bank.
- Curtis, S. L., & Blanc, A. K. (1997). Determinants of contraceptive failure, switching, and discontinuation: An analysis of DHS contraceptive histories. *DHS Analytical Reports*. Calverton, MD: Macro International Inc.
- Heise, L., Ellsberg, M., & Gottmoeller, M. (2002). A global overview of gender-based violence. *International Journal of Gynaecology & Obstetrics*, 78 Suppl 1, S5-14.
- Kabeer, N. (2001). Resources, agency, achievements: Reflections on the measurement of women's empowerment *Discussing Women's Empowerment-Theory and Practice* (Vol. Sida Studies ). Novum Grafiska AB, Stockholm
- Kandiyoti, D. (1988). Bargaining with patriarchy. *Gender & Society*, 2(3), 274-290.
- Kandiyoti, D. (Ed.). (1991). *Women, Islam, & the state*. Philadelphia: Macmillian Academic and Professional Ltd.
- Malhotra, A., Schuler, S. R., & Boender, C. (2002). *Measuring women's empowerment as a variable in international development*. Paper commissioned by the World Bank, Gender and Development Group available at <http://siteresources.worldbank.org/INTGENDER/Resources/MalhotraSchulerBoender.pdf>
- Moghadam, V. (2003). *Modernizing women: Gender and social change in the Middle East* (2nd ed.). Boulder, CO: Lynne Reinner Publishers, Inc.
- National Institute of Population Research and Training (NIPORT), Mitra and Associates, and Macro International. (2009). *Bangladesh Demographic and Health Survey 2007*. Dhaka, Bangladesh and Calverton, Maryland, USA.

Straus, M. A. (2007). Conflict Tactics Scales. In N. A. Jackson (Ed.), *Encyclopedia of domestic violence* (pp. 190-197). New York: Routledge: Taylor & Francis Group.