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# Gendered power dynamics and unmet need for family planning among married women in Bangladesh

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Gendered power dynamics and unmet need for family planning among married women in  
Bangladesh

by

Jalal Uddin

A thesis submitted to the graduate faculty  
in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE

Major: Sociology

Program of Study Committee:  
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2014

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## TABLE OF CONTENTS

	Page
LIST OF FIGURES .....	iii
LIST OF TABLES .....	iv
ACKNOWLEDGEMENTS .....	v
ABSTRACT .....	vi
CHAPTER 1 INTRODUCTION .....	1
1.1 Background .....	1
CHAPTER 2 REVIEW OF LITERATURE AND CONCEPTUAL MODEL	9
2.1 Social dominance theory and gendered power bases .....	9
2.2 Exposure to family planning information .....	14
2.3 Socio-demographic characteristics .....	14
2.4 Conceptual model and hypotheses .....	17
CHAPTER 3 DATA AND METHODS .....	20
3.1 Data and Sampling .....	20
3.2 Variables, conceptualization, and measurements .....	21
3.3 Representativeness of the findings.....	24
3.4 Ethical considerations .....	25
3.5 Data analysis plan .....	25
CHAPTER 4 RESULTS .....	27
4.1 Study population characteristics .....	27
4.2 Differentials in current use of family planning.....	28
4.3 Differentials in unmet need for family planning.....	29
4.4 Bivariate analysis of unmet need for family planning .....	30
4.5 Multivariate analysis of unmet need for family planning .....	31
CHAPTER 5 DISCUSSION AND CONCLUSIONS .....	33
REFERENCES .....	38
APPENDIX A: Calculation of unmet need for family planning .....	53
APPENDIX B: Measures of socio-demographic characteristics .....	54

LIST OF FIGURES

	Page
Figure 1: Conceptual framework of the study .....	44
Figure 2 : Revised definition of unmet need (Bradley et al. 2012).....	45

## LIST OF TABLES

	Page
Table 1: Demographic characteristics of currently married women.....	46
Table 2: Socioeconomic characteristics of currently married women.....	47
Table 3: Women’s exposure to family planning information.....	47
Table 4: Women’s participation in household decision-making .....	48
Table 5: Unmet need for family planning by background characteristics .....	49
Table 6: Bivariate correlation among continuous independent variables.....	50
Table 7: Chi-square and Cramer’s V values for unmet need for family planning by selected nominal and ordinal variables .....	51
Table 8: Mean of continuous variables for unmet need for FP and t test results.....	51
Table 9: Odds ratios from logistic regressions showing the likelihood that a woman would have unmet need for family planning, by set of variables included in analysis.....	52

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## ABSTRACT

**Context:** Bangladeshi women are typically constrained by strict religious norms, patriarchal family structure, and poverty. Relatively little is known, however, about their ability to use contraceptives based on existing power relations at the household level. Drawing on social dominance theory with its focus on four bases of gendered power, this study aims to examine how power dynamics affect unmet need for family planning among married women in Bangladesh.

**Methods:** Logistic regression analyses using data from the Demographic and Health Survey 2011 of Bangladesh were used to examine the socio-demographic and gendered power dynamics associated with unmet need for family planning.

**Results:** About 14 percent of currently married women in Bangladesh have an unmet need for family planning. Muslim women had 54% higher unmet need for family planning than their non-Muslim counterparts. Women with greater participation in domestic decision-making were moderately less likely to have unmet need for family planning. Regression analyses indicated that egalitarian participation in controlling resources rather than women's sole autonomy was a strong predictor in unmet need for family planning models.

Furthermore, age, age at marriage, place of residence, exposure to family planning information, and control over resources were significant predictors of unmet need for family planning.

**Conclusion:** The relationships between socio-demographic characteristics, power dynamics, and unmet need for family planning are not straightforward. The study found moderate support for the power bases such as consensual ideologies and resource control in predicting unmet demand for family planning.

## CHAPTER 1 INTRODUCTION

### **1.1 Background**

#### *The concept of unmet need*

The existence of unmet need for contraception in many developing countries was first found in surveys in the 1960s that inquired about women's knowledge of, attitudes toward, and practice of birth control, as well as about family-size preferences (United Nations 1979; Bongaarts and Bruce 1995). Such surveys identified a gap between women's knowledge, attitudes, and practices (KAP) about contraception. The survey data indicated that a substantial proportion of women who wanted to stop childbearing were not practicing contraception. This gap between couple's expressed fertility desires and their contraceptive behavior is commonly referred to as unmet need for family planning. Simply put, unmet need for family planning refers to the unsatisfied demand for contraception.

Unmet need for family planning exists when a woman currently married or in union who is fecund and desires to either terminate or postpone childbearing, but who is not currently using a contraceptive method. Though the concept seems straightforward, the calculation is extraordinarily complex and has changed over time. The measurement of unmet need for contraception has become increasingly refined. The latest revised measurement mechanism required more than 15 different survey questions to define unmet need (Bradley et al. 2012).

#### *Situation of unmet need in developing countries*

One of the important population policy questions is whether the level of unmet need for family planning in developing countries is high enough, to result in a significant reduction in fertility if that need is satisfied (Westoff and Bankole 1995). In fact, recent research estimated that 222



million women in developing countries had unmet needs for modern contraceptive methods in 2012. Approximately two out of five pregnancies worldwide are unintended – in industrial countries as well as developing ones – and more than one in five births worldwide results from such pregnancies (Darroch and Singh 2013). Women with an unmet need for family planning still constitute a significant fraction of married women of reproductive age in developing countries. Unmet need is especially prevalent in West and Central Africa (where an unmet need for spacing births predominates) and is less common in Latin America and Asia (Westoff 2012). The recent estimates for modern methods reveal that, on average, unmet need was as high as 80 percent of the population in West and Central Africa in 2005-2011. On average, about 45 percent of married women had unmet need in Asia, North Africa, and Europe in 2005-2011. For example, about one third of married women had an unmet need for family planning in countries such as Pakistan (33% in 2007), Nepal (37% in 2011), Ethiopia (31% in 2011), Tanzania (32% in 2010), Peru (36% in 2008) and Guyana (31% in 2009). In the Asian region, the unmet need for modern method is lowest in Indonesia (17% in 2007) followed by India (22% in 2006) and Bangladesh 25% in 2007 (Westoff 2012).

### ***Why addressing unmet need is important?***

Research suggests that women who carry unintended pregnancies are less likely to seek antenatal care and delivery assistance (Marston and Cleland 2003) resulting in additional maternal deaths, and contributing to the more than one million preventable stillbirths (Speidel, Harper, and Shields 2008) and 3.6 million neonatal deaths that occur annually and that may have been prevented with proper care (Bhutta et al. 2011). World Health Organization (2011) reported that more than 358,000 women die of pregnancy-related causes every year. Meeting women's unmet need offers

a host of health and socioeconomic benefits. For instance, family planning can enhance the wellbeing of mothers and women by preventing unwanted pregnancies (Sedgh et al. 2007). It can reduce maternal mortality by reducing the number of pregnancies, the number of abortions, and the proportion of births at risk (UNFPA 2008).

From the standpoint of women's reproductive health rights, unmet need can be considered as an indicator of the violation of women's rights and absence of empowerment (Ahlburg, Kelly, and Mason 1996). Disparities in unmet need violate women's fundamental human right to control their own fertility and choose the number and timing of their children. At the 1994 International Conference on Population and Development (ICPD), a general consensus was reached to uphold the reproductive autonomy of individuals. In addition, meeting unmet need for family planning also slows the spread of HIV/AIDS, and reduces fertility substantially and, thereby, reduces the rate of population growth (Westoff and Bankole 1995).

### ***Power relations, women's position, and fertility regulation in Bangladesh***

Bangladesh is predominantly a Muslim country where women's lives are typically constrained by the system of patriarchy, conservative religious norms, and extreme poverty. In delineating the nature of Islamic policy, Cain and others (1979: 407) pointed that "both as an ideology and as the normative force that channels behavior and expectations, Islam represents a strong apology for patriarchy." The sexual division of labor and responsibility of men are explicit in Islam, which sanctifies male dominance. Typically, male dominance is observed in the household in which men are considered as the head of household and the breadwinner; they control family resources and assets. Male dominance is categorically reflected in their right to polygamy, unilateral divorce, double share of inheritance, and guardianship over wife and

children. Women are often considered as men's property, their sexuality, income, and labor being systemically controlled by the men in their family.

Although changing, the practice of *purdah* (seclusion of women) is still socially valued. The system of *purdah* has been an instrument of patriarchal control over women's lives. *Purdah* is a "system of secluding women and enforcing high standards of female modesty" (Papanek 1973: 289). The usual manifestations of *purdah* in Bangladesh include restrictions on women's movements outside their immediate homestead and standards of dress that hide their face and form. Because of *purdah*, women's contact with the world outside the family is limited. Seclusion system often limits woman's opportunities to participate in income-generating activities, and limits their access to reproductive healthcare services, support systems, ideas, and information.

Apart from patriarchal gender norms, some ingrained social obligations place women in a weaker position regarding their ability to use contraception and regulate fertility. One such obligation is the early marriage for young and adolescent girls. This obligation is embedded in the agrarian lifestyle in many rural communities in the developing world. Many agrarian families in Bangladesh view children as a source of agricultural labor and a hedge against poverty in old age and illness. Therefore, high fertility and large families are considered to be economically rewarding. Such norms in an agrarian value system encourage early marriage. As new brides, women are expected to behave in a shy, subservient manner, and they are under pressure to prove their fertility by producing children. Thus, typically, a woman who has reproduced a desired number of children easily fulfills her social and marital obligations. The critical gendered power dynamic in such obligations is that women who marry early are particularly unlikely to negotiate the use of contraception and make independent decisions related to fertility control,

because they feel obligated to bear children as part of the marital responsibilities and social obligations.

### ***Shifts in women's lives and fertility in Bangladesh***

Despite being a Muslim-majority country with persistent patriarchal manifestations in marriage and family, women's lives have started to change greatly with the rapid growth of urbanization, industrialization, and donor assisted development projects in Bangladesh in recent decades. A cultural shift has been started due to the mass migration of poor women from the countryside to the cities to work in industries such as the garment sector, increasing access to free education, 'collateral-free' microcredit, and free family planning services. Women's mobility to and connection with the world outside the family has increased. In the rural communities, particularly in poor families, shifts in poverty and livelihood trends have resulted in women's wage labor becoming more critical for household food security, and thus a loosening of restrictions on women's mobility. In addition, donor assisted NGO programs such as the widespread use of women's credit groups, and governance policy reforms that require reserved seats for women in local government administrations, have contributed to alter the prevailing social norms and break the silence of womenfolk.

Bangladesh has received considerable attention in the recent development literature as a poor Muslim country with a high success rate in contraceptive acceptance in the face of abject poverty and persistent social norms such as early marriage for girls, seclusion of women, and preference of sons (Schuler, Hashemi, and Jenkins 1995). There has been rapid decline in total fertility rates (from about 7 births per woman in the 1970s to 2.3 births per woman in 2011) and dramatic increase in contraceptive prevalence rates (about 8 percent in 1975 to 61 percent in

2011) (NIPORT et al. 2013). In all these achievements, women have emerged as the major players as users of modern contraceptives.

***Previous research on gendered power dynamics in family planning***

Previous research on the determinants of contraceptive use in Bangladesh has examined the roles of community (Balk 1994), family planning worker and client interaction (Koenig et al.1992; Philipps et al. 1993), religion (Bernhart and Uddin 1988), social network and ideation (Kincaid 2000) and behavioral aspects of contraception (Bhatia 1982). Studies that so far have addressed the issue of unmet need for family planning in Bangladesh have variously restricted their analysis to examining the effects of socio-demographic factors (age, age at marriage, number of living children, husband and wife's education, and occupation, religion, etc.), family planning program access factors (e.g., visit by family planning worker), exposure to mass media, exposure to family planning messages, and the communication between husband and wife (Khuda, Roy, and Rahman 1999; Khuda and Howlader 1988; Khatun, Rahman and Khan 2007).

Previous research has tended to ignore women's ability to use contraceptives based on existing power relations at the household level in Bangladesh, where persistent seclusion, patriarchal family structure, and agrarian value system challenge women in acquiring power, position, and privilege. Past research has recognized that women with limited access to power both structurally and interpersonally, reduce their choices and at times constrain their ability to control their own bodies and fertility (Connell 1987; Dayson and Moore 1983). Understanding the linkages between power bases and women's ability to influence family planning choices requires a gender based power dynamics perspective. Thus, demographers, and feminist researchers have begun to apply issues of power to theorizing women's agency in contraception use. For example, Dayson and Moore (1983), and Jejeebhoy (1995) theorized the ways that

gender roles and women's differential status are crucial in understanding reproductive behavior. Several researchers further theorized this connection and applied social dominance theory to understanding women's use of condoms, pointing to four elements of gendered relationships: resource control, consensual ideologies, force, and social obligations (Rosenthal and Levy 2010; Bass and Richards 2012).

Social dominance theory (SDT) has been applied to understand various aspects of gender-based power and their consequences for different outcomes such as women's risk for HIV infection, condom use, and mate selection (Pratto and Hegarty 2000; Rosenthal and Levy 2010; Bass and Richards 2012). SDT asserts that because of unequal access to, and control over power bases at the household level, members of marginalized or disadvantaged groups (women, ethnic minorities, etc.) face discrimination institutionally and interpersonally on a daily basis (Sidanius and Pratto 1999). Within the social dominance school of thought, Pratto and Walker (2004) have outlined four bases specific to gendered power – resource control, consensual ideologies, force, and social obligations -that can be applied to a range of issues. According to SDT, power and dominance are defined as operating on individual, group, institutional, and structural levels. In much of the literature, connecting power and women's risk for unprotected sex, the term 'power' refers to being able to act or behave according to one's own wishes and being able to influence or have control over the actions of others (Wingood and DiClemente 2000). In the context of unmet need for family planning, this definition is useful because it seems especially important to take into consideration the abilities that women have to limit or space their pregnancies by using contraceptives. To our knowledge, neither SDT nor the four bases of gendered power have been explicitly applied to understanding women's ability to space and limit their pregnancies. This study thus aims to explore SDT's ability to explain women's unmet need

for family planning. Using the four bases of gendered power as a lens gives us the ability to focus on the specific ways that unmet need for family planning is related to gendered power dynamics in the family.

In the following sections, first I will outline the reasons why SDT and its four bases of gendered power offer an ideal theoretical framework for understanding women's unmet need for family planning by reviewing research on contraception use, gender inequality in family planning, and gender based power dynamics in heterosexual relationships. Second, I will propose a conceptual model based on four elements of SDT to guide the data analysis. Finally, upon analyzing the data according to the conceptual model, we will discuss the ways that the current theoretical framework can inform future research and intervention efforts.

## CHAPTER 2 LITERATURE REVIEW AND CONCEPTUAL MODEL

### **2.1 Social dominance theory and gendered power bases**

Proponents of the social dominance theory argue that all human societies are composed of social hierarchies. Because hierarchies within society are based on social categories (e.g. religion, gender, class, sexuality), members of marginalized or disadvantaged groups face discrimination institutionally and interpersonally on a daily basis (Sidanius and Pratto 1999). This theory recognizes and explains the dynamics of gender-based power inequalities at both the institutional and individual levels and their consequences. This theory has been applied to a range of issues with many different populations. For example, recently this theory has been applied to explore the linkages between gendered power dynamics and women's ability to use contraceptive methods, and women's risk for HIV infection etc. (Rosenthal and Levy 2010; Bass and Richards 2012).

Within the social dominance school of thought, Pratto and Walker (2004) introduced four bases of gendered power. These bases include resource control, consensual ideologies, force, and social obligations. These bases of gendered power can be used as a lens to explore how these four bases determine women's ability to use contraception in a hierarchical society dominated by patriarchy, religious norms, and ingrained cultural value system. It is important to note from the outset that Pratto and Walker (2004) conceptualized the four bases of gendered power as fungible. Hence, although distinctions can be made between these four bases, these are interconnected and can reinforce each other. As a whole, these four bases are useful for outlining the ways that gendered power dynamics in the household contribute to women's risk for unintended pregnancies and non-use of contraception.



**Resource control:** Resource control refers to control over productive resources (e.g. income, assets, etc.) which generally favors more men than women worldwide (Connell 2005). Resource control particularly highlights the role of institutional and structural inequality in women's subordination (Pratto and Walker 2004). Because of inequality in access to resources, women are often left economically dependent on male partners, making it challenging and sometimes even dangerous for women to negotiate condom use (Gutierrez, Oh, and Gillmore 2000). African American women in North Carolina reported that a main reason for having unprotected sex was their financial dependence on male partners (CDC 2005).

**Consensual ideologies:** Consensual ideologies referring to "gender roles, norms, stereotypes, and any other beliefs or expectations about men and women that are generally agreed upon in a society or culture" often put women in a weaker position in comparison to men (Rosenthal and Levy 2010: 26). In many societies, it is commonly believed that women should be protected and taken care of by men (i.e., benevolent sexism) (Glick et al. 2000). Such benevolent sexism puts women in a weaker position and helps to maintain gender inequality within the marriage relationship. This benevolent sexism is often termed as "parentalism." Pratto and Walker (2001: 95) explain that "widespread acceptance of parentalism allows institutions to collude in 'protecting' women by limiting their access to education, political power, health care, legal standing, and economic resources." This form of parentalism plays out in marriage and committed relationships, creating the expectation that men will financially support and protect women and that in return women will take care of the family, home and show compliance with what their partner/husband desires. These consensual ideas decrease women's power in heterosexual relationship, which may result in failure to control their fertility by using contraception (Pratto and Walker 2001).

Patriarchal ideologies coupled with a religious script favors men and sanctifies male dominance in family. In a traditional society such as Bangladesh, men are uniformly considered to be the head of the household and the breadwinner of the family. Islamic religious scripts give men the right to have double share of inheritance and guardianship over wife and children. Men, thus, tend to have more bargaining power and decision-making power in the family. Women's weaker position in the family compared to men results in a diminished ability on women's part to negotiate the use of contraception and condoms. Because of the unbalanced power dynamics in the family, men and women act differently when it comes to their contraceptive and decision-making behavior. In most cases, women's economic dependence on their partners impedes them from raising their voices against men. This is further reinforced by male dominance in household decision-making in patriarchal societies (Sharan and Valente 2002).

Another form of ideology is restricting women's physical mobility in the society. For example, Islamic system of purdah often limits women's physical movements outside their homestead. The purdah practices in Bangladesh limit women from getting the help they need for their reproductive goals and contraceptive use. If a woman can visit family or relative independently of their husband's consent, this reflects a significant degree of autonomy on the part of the women in Bangladesh. If they are allowed to visit friends and family independently, their contraceptive behavior could be affected. A number of studies indicated that such autonomy is strongly associated with women's greater use of contraception, intention to avoid childbirth, and unintended pregnancies in traditional societies (Rahman, Mostofa, and Hoque 2014; Hakim, Salway, and Mumtaz 2003; Blanc 2001).

Another form of gender role asserts that women are and should be the passive acceptors of sex whereas men are and should be the controlling aggressors (Scott et al. 2005). Such gender

roles may result in a diminished ability on women's part to negotiate the use of contraception and condoms. Empirical evidence does support this association. For example, women in one study described certain gendered norms, including the requirement that married women bear many children, as reasons why their husbands did not want them to use contraception (Nalwadda et al. 2010). Another study comparing the influence of male dominance on fertility in rural versus urban areas found that in rural areas, where traditional ideologies remain and provide men with greater power, their fertility desires shaped outcomes more than the desires of their wives, in contrast to urban areas where traditional ideologies were less pervasive and women's desires held more sway (Dodoo and Tempenis 2002).

**Force:** Force is a form of gendered power, because of its significant contribution to the maintenance of a power hierarchy between men and women in society. Force may include physical abuse, rape, assault, any other form of violence against women that undermines their status and power (Rosenthal and Levy 2010). Psychosocial analysis suggests that violence against women is associated with the traditional power asymmetries that have characterized relations between men and women (Pratto and Walker 2004). Such a power imbalance between men and women has generated not only inequality and gender-based discrimination in the public arena, but also many of the situations of abuse that take place in the private sphere of male-female relations, especially in family relations.

Evidence suggests physical abuse in primary relationships poses a serious challenge to women's ability to use condoms. Women in the United States with physically abusive partners were more likely to report never using condoms, experiencing abusive consequences of condom use negotiation, and fearing consequences of attempting to negotiate condom use (Molina &

Basinait-Smith 1998). Because women's experience of partner violence is closely related to the amount of power that they have in those relationships, a history of violence has a negative effect on women's condom use with those partners (Pulerwitz et al. 2000). Regarding contraception, one qualitative study (Bawah et al. 1999) revealed that women reported violence as a form of retaliation for using or even attempting to discuss the use of contraception in Ghana. Another study using clients from a nongovernmental organization in Zimbabwe found low contraception use for women who feared violence in response to discussing contraception with their partners or in hiding their pills or other contraceptive methods if their efforts would be discovered (Njovana and Watts 1996).

***Social obligations:*** Social obligations often work as a base of gendered power, focusing on relationships and provisions of care as sources of inequality between women and men. Social obligations include responsibilities to others (such as a partner or children). A common norm in most societies is for women, as compared to men, to have more obligations in terms of being caregivers or satisfying others' needs and desires (Pattro and Walker 2004). In Bangladesh, child bearing and caregiving responsibilities are traditionally been handled by women. Such social obligations may place women in a weaker position regarding their contraception use desires. One study revealed that women in sub-Saharan Africa are expected to begin giving birth shortly after marriage to fulfill their roles as wives and mothers (Hindin 2000). Thus, married women may be less able to negotiate the use of contraception because they feel obligated to bear children as part of their marital responsibilities. With this, the higher the number of living children a woman has the more likely she should be able to use contraception because women with more children feel they have fulfilled their social obligation as wives and are subsequently able to use contraception as they desire (Bass and Richards 2012).

We also need to understand the social structure within which the social dominance theory might operate. We, therefore, need to review the socio-structural and life course related factors that inherently shape and determine women's use of contraception in a given society. In the following sections, exposure to family planning information and socio-demographic characteristics have been reviewed to guide development of hypotheses.

## **2.2 Exposure to family planning information**

Looking at the service point of view, empirical evidence suggests that availability of family planning services is associated with the use of contraception. The common approach towards meeting the demand of contraception is to ensure that family planning services are physically, financially, and culturally accessible. Considering the socio-cultural context of traditional society such as Bangladesh, the family planning program mobilized numerous fieldworkers to motivate couples about family planning and promote the value of small family. The empirical evidence suggests that the more frequent the visits of such fieldworkers, the higher the uptake of family planning (Khatun, Rahman, and Khan 2007; Ayele et al. 2013).

## **2.3 Socio-demographic characteristics**

Classic demographic theories argued that a society's fertility declines as a consequence of the rising cost of children, coupled with rapid social changes caused by industrial revolution, urbanization, and enlightenment (Easterlin 1978). Social science and population researchers over the last three decades, however, have challenged the posited relationship between socioeconomic changes and fertility (Hirschman 1994). Recent sociological and population research has identified 'ideational factors' (Cleland and Wilson 1987; Freedman 1987), 'social-interactions' (Bongaarts and Watkins 1996), education, income and autonomy in decision making (Hossain

1998) autonomy and power relationship (Shaikh et al. 2008; Rosero-Bixby and Casterline 1993; Khatun and Cornwell 2009) as important determinants of fertility and reproductive behavior.

### ***Age and age at marriage***

The common demographic determinants of contraceptive use include age, place of residence, age at marriage, place of residence and so on. Studies show that a relationship exists between women's age and contraception use for spacing and limiting birth. The younger women are less likely to use contraceptive method for spacing births, because they still want to have more children. As the women get older, they tend to use contraceptive methods for limiting birth. The women would have reached their desired number of children as their age increases which might lead them to think about limiting child birth. The use of contraception for limiting birth usually peaks in the late thirties to the early forties (Westoff and Ochoa 1991; Lethbridge 1990). The age at marriage follows exactly the same pattern as age: women who marrying at a younger age are less likely to use contraceptives to space births in contrast to women marrying at older age in traditional societies where large family size is socially valued.

### ***Religion***

Religion has consistently been found significant in shaping contraception use and fertility regulation. Empirical evidence from Asian countries indicates that through imposing sanctions of the practice of birth control, particularly, conservative religious beliefs of Islam substantially impact the fertility behavior of women. Research claims that higher fertility and unintended pregnancies are attributed to the lower level of power and autonomy afforded to Muslim women (Morgan et al. 2002; Rahman 2012). However, studies from Western countries reported atypical findings. Though Catholicism does not condone the use of contraceptives, one study found that Catholics are more likely to use certain methods of contraception that ensure non-pregnancy

while preventing feelings of shame and condemnation in their religious communities (Hill, Siwatu, and Robinson 2014).

### ***Place of residence***

Place of residence has routinely been used as an explanatory factor in a large body of studies indicating that contraceptive use varied by the respondents' place of residence. The common explanation found in the existing studies is that urban households, in particular, are exposed to small family norms and often enjoy far better access to health and family planning services than do those in rural areas. Consequently, urban householders are far more likely to use modern contraceptives than rural householders (Rahman 2012; Khan et al. 2008; Cleland, Kamal, and Sloggett 1996).

### ***Education and employment***

Education and women's employment are regarded as traditional indicators of women's status and are the most significant strategies for improving women's status in a given society. Access to education and labor force participation appear to be most significant indicators of women's status in society, especially where patriarchal structure is common (Kritz and Gurak 1989). Labor force participation of women in such societies, tend to increase women's capacity to control resources and capacitate them to participate in household decision-making. On a macro scale, employment tends to be associated with reductions in national fertility rate, presumably through increasing women's status within the home and their ability to advocate for their own fertility desires through the use of contraception (Soares and Falcao 2008; Klassen and Lamanna 2009; Lethbridge 1990; Cleland, Kamal, and Sloggett 1996; Miah and Mizan 1992). The underlying reasoning is that women who are involved in the job market might see that giving birth can incur additional costs in the form of money and time. Further, they might be concerned about the

parental responsibility of maintaining and rearing new born babies. However, many studies reported that both education and cash employment are only distant indicators for women's status that could influence their contraceptive behavior. In fact, studies reported that women's overall autonomy in their households mediates the association between these factors and women's behavior related to fertility control (Govindasamy and Malhotra 1996). Given the lack of predictive capacity of education and employment alone or together, women's domestic decision-making power has been of great interest to researchers.

#### **2.4 Conceptual model and hypotheses**

The conceptual model of gendered power of married women and contraceptive behavior (unmet need for FP) was derived from the social dominance theory and its four bases of gendered power. We assume that the bases of gendered power shape women's ability to use contraception in the family. However, without considering the characteristics of the respondents, any analysis of the contraception use would be pragmatically challenging. We thus include socio-demographic characteristics of the respondents. In the model, socio-demographic characteristics included women's age, age at marriage, education, religion, place of residence, and current work status. Furthermore, inclusion of exposure to family planning information is also crucial in the analysis of contraception use. Thus, we examine how individual level factors, exposure to family planning information, and women's power dynamics in the household are associated with their unmet need for contraception for spacing and limiting births.

#### **Hypotheses**

Research suggested that younger women are less likely to use contraceptive, because they still want to have more children. As the women get older and reached their desired number of children, they are more likely to use contraceptive methods (Westoff and Ochoa 1991; Lethbridge 1990).



Hypothesis 1: Younger women are more likely to have unmet need for family planning than older women.

The age at marriage follows exactly the same pattern as age: women who marrying at a younger age are less likely to use contraceptives in contrast to women marrying at older age in traditional societies where large family size is socially valued (Westoff and Ochoa 1991; Lethbridge 1990).

Hypothesis 2: Women younger than average when married are more likely to have unmet need for family planning than women who married late.

Empirical evidence suggests that women with higher education are better able to regulate their fertility than those who have no formal education (Kritz and Gurak 1989).

Hypothesis 3: Women with higher level of education are less likely to have unmet need for family planning compared to women with lower education.

Empirical evidence from Asian countries indicates that higher fertility and unintended pregnancies are higher among Muslim women than their non-Muslim counterparts (Morgan et al. 2002; Rahman 2012).

Hypothesis 4: Muslim women are more likely to have unmet need than non-Muslim women.

Studies reported that urban households are exposed to small family norms and often enjoy far better access to health and family planning services than do those in rural areas. Consequently, urban householders are far more likely to use modern contraceptives than rural householders (Rahman 2012; Khan et al. 2008; Cleland, Kamal, and Sloggett 1996).

Hypothesis 5: Women living in urban areas are less likely to have unmet need for family planning than women living in rural areas.

Empirical evidence suggests that paid employment tends to be associated with reductions in national fertility rate, presumably through increasing women's status within the home and their ability to advocate for their own fertility desires through the use of contraception (Soares and Falcao 2008; Klassen and Lamanna 2009; Lethbridge 1990).

Hypothesis 6: Women who are currently employed are less likely to have unmet need for family planning compared to women who are not currently employed.

The empirical evidence suggests that the more frequent the visits of such fieldworkers, the higher the uptake of family planning (Khatun, Rahman, and Khan 2007; Ayele et al. 2013).

Hypothesis 7: Women with higher exposure to family planning information are less likely to have unmet need for family planning than women with less exposure to family planning information.

Because of inequality in access to resources, women are often left economically dependent on male partners, which lead women to have less power to negotiate condom use with their partners (Gutierrez, Oh, and Gillmore 2000).

Hypothesis 8: Women with less control over resources are more likely to have unmet need for family planning than women with more control over resources.

Studies reported that women's greater participation in household decision-making (e.g. decisions about their healthcare, children's healthcare) and greater freedom in physical movement are more able to negotiate condom use and regulate fertility (Sharan and Valente 2002)

Hypothesis 9: Women with greater participation in household decision-making are less likely to have unmet need for family planning than women with higher participation.

Research reported that women in the United States with physically abusive partners were more likely to report never using condoms (Molina & Basinait-Smith 1998).

Hypothesis 10: Women with least gender-equitable attitudes towards use of physical force are more likely to have unmet need for family planning than women with greater gender-equitable attitude toward use of physical force.

Study revealed that women in sub-Saharan Africa are expected to begin giving birth shortly after marriage to fulfill their roles as wives and mothers (Hindin 2000; Bass and Richards 2012). In Bangladesh, women are socially expected to give birth a desired number of children, because children are seen as economically rewarding (Rahman 2012). Thus, women with higher number of living children may be more able to use contraception.

Hypothesis 11: Women with more living children are less likely to have unmet need for family planning compared to women with fewer living children.

Hypothesis 12: The higher desired number of additional children is associated with higher unmet need for family planning.

## CHAPTER 3 DATA AND METHODS

### 3.1 Data and Sampling

To answer the research questions, this study analyzed quantitative data from the Bangladesh 2011 Demographic and Health Surveys (DHS). DHS are conducted in developing countries using face-to-face interviews and typically collect nationally representative data on demographic and health indicators for women in the age group of 15 to 49. Bangladesh is one of the countries where DHS surveys are conducted in every three years since 1993.

The sample for the 2011 BDHS covered the entire population residing in non-institutional dwelling units in the country. The list of enumeration areas (EAs) prepared for the 2011 Population and Housing Census, was used as a sampling frame for the 2011 BDHS. The primary sampling unit (PSU) for the survey was an EA that consisted of an average of about 120 households. Bangladesh has seven administrative divisions: Barisal, Chittagong, Dhaka, Khulna, Rajshahi, Rangpur, and Sylhet. Each division is subdivided into several districts and each district into several *upazilas* (sub-district). Each *upazila* (sub-district) headquarter is an urban area. There are several hundred villages in an *upazila*.

This survey was based on a two-stage stratified sample of households. In the first stage, 600 EAs were selected with probability proportional to the EA size, with 207 clusters in urban areas and 393 in rural areas. A complete household listing operation was then carried out in all the selected EAs to prepare a sampling frame for the second-stage selection of households. In the second stage of sampling, a systematic sample of 30 households on average was selected per EA to provide statistically reliable estimates of key demographic and health variables for the country as a whole, for urban and rural areas separately, and for each of the seven divisions. With this

design, from a total of 17,964 selected households, 17,511 were found to be occupied. Interviews were successfully completed in 17,141 households, or 98 percent of all the occupied households. A total of 18,222 ever-married women age 12-49 were identified in these households, and 17,842 were interviewed, yielding a response rate of 98 percent.

### **3.2 Study variables, conceptualization, and measurements**

#### Dependent variable: Unmet need for family planning

This study used conceptual definition of unmet need for family planning developed by Bradley et al. (2012). According to Bradley et al. (2012), women with unmet need for spacing births include pregnant women whose pregnancy was mistimed, postpartum amenorrheic women whose last birth was mistimed, and fecund women who are neither pregnant nor postpartum amenorrheic and who are not using any method of family planning and say they want to wait two or more years for their next birth, are undecided about the timing of the next birth, or are undecided whether to have another child. Unmet need for spacing is coded as No = 0, Yes = 1.

Women with unmet need for limiting births include pregnant women whose pregnancy was unwanted, postpartum amenorrheic women whose last birth was unwanted and fecund women who are neither pregnant nor postpartum amenorrheic and who are not using any method of family planning and who want no more children. Unmet need for limiting is coded as No = 0, Yes = 1). Total unmet need refers to the sum of unmet need for spacing and unmet need for limiting. For detailed calculation process of unmet need, please see Appendix A and figure 2.

Independent variables:

***Socio-demographic characteristics***

Socio-demographic variables included: age, age at first marriage, years of schooling, place of residence (urban, rural), current work status (yes, no), and religion. Religion is recoded as 0 = Non-Muslims and 1 = Muslims. The list of questions used to measure the socio-demographic characteristics is presented in Appendix B.

***Resource control variables***

Variables pertaining to resource control include women's control over their cash earnings, and control over large household purchases. All women were inquired about who primarily controls over their cash earnings and large household purchases. The responses recoded for our analysis include 0= Husband alone, 1 = both husband and wife, and 2 = Wife alone.

***Consensual ideology variables***

*Women's participation in household decision-making index*

Women's participation in household decision-making is assumed to be reflective of couple's ideologies regarding gender roles in the family affairs. This study measured the concept of 'women's participation in household decision-making' in the following areas: 1) extent of freedom of movement (via decisions on visiting families or relatives), 2) decision-making about their own health care, 3) decision-making about child's health care, and 4) ability to visit health center alone or with young children. In order to obtain information on the above measures, the BDHS 2011 asked the following question: "Who usually decides on the following decisions":

- Visiting to family, friends, or relatives
- Making decision about women's healthcare
- Making decision about children's healthcare
- Making decision about going to health center

Responses to first three decisions were recoded as 2 = Wife alone, 1= both husband and wife jointly, 0 = respondent and someone else, or husband alone, or someone else alone. The last decision was assessed using the following question “Whether the respondent can go to health center alone or with young children. The responses to this question were recoded as 2 = can to health center alone or with young children, 1 = can go to health center with husband, 0 = can’t go). To create an index, we summed up all the scores for each respondent. The summated score ranged from 0 to 8, with 0 indicating no participation and 8 indicating the highest participation.

### ***Force variables***

#### Attitude towards use of physical force index

An index reflecting women’s attitudes toward *use of physical force* in intimate relationships represents the force variable. The DHS standard questionnaire measures women’s attitudes towards five hypothetical scenarios under which a husband is justified in hitting or beating his wife. The question asked is “Sometimes, a husband is annoyed or angered by what his wife/partner does. In your opinion, is a husband justified in hitting or beating his wife in the following situations”:

- if she goes out without telling him
- if she neglects the children
- if she argues with him
- if she refuses to have sex with him
- if she burns the food

Responses were classified into one of the following categories: Yes, No, and Don't Know. For each item, the variable was coded as ‘1’ for a ‘No’ response, indicating that a husband was not justified in hitting or beating his wife in that situation, and ‘0’ to indicate all other response options. We summed up the scores to create an index. The summated score ranged from 0 to 5, with 0 indicating the least gender-equitable attitudes and 5 indicating the most gender-equitable attitudes.

### ***Social obligations variables***

Social obligation is conceptualized to be family or societal expectations that shape individuals behavior or course of action. The agrarian value system encourages early marriage and considers children as a source of labor and hedge in old age and illness. Thus, large families are socially expected. Therefore, theoretically, the ideal number of children would be higher in societies where large family size is socially desirable. According, women will be reinforced to have more children to fulfill her social and marital obligations. To evaluate the social obligations upon women, following two variables were used in the analysis.

*No. of living children:* This is a continuous variable.

*Desired number of additional children:* This is also a continuous variable. This variable is calculated by subtracting the actual number of living children from ideal number of children.

### ***Exposure to FP information index***

Exposure to family planning information refers to women's degree of exposure to information and services related to contraception. To evaluate women's exposure to FP information, an index was created using for items. These items include:

- whether the women were visited by FP worker in past 6 months
- whether women heard any FP message on radio
- whether women heard any FP message on TV
- whether women read any FP message in newspaper/magazine

The responses to these questions were coded as 1=Yes, 0=No. We summed up the score to create an index. The summated score ranged from 0 to 4, with 0 indicating no exposure and 4 indicating the highest exposure.

**3.3 Representativeness of the findings:** Demographic and Health Survey collect nationally representative sample, which substantially enables us to generalize the findings with greater statistical confidence. The generalizable characteristics of the data ultimately minimize most of

the external validity threats to findings. Furthermore, because the DHS employs a complex cluster sampling design, sample weighting procedures were employed so that the results are representative of Bangladeshi married women and so that the standard errors are not inflated.

**3.4 Ethical considerations:** Personal identifiers of all participants were removed in the publicly accessible data files. Bangladesh DHS obtains informed consent from all household heads and respondents interviewed in the survey. All the survey respondents are duly briefed and their consent requested before conducting the interview. Formal permission is obtained to use and access the BDHS data set for this academic research.

### **3.5 Data Analysis Plan**

Analysis of data began with using descriptive summary statistics for selected discrete and continuous variables. In the second step, various tests were used to examine the statistical associations between independent and dependent variables. For example, bivariate correlation was used to examine the strength and direction of relationship among a set of independent variables which are continuous in nature. For the categorical and ordinal level variables, chi-square and Cramer's V test was used respectively. Two sample independent t-test was used to examine the mean difference of independent variables (continuous) on unmet need for family planning.

In the third step, binary logistic regression is used to identify factors associated with three types of unmet need for family planning (unmet need for spacing births, unmet need for limiting births, and total unmet need). The analytic strategy for assessing the relationship between study variables and unmet need for family planning was to consecutively add controls for different variables. The first model included only the effect of socio-demographic factors on the odds of



three types of unmet need; the second model added controls for exposure to family planning information; the third incorporated the characteristics of four gendered power bases. Before finally entering the variables in the regression models, I iteratively checked the variance inflation factor (VIF) for detecting any possible multicollinearity problem in the regression models. I did not find any multicollinearity problem.

## CHAPTER 4 RESULTS

### 4.1 Study Population Characteristics

The background characteristics of the respondents are presented in Table 1 and Table 2. A total of 16,704 currently married women were interviewed in BDHS 2011. Table 1 shows that a significant proportion of women interviewed were young, for example 40% of the women belonged to 20-29 age cohort. The mean age of the currently married women was 30.4. The average age at first marriage was 15.7. An overwhelming majority (more than 90%) of the women got married before their transition from teenage to adulthood, with 40% of them getting married at a very young age, i.e., before they reach 15. Three-fourths of the married women considered 'two children' as the ideal number of children for a couple. The average number of living children per married women was 2.3. Half of the currently married women reported to have 1-2 living children followed by 3-4 living children (30%).

The socioeconomic information presented in Table 2 shows that 26 percent of currently-married women had no education. A few women attained higher education (7.6%). Only 30% had some primary education and 36% had some secondary education. In terms of the current working status, nearly 12% of the women were employed. Overall, an overwhelming majority of the women were Muslim (90%), followed by Hinduism (9.6%).

As shown in Table 3, about 15% of women said they were visited by a family planning worker in the six months before the survey. About 16% of women visited nearest community clinic in previous 3 months of the survey. Television was the most popular source for family planning messages in Bangladesh, with about 25% of married women having seen a family planning message in this media.

The ability of women to make decisions that affect the personal circumstances of their own lives is an essential aspect of empowerment and serves as an important contributor to their overall welfare. To assess currently married women's decision-making autonomy, the 2011 BDHS collected information on women's participation in several decisions, for example, the decisions on their own health care, major household purchases, their child's health care, and visits to their family or relatives etc. As shown in Table 4, about 30 percent of currently married women report that their husbands are the main decision makers for decisions about major household purchases, and visits to family or relatives. Half of the currently married women report that their husbands are the main decision makers for decision about their own healthcare. On the contrary, women have more say in decisions related to their children's health care; 15 percent say that they mainly make these decisions, and 19 percent report that their husbands mainly make these decisions.

#### **4.2 Differentials in current use of family planning**

In BDHS surveys, current use of contraception is defined as the proportion of currently married women who report that they were using a family planning method at the time of the survey. Overall, 61 percent of currently married women reported to use any contraceptive method. Fifty-two percent women report to use any modern method and nine percent reported to use any traditional method. Current use of contraception varies by age. Among young women, the use of any method increases with age, rising from usage among 47 percent of currently married women age 15-19 to a peak usage of 72 percent at age 35-39. Then usage among currently married women decreases to 64 percent at age 40-44 and to 43 percent at age 45-49. This pattern of contraceptive use by age is typical of most countries.

Use of contraceptives varies by the woman's number of living children. In general, contraceptive use is seen to be higher among high-parity women. It continues to increase to 69 percent among women with three or four children but decreases to 58 percent after five or more children. This decline in use may be caused by declining fecundity associated with the older age of high-parity women. Contraceptive use varies by place of residence. The use of contraception is higher in urban (64 percent) than in rural areas (60 percent).

#### **4.3 Differentials in unmet need for family planning**

Overall, 13 percent of currently married women in Bangladesh have an unmet need for family planning services, 7.7 percent for limiting and 5.3 percent for spacing of births (Table 5). Unmet need for family planning decreases with increasing age, ranging from 16 percent among women age 15-19 to about 8 percent among women age 45-49. Women in rural areas have a higher unmet need (14 percent) than women in urban areas (11 percent).

Unmet need for family planning is lower among women who considered a higher ideal number of children, ranging from 25 percent among women with no ideal number of children to 16 percent among women with 5 as the ideal number of children. Unmet need for family planning varies by the woman's number of living children. Unmet need for spacing is lower among high-parity women. On the other hand, unmet need for limiting births is higher among women with higher number of living children. Overall, Muslim women are more likely to have unmet need for family planning.

#### **4.4 Bivariate analysis of unmet need for family planning**

Table 6 presents the bivariate correlation matrix of the continuous variables in the study, indicating the hierarchy among the independent variables. It shows that the number of living children is positively associated with age and negatively associated with age at first marriage. Autonomy index is positively associated with age and number of living children.

Table 7 presents the chi-square and Cramer's V test results. Based on the chi-square test statistic, unmet need for family planning differs significantly according to religion, place of residence, and current working status. Unmet need for both spacing and limiting is higher among Muslim women compared to non-Muslim women. Unmet need for both spacing and limiting is higher among women living in rural areas compared to women living in urban areas. Further, unmet need for both spacing and limiting is higher among women who are not currently working compared to women who are currently working.

T-tests of mean differences (Table 8) indicate that unmet need for spacing is higher among women who are younger, were somewhat older than average when married, have somewhat less schooling, fewer living children, and a lower degree of autonomy. Unmet need for limiting is higher among women who are older, were younger than average when married, have more living children, a higher degree of autonomy, and less exposure to family planning information.

Desired number of additional children and force index are not significantly associated with either type of unmet need.

#### **4.5 Multivariate analysis of unmet need for family planning**

Table 9 presents the Odds Ratios (OR) from logistic regressions, which indicates the likelihood that a woman would have unmet need for spacing, unmet need for limiting, and total unmet need for family planning according to the sets of variables included in analysis. The first analysis examined whether socio-demographic factors alone were associated with three types of unmet need. The table shows that age was negatively associated with the odds of having an unmet need for spacing births, indicating that unmet need is lower among older women, and positively associated with unmet need for limiting. Age is negatively associated with total unmet need. Age at first marriage is positively associated with higher unmet need for spacing births, and negatively associated with unmet need for limiting births. Religion is consistently a strong predictor in all types of unmet need. The odds of having unmet need for spacing and limiting are 81% and 71% higher, respectively, among Muslim women compared to non-Muslims. Women living in rural areas consistently have higher odds of unmet need for spacing (46% higher) and limiting (20% higher) than urban women. The odds of having unmet need for spacing and limiting were 23% and 21% lower, respectively, among women who were working compared to women who were not working. Education was not significantly related to unmet for spacing or limiting.

In the second analysis, we added exposure to family planning information index with the socio-demographic characteristics. The addition of this variable did not change the odds of other significant variables. The odds of having unmet need for limiting births and total unmet need for family planning were 11% and 13% lower, respectively, among women who exposed to family planning information compared to women who did not get exposed to family planning information.

In the final step, variables related to gendered power bases were added. In this analysis, the addition of six variables slightly reduced the odds related to age, religion, place of residence in the models on unmet need for spacing and limiting births. The odds of having unmet need for spacing were 33% lower among women who alone had control over their cash earning compared to women whose cash earnings were mainly controlled by their husbands. The odds of having unmet need in all three models were nearly 40% lower among women who controlled large household purchases jointly with their husband compared to women whose household purchases were mainly controlled by their husbands. Women's autonomy in household decision-making was consistently associated with lower unmet need. Having more living children was positively associated with three types of unmet need. In terms of the relationship and directions, all the variables in bivariate analysis remained consistently significant in multivariate analysis.

In summary, regression results indicate that unmet need for spacing is higher among women who are younger, women who are Muslim, women living in rural areas, were somewhat older than average when married, have more living children. Unmet need for spacing is lower among women who jointly with their husband controlled over household purchases and among women who primarily controlled their own cash earnings. Unmet need for limiting is higher among women who are older, women who are Muslim, were younger than average when married, have more living children, a lower degree of autonomy, more exposure to family planning information. Unmet need for limiting is lower among women who jointly with their husband controlled over household purchases. Desired number of additional children and force index are not significantly associated with either type of unmet need.

## CHAPTER 5 DISCUSSION AND CONCLUSION

This study used the gendered power typology put forward by Pratto and Walker (2004) as a theoretical framework in examining how different power bases predict unmet need for family planning in a poor Muslim-majority country. This study also used socio-demographic characteristics and exposure to family planning information in the analysis. Our examination found just moderate support for the ability of the social dominance theory and its four elements of gendered power to predict unmet need for family planning among a nationwide sample of married women. The overall fit of the conceptual model to the data was moderate to weak. We found support for some but not all of the power bases specified in the social dominance theory.

Overall, this study found some support for two critical power bases such as ‘control over resources’ and ‘consensual ideologies’ in predicting unmet need for family planning. In general, I hypothesized that sole female control over resources would be imperative to decrease the likelihood of unmet need for family planning. Regression analyses supported our hypothesis but in a different way. The findings revealed that control over household purchases, particularly by both husband and wife, is consistently a significant predictor in all models. This particular finding suggests that control over resources can significantly shape the likelihood of unmet need, when joint effort over controlling resources (e.g., household large purchases) was emphasized. This finding questions the individualistic framework of women’s power that puts all of the burden on women and none on other relevant actors in a relationship. In other words, in valuing control over resources, we should be careful, as Petchesky and Weiner (1990) suggest, to not draw responsibility away from the other relevant actors.



Multivariate logistic regression analyses also provided support regarding the role of another power base called ‘consensual ideologies’. In traditional patriarchal societies, consensual ideologies are reflected in women’s degree of participation in domestic decision-makings. Our analyses revealed that women’s participation in domestic decision-making index was a statistically significant predictor in all models, implying that women’s greater participation in decision-making could reduce the unmet need for family planning. In fact, it is expected that more autonomous women would want smaller families and be better able to negotiate decisions regarding fertility and family planning. The observed association between women’s autonomy and unmet need for family planning is in line with a recent study that explored the effects of women’s autonomy on current use of modern contraception in Bangladesh (Rahman, Mostofa, and Hoque 2014).

In terms of influencing unmet need for family planning, the relationships in the full models across two other bases (e.g., ‘force’ and ‘social obligation’) were not supported. However, some socio-demographic background characteristics of the women appeared as important predictors. For example, age at marriage is consistently an important demographic predictor in the regression models. Age at marriage was positively associated with unmet need for spacing and negatively associated with unmet need for limiting births. It is relevant to reiterate that agrarian cultural values encourage early marriage in Bangladesh. Though the legal age of marriage in Bangladesh for women is 18 years, our study findings showed that a large proportion of marriages still take place before the legal age. Regression results suggested that women who married later, they had slightly lower unmet need for limiting births than those of who married early.

Another significant demographic predictor was place of residence. Women living in rural areas had more potential demand for contraception for both spacing and limiting births. However, the addition of control variables related to the gendered power typology moderately reduced the odds of unmet need for rural women in all models. The higher unmet need among rural women could be explained by the fact that women in rural areas are more likely to be far from health facilities, less educated, and less aware of family planning than women in urban areas. Other studies reported similar findings that corroborate our results (Korra 2002).

Furthermore, unmet need was significantly higher among Muslim women. However, the addition of controls for gendered power variables significantly reduced the odds of unmet need for Muslim women in all models. This means, greater autonomy in household decision-making and holding control over household resources might weaken the Muslim religious sanction on the practice of birth control. Looking at the supply-driven family planning program efforts, study findings indicated that exposure to family planning information had significant effect in lowering the unmet need even after controlling for gendered power variables.

To a large extent, the results confirm the argument that in its manifestations of higher status for women, Bangladeshi culture supports interaction and negotiation between husband and wife. Within this Islamic society, despite the considerable variability across measures of women's power, women's preference for joint rather than sole decision-making in controlling family resources matters in reducing unmet demand for family planning. Women who are supportive of a more egalitarian approach are seen to be more powerful in regulating their reproductive choices.

We conducted the analysis based on the available variables contained in the DHS women's questionnaire. This study aimed to test social dominance theory in understanding the complex relationships between gendered power dynamics in family and women's unmet need for contraception. Our examination found partial support for the relationships explicated in our conceptual model. This may be due to the DHS dataset not containing variables to measure fully all concepts of social dominance theory. For example, two critical elements of SDT theory, namely social obligations and resource control, were measured with only two items. Future work may want to test the relationships between these concepts and unmet need for contraception with a fuller array of measures. Furthermore, we also suggest that future work consider elaborating on our model in other ways. Our analysis builds on a simple and unidimensional model. However, future work can hypothesize mediating mechanisms in examining relationships between SDT variables and women's unmet need for contraception.

Given that gender roles, structural factors, and cultural norms play a crucial role in shaping power dynamics between husband and wife, it seems fruitful to build a general model as well as the specific models for women and men based on an integrated couple dataset. Overall, because this is the first test of the hypothesized relationships based on only the women's questionnaire, more work is needed to understand the associations of SDT variables, couple's attitude towards and interest in use of contraception, utilizing paired couple data by combining women's and men's modules of DHS or other relevant surveys.

### **Policy Recommendations**

Women's resource control power and decision-making autonomy play a role similar to egalitarianism in some cases; these power bases have an important effect in reducing unmet need

for family planning. Therefore, the policymakers must consider and incorporate Bangladeshi men and women equally in family planning programs. Our examination found that addition of these variables reduced the role of religion in impacting women's unmet demand for contraception. Thus, community based educational and communication campaigns based more on egalitarian approach should be promoted. Since television is the most popular form of mass media in Bangladesh, policymakers might consider telecasting communication campaigns in the form of 'short drama' or 'short movie' aiming to stimulate couples to make joint decisions in health and family affairs.

### **Limitations of the study**

This study acknowledges several limitations regarding data analysis and concepts measured. One major shortcoming of this research is that it has conceptualized and measured autonomy as a static characteristic, relying on cross-sectional data to measure it at a single time point rather than acknowledging the potential for prior experiences to accumulate and shape women's autonomy over time. This study also has limitations with respect to constructing an index of women's domestic decision-making autonomy based on the available data from the DHS. Much of the literature on women's empowerment highlights the fact that women's autonomy is a multidimensional concept and, therefore, objective representation of this construct requires a multidimensional measure. However, because of data limitations, we restricted our index to issues related to freedom of movement and domestic decision-making dynamics. This study lacked data on several other critical dimensions of autonomy such as emotional and knowledge dimensions of autonomy. Data on these two dimensions would contribute to a more comprehensive representation of female autonomy.

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Figure 1: Conceptual framework of the study

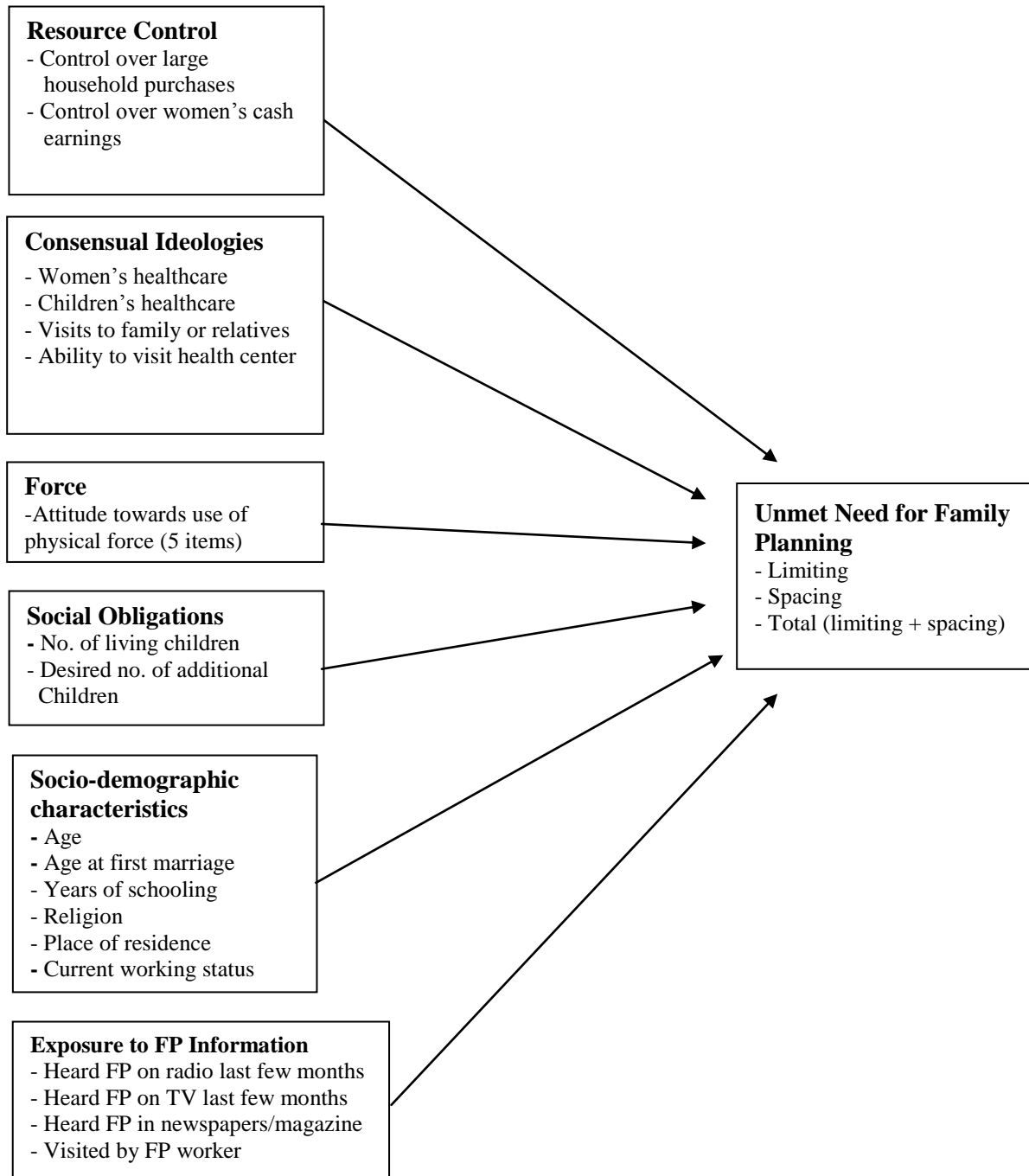


Figure 2: Revised definition of unmet need for currently married women (Bradley et al. 2012)

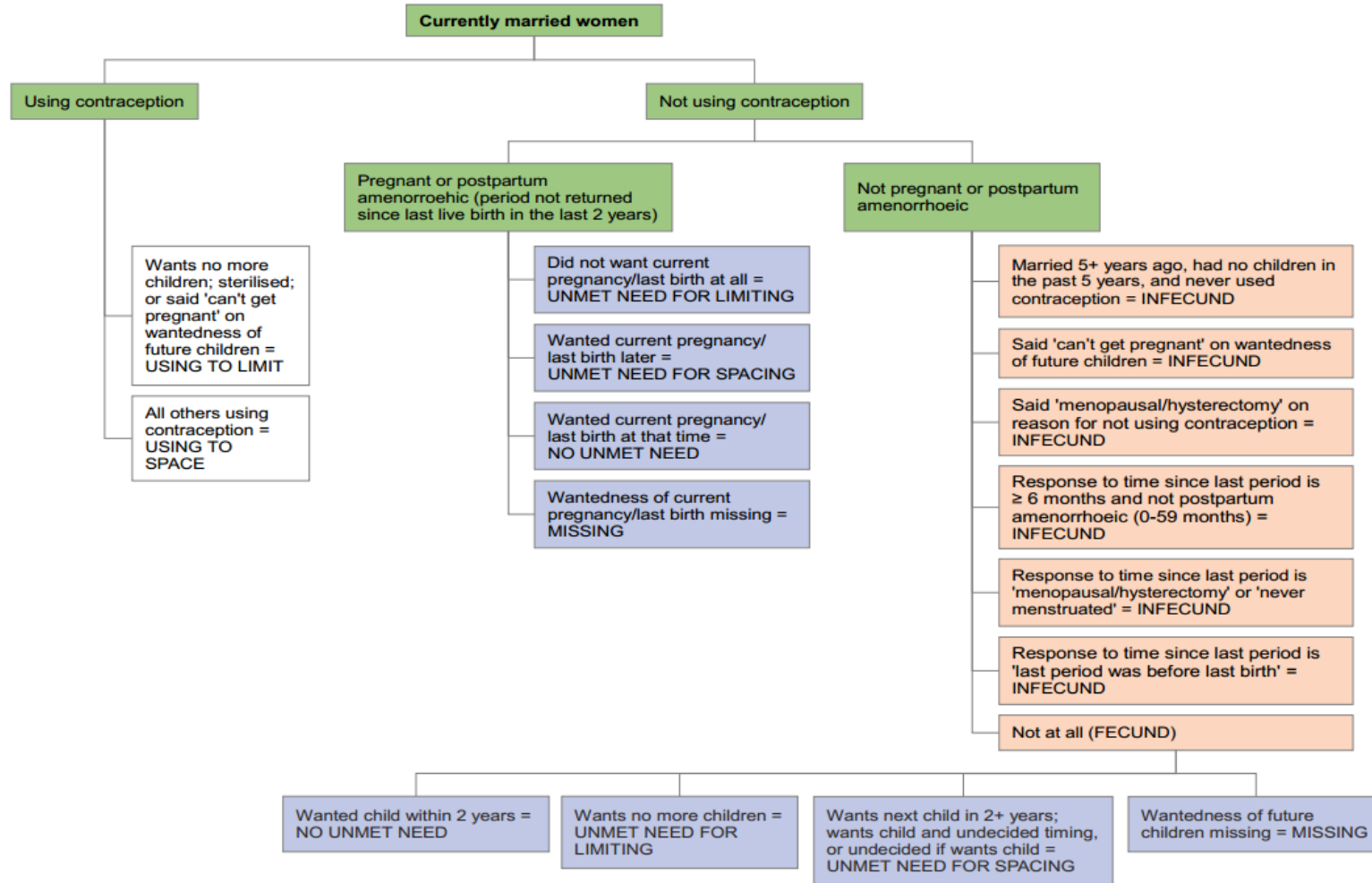


Table 1: Demographic characteristics of currently married women (N=16,704)

<b>Demographic characteristics</b>	<b>Coding categories</b>	<b>Percent</b>
Age	15-19	11.6
	20-24	20.4
	25-29	19.6
	30-34	15.2
	35-39	12.5
	40-44	11.6
	45-49	9.0
Age at First Marriage	<15	40.0
	15-19	51.4
	20-24	7.0
	>24	1.6
Ideal No. of Children (N =16,546)	0	0.1
	1	5.0
	2	75.7
	3	12.3
	4	5.3
	5+	1.7
	No. of Living Children	0
1-2		50.4
3-4		30.2
5 or more		10.3
Place of Residence	Urban	25.8
	Rural	74.2

Table 2: Socioeconomic characteristics of currently married women (N=16,704)

<b>Socioeconomic characteristics</b>	<b>Coding categories</b>	<b>Percent</b>
Educational Attainment	No education	26.3
	Primary	30.2
	Secondary	35.9
	Higher	7.6
Women's Current Working Status	Currently working	11.6
Types of Earning from Women's Work	Not paid	0.1
	In-kind only	1.9
	Cash and in-kind	4.1
	Cash only	92.8
Religion	Islam	90.0
	Hinduism	9.6
	Buddhism	0.2
	Christianity	0.2

Table 3: Women's exposure to family planning information (N=16,704)

<b>Exposure to family planning information</b>	<b>Coding categories</b>	<b>Percent</b>
Visited by FP worker in past 6 months	Yes	14.5
Visited a community clinic in past 3 months	Yes	16.3
Heard FP on radio last few months	Yes	2.9
Heard FP on television last few months	Yes	24.8
Heard FP in newspaper/magazine last few months	Yes	3.0

Table 4: Women's participation in household decision-making (N=16,704)

<b>Household decision-making</b>	<b>Coding categories</b>	<b>Percent</b>
Person who usually decides how to spend women's Earnings	Husband alone	8.3
	Both husband & wife	56.1
	Wife alone	34.5
	Someone else	1.1
Person who usually decides on women's health care	Husband alone	30.7
	Both husband & wife	50.1
	Wife alone	13.0
	Someone else	6.2
Person who usually decides on large household Purchases	Husband alone	29.9
	Both husband & wife	52.6
	Wife alone	7.0
	Someone else	10.6
Person who usually has the final say on your child's health care	Husband alone	19.7
	Both husband & wife	52.2
	Wife alone	14.5
	Someone else	13.6
Whether women can go to health center alone or with young children	Can't go alone or with young children	37.5
	Can go with husband	43.4
	Can go alone or with young children	19.1
Person who usually decides on visits to family or relatives	Husband alone	28.8
	Both husband & wife	53.0
	Wife alone	9.7
	Someone else	8.5

Table 5: Unmet need for family planning by background characteristics (N=16,704)

Background characteristics	Unmet need for spacing		Unmet need for limiting		Total unmet need	
	No	Yes	No	Yes	No	Yes
<b>Age</b>						
15-19	84.8	15.2	98.9	1.1	83.7	16.3
20-24	89.5	10.5	95.9	4.1	85.4	14.6
25-29	94.7	5.3	90.9	9.1	85.6	14.4
30-34	98.1	1.9	88.8	11.2	87.0	13.0
35-39	99.5	0.5	88.8	11.2	88.3	11.7
40-44	99.8	0.2	90.0	10.0	89.7	10.3
45-49	99.9	0.1	92.4	7.6	92.3	7.7
<b>Age at first marriage</b>						
<15	95.7	4.3	91.7	8.3	87.4	12.6
15-19	94.0	6.0	92.2	7.8	86.2	13.8
20-24	93.7	6.3	94.6	5.4	88.4	11.6
>24	93.8	6.2	97.1	2.9	90.8	9.2
<b>Ideal number of children</b>						
1	95.4	4.6	90.3	9.7	85.6	14.4
2	94.5	5.5	93.0	7.0	87.5	12.5
3	95.1	4.9	91.1	8.9	86.2	13.8
4	96.3	3.7	88.3	11.7	84.5	15.5
5	96.3	3.7	87.7	12.3	84.0	16.0
6+	0.3	0.0	88.1	11.9	88.1	11.9
<b>Number of living children</b>						
0	88.5	11.5	99.9	0.1	88.4	11.6
1-2	92.9	7.1	94.2	5.8	87.1	12.9
3-4	98.3	1.7	88.0	12.0	86.4	13.6
5 or more	99.5	0.5	86.5	13.5	86.0	14.0
<b>Place of residence</b>						
Urban	95.6	4.4	93.3	6.7	88.8	11.2
Rural	94.2	5.8	91.8	8.2	85.9	14.1
<b>Current work status</b>						
Yes	97.1	2.9	93.2	6.8	90.4	9.6
No	94.3	5.7	92.1	7.9	86.5	13.5
<b>Religion</b>						
Islam	94.4	5.6	91.9	8.1	86.3	13.7
Hinduism	96.9	3.1	95.0	5.0	91.9	8.1
Buddhism	90.9	9.1	93.9	6.1	84.8	15.2
Christianity	97.7	2.3	95.3	4.7	93.0	7.0
<b>Education</b>						
No education	97.7	2.3	90.8	9.2	88.6	11.4
Primary	95.4	4.6	91.9	8.1	87.3	12.7
Secondary	92.3	7.7	92.9	7.1	85.3	14.7
Higher	93.2	6.8	94.9	5.1	88.1	11.9
<b>Total</b>	94.7	5.3	92.3	7.7	86.9	13.1



Table 6: Bivariate correlation among continuous independent variables (N=16,704)

	Age	Age at first marriage	Highest year of education	Number of living children	Desired No. of additional children	Autonomy Index	Physical force index	Exposure to FP information
Age	1							
Age at first marriage	-.032**	1						
Highest year of education	.038**	.111**	1					
Number of living children	.642**	-.267**	-.006	1				
Desired # of additional child	.003	-.003	-.024**	-.017*	1			
Autonomy Index	.205**	.000	.008	.164**	.004	1		
Physical force index	-.029**	.098**	.015	-.065**	-.015*	.045**	1	
Exposure to FP info	-.070**	.092**	.038**	-.101**	.014	.062**	.042**	1

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

Table 7: Chi-square and Cramer's V values for unmet need for family planning by selected nominal and ordinal variables (N=16,704)

<b>Independent variables (nominal level)</b>	Unmet need for spacing $\chi^2$	Unmet need for limiting $\chi^2$	Total unmet need $\chi^2$
Religion	19.91**	21.76**	44.71**
Place of residence	16.72**	11.11**	29.19**
Current working status	15.07**	9.89**	25.87**
<b>Independent variables (ordinal level)</b>	<b>Cramer's V</b>	<b>Cramer's V</b>	<b>Cramer's V</b>
Control over large HH purchases	0.04**	0.16**	0.16**
Control over women's cash earnings	0.12**	0.07*	0.12**

\* Correlation is significant at the 0.05 level.

\*\* Correlation is significant at the 0.01 level.

Table 8: Mean of continuous variables for unmet need for FP and t test results (N=16,704)

Background characteristics	Unmet need for spacing			Unmet need for limiting			Total unmet need		
	No	Yes	<i>t</i>	No	Yes	<i>t</i>	No	Yes	<i>t</i>
Age	30.82	22.03	28.95**	30.12	32.95	-11.00**	3.62	28.57	10.00**
Age at first marriage	15.61	16.15	-5.37**	15.68	15.25	5.11**	15.65	15.61	0.51
Years of schooling	3.17	3.05	2.11*	3.17	3.18	-0.23	3.17	3.12	1.32
No. of living children	2.39	1.28	20.65**	2.25	3.15	-20.08**	1.58	1.57	-2.31*
Desired # of additional children	-0.09	-0.09	0.04	-0.08	-0.13	1.01	-0.87	-0.11	0.84
Autonomy index	3.86	3.26	7.73**	3.74	4.87	-17.27**	3.78	4.22	-8.33**
Force index	4.28	4.32	-0.91	4.29	4.27	0.39	4.29	4.30	-0.46
Exposure to FP info. index	0.47	0.45	1.03	0.48	0.39	4.14**	0.48	0.42	3.83**

Table 9: Odds ratios from logistic regressions showing the likelihood that a woman would have unmet need for family planning, by set of variables included in analysis

Characteristics	Unmet need for spacing			Unmet need for limiting			Total unmet need		
	Socio-demographic	Plus exposure to FP information	Plus gendered power bases	Socio-demographic	Plus exposure to FP information	Plus gendered power bases	Socio-demographic	Plus exposure to FP information	Plus gendered power bases
<b>Age</b>	0.85**	0.84**	0.82**	1.03**	1.03**	0.99	0.97**	0.97**	0.94**
<b>Age at first marriage</b>	1.12**	1.12**	1.11**	0.96**	0.96**	0.99	1.00	1.00	1.03**
<b>Education</b>									
Primary	1.02	1.03	1.02	0.99	1.01	0.99	0.96	0.97	0.96
Secondary	1.15	1.18	1.18	1.04	1.07	1.16	1.08	1.13	1.17*
Higher	1.14	1.19	1.21	0.94	1.00	1.15	1.02	1.10	1.20
<b>Religion</b>									
Muslim	1.81**	1.80**	1.71**	1.71**	1.70**	1.34*	1.79**	1.78**	1.54**
<b>Place of residence</b>									
Rural	1.46**	1.46**	1.40**	1.20**	1.20*	1.15*	1.32**	1.31**	1.27**
<b>Work status</b>									
Yes	0.77*	0.77	0.74	0.79*	0.79*	0.89	0.73**	0.73**	0.76
<b>Exposure to FP info. index</b>	na	0.92	0.91	na	0.89*	0.88*	na	0.87**	0.86**
<b>Control over cash earnings</b>									
Husband alone	na	Na	1.00	na	Na	1.00	na	na	1.00
Both husband & wife	na	Na	0.62	na	Na	0.84	na	na	0.75
Wife alone	na	Na	0.67**	na	Na	0.87	na	na	0.71
<b>Control over HH purchases</b>									
Husband alone	na	Na	1.00	na	Na	1.00	na	na	1.00
Both husband & wife	na	Na	0.64**	na	Na	0.61**	na	na	0.59**
Wife alone	na	Na	1.16	na	Na	1.18	na	na	1.10
<b>Autonomy index</b>	na	Na	0.91**	na	Na	0.92**	na	na	0.91**
<b>Force index</b>	na	Na	0.99	na	Na	1.01	na	na	1.01
<b>No. of living children</b>	na	Na	1.14**	na	Na	1.37**	na	na	1.27**
<b>Desired # of additional children</b>	na	Na	1.01	na	Na	0.99	na	na	0.99
<b>Intercept</b>	-2.86**	-2.86**	-2.86**	-2.43**	-2.43**	-2.43**	-1.86**	-1.86**	-1.85**
<b>Nagelkarke R<sup>2</sup></b>	0.19	0.19	0.20	0.03	0.03	0.11	0.02	0.02	0.08

**Appendix A:**Calculation of unmet need

In order to measure unmet need for contraception married women of reproductive age were asked more than 15 different precisely worded questions. The steps involved in measuring unmet need are illustrated in Figure 2, which shows a flow chart for how information is collected to calculate the level of unmet need. A woman is first asked whether she is using any method of contraception, whether for the purpose of limiting or spacing births. If she is using contraception, including traditional methods, she is considered to be a contraceptive user, and therefore, she does not have any unmet need. Women who are not using contraception are then asked whether they are pregnant or amenorrheic (not menstruating, often due to a recent pregnancy or lactation). In the calculation of unmet need, pregnant or amenorrheic women whose pregnancy was mistimed or unwanted are added to the proportion with unmet need, even though they do not at the time of the survey have an immediate need for contraception, given their pregnancy. Women who are not pregnant or amenorrheic and are infecund do not have unmet need, nor do women who want to become pregnant soon (within 1 to 2 years).

**Appendix B: Measures of socio-demographic characteristics**

<b>Variables</b>	<b>Questions asked</b>	<b>Response categories</b>
Age	How old were you at your last birthday?	Age in completed years <input type="text"/> <input type="text"/>
Age at first marriage	Have you been married only once or more than once?	Only once . . . . . 1 More than once . . . . . 2
	IF ONCE In what year did you start living with your husband?	Year <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>  Don't know year . . . . . 9998
	IF MARRIED MORE THAN ONCE In what year did you start living with your first husband?	
	How old were you when you first started living with him?	Age in completed years <input type="text"/> <input type="text"/>
Education	Have you ever attended school/madrasha?	Yes . . . . . 1 No . . . . . 2
	IF YES, What is the highest level of school you attended: primary, secondary, or higher?	PRIMARY . . . . . 1 SECONDARY . . . . . 2 HIGHER . . . . . 3
	What is the highest class you completed at that level?	Class <input type="text"/> <input type="text"/>
Place of residence	Respondent's place of residence	Urban = 1 Rural = 2
Religion	What is your religion?	ISLAM . . . . . 1 HINDUISM . . . . . 2 BUDDHISM . . . . . 3 CHRISTIANITY . . . . . 4 OTHER . . . . . 5
Current work status	Have you done any work in the last 12 months?	Yes . . . . . 1 No . . . . . 2