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Factors associated with contraception in India

Introduction

Despite heavy measures taken by various governments in developing countries, fertility is still on the rise. For example, men and women in these countries tend to want large families with husbands desiring more children than their wives (Bankole & Singh, 1998). Literature suggests that within married couples, husbands and wives do not always have the same aspirations (Ezeh, 1993; Bankole, 1995; Mason & Taj, 1987; Mason, 1987).The desire for large families can be traced back to the issue of social security and potential sources of wealth (Cain, 1982; Caldwell, 1982). Son preference has also been a driving factor for these couples due to economic, social and religious reasons (Cain, 1984; Repetto, 1972). There has also been some research done on the role of men in fertility decisions. In some countries, the male partner has been shown to have a greater influence on family planning. Control of the family's assets is one popular explanation though it is not always accurate (Ezeh 1993; Bankole & Singh, 1998). On the other hand, there are instances where the wife makes the final decision about family size (Coombs & Chang, 1981).

Rapidly increasing populations have given rise to family planning programs in developing countries. Population policy has generally focused on contraception as a way to reduce unintended pregnancies instead of abortion as a way to prevent birth. However, contraception has also had an impact on all types of fertility, thus making it a popular tool for family planning programs (Casterline & Sinding, 2000). Despite numerous studies on fertility issues and family planning, there has been surprisingly little done on the diverse method of contraception used by women. With each country having its own unique culture and traditions, it stands to reason that not all methods are going to be equally accepted or utilized. In a diverse and relatively young independent country such as India, infrastructure, implementation, education and public opposition proved to be barriers for initial family planning attempts. Renewed efforts on the part of the government have seen an increase in modern methods since 1995 (Visaria et al, 1999). However, literature is scarce on other forms of contraception such as abstinence and withdrawal which still continue to be popular. Since fertility in India is primarily marital, the aim of this paper is to look at some factors that may affect different methods of contraception among married Indian women at the individual level.

In this analysis, the focus is on what factors contribute to a women using or not using contraceptive measures to control her fertility.

Analysis if the literature shows that contraceptive use varies by the age of the woman. For example, adolescent married women in India are under more pressure to prove their fertility, thus they are less likely to use any kind of contraception (Jejeeboy, 1998). The sample consists if women aged 15-49, thus from the theory presented above, teenage girls would be less likely to

use contraception as compared to adult women. Following the same concept, older women are more likely to already have children and use some form of birth control.

Woman's educational level and her partner's educational level are also predictors in this analysis. There have been many studies that have focused on the relationship between education and the idea of family planning. For example, Fisek & Sumbuloglu (1978) in their analysis of rural Turkey, found that both husband's and wife's education is indicative of their contraceptive practices and any education overall contributes contraceptive use both traditional and modern. Thus, in this analysis, presence of some women's education and their partner's education should make it more likely that a woman will use contraception. It must also be kept in mind that women who have grown up in urban areas have higher chances of being educated that women of rural backgrounds and therefore have greater awareness of fertility issues. Therefore it is expected that women of urban background have higher chances of controlling their fertility than their rural counterparts. Current residence of the woman is not being used as she may have moved their after marriage.

Another factor that can contribute to the analysis is the religion of the woman. Catholicism and Islam are seen to be generally pronatalist in their beliefs (Chacko, 2001). There is a complex relationship between contraception and religion in India. There has been scarce research done on Hinduism and its views on fertility control. Due to the pronatalist beliefs of Catholics and Muslims, it is expected that these groups will not use any form of contraception as compared to Hindus.

Both sexually transmitted diseases (STDs) and pregnancies require sexual contact. The impact of STDs on contraceptive use has been explored in some of the literature. Generally having information on STDs has shown to encourage modern contraceptive use such as condoms and thus having an impact on fertility as well (Cates & Stone, 1992). Therefore it is expected that women who have some knowledge of STDs will be the most likely to use modern methods.

Regarding the cost of contraception, research has found that when couples decided to use modern contraception, cost, awareness and accessibility play role in their decision (Robey, 1988). Thus in this analysis, women who are from higher classes of society, are more likely to be using modern contraception than women from the lower classes.

Data

The data for this paper comes from the India Demographic and Health Survey conducted in 2005-06. India was chosen as it currently the world's second largest country in the world with over a billion people.

In order to test the hypotheses, the woman's dataset has been used. This dataset consists of around 120,000 women who were sampled from the different states of India. As with all DHS surveys, questions were asked to each woman covering demographic information, indicators of socio-economic status, information on pregnancy and children, female circumcision, family planning and fertility and knowledge about HIV/AIDS and sexual behaviors.

Variables and Statistical Technique

This paper is interested in looking at the factors that affect contraceptive use by married Indian women. The final sample consists only of fertile and currently non-pregnant women. The dependent variable asks each woman about her 'current contraceptive method'. This variable consisted of different methods of contraception namely 'None', 'Folkloric/Traditional' and 'Modern'. The following outcomes were thus established:

Result 0= Not using contraception (reference category).
Result 1= Using Traditional/Folkloric Method (Abstinence, Withdrawal etc).
Result 2= Using Modern Method (IUD, Condom, Sterilization etc).

Result 1 and Result 2 are so distinguished because there may be different factors affecting the type of contraception being used by the woman. The independent variables used to test the hypothesis include demographic controls in Model 1. In Model 2, variables looking at the number of children and awareness of sexually transmitted diseases (STDs) are added so their effects can be assessed independently of all other factors. In Model 3, the wealth index of the woman is added as an indicator of her socio-economic status.

Multinomial regression models were fitted to examine the factors influencing current contraceptive use by the women.

Preliminary Results

Table 1 presents the results for the analysis. Table 1, Model 3 shows the hypotheses as confirmed.

- Adolescent women were expected not to use any kind of contraception, as compared to other age groups. Significant results were found in this matter. Married women aged 15-19 were less likely that any other age group to use contraception(Model 3: Result 1 and 2). This is consistent with the hypothesis. Also, women having children are 18 to 20 times more likely to be using traditional methods of withdrawal/abstinence as compared to women who have no children. They are also 4 times as likely to be using modern methods.

- Women brought up in urban areas had significantly higher odds of using contraception than their rural counterparts who use none. They are 10% more likely to use traditional methods (Model 3, Result 1) and 11% more likely to use modern methods(Model 3, Result 2).

- Catholic and Muslim women had significantly lower odds of using contraception than Hindu women (52% and 42% less likely for traditional methods respectively; 66% and 11% less likely for modern methods respectively).

- Woman's education and partner's education were significant for both Result 1 and Result 2. Women with at least primary education had higher chances of using contraception (Model 3: Result 1 and 2). Women with secondary education had 67% more of a chance of using modern methods. The woman's partner having secondary/higher education shows 28% higher likelihood of using modern contraception.

- Significant difference was found between women who had heard about STDs and those who had not. The former were 35% more likely to use traditional methods and 26% more likely to use modern methods.

- The socio-economic position of the woman provides mixed results. Compared to the poorer/poor women, middle class women are 46% more likely to use traditional methods. There is no significant difference regarding modern methods for these two groups. The women belonging to the rich/richest category were 76% more likely to use traditional methods and 21% more likely to use modern methods. Though it confirms the hypothesis of rich/richest women being able to afford modern contraception, it also raises the question of why the use of traditional methods is so strong.

Next Steps

These initial results are currently being explored to pinpoint some other definite factors that contribute to contraceptive use. Other variables such as 'Husband's desire for children', 'Decision making regarding family size', 'Discussion regarding family planning' and 'Community behavior' could also have a significant effect. In addition, the 1992-93 India DHS and 1998-99 India DHS are also available for a cross sectional analysis. Comparable questions have been found in both datasets. Thus, it will also be interesting to see trends in different factors across a span of a decade.

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Table 1.Multinomial Logistic Regression analysis of women using contraception (odds ratio) N=77,891

Characteristics	Model 1 Result 1	Result 2	Model 2 Result 1	Result 2	Model 3 Result 1	Result 2
Demographic						
Age						
15-19(ref)						
20-24	4.272***	1.646***	2.310***	1.072	2.234***	1.061**
25-29	11.064***	2.750***	5.091***	1.611***	4.825***	1.581***
30-34	19.410***	4.249***	8.507***	2.415***	7.963***	2.355***
35-39	22.646***	5.125***	9.833***	2.877***	8.977***	2.778***
40-44	19.468***	4.159***	8.292***	2.299***	7.407***	2.198***
45-49	17.313***	1.984***	7.329***	1.096	6.389***	1.037**
Childhood place of Residence						
Rural(ref)						
Urban	1.290***	1.188***	1.280***	1.183***	1.102***	1.110***
Religion						
Hindu(ref)						
Muslim	0.623***	0.936	0.608***	0.908***	0.579***	0.892***
Christian	0.520***	0.362***	0.493***	0.347***	0.482***	0.343***
Other	1.155***	0.762***	1.132***	0.750***	1.066	0.728***
Education						
No Education(ref)						
Primary	1.383***	1.294***	1.303***	1.246***	1.228***	1.223***
Secondary/Higher	1.217***	1.825***	1.159***	1.764***	1.025**	1.677***
Partner's Education						
No Education(ref)						
Primary	1.258***	1.177***	1.211***	1.142***	1.148***	1.126**
Secondary/Higher	1.130***	1.383***	1.075***	1.339***	0.951**	1.287***

Note: **p<0.05 ***p<0.01

Table 1 Cont.Multinomial Logistic Regression analysis of women using contraception (odds ratio)
N=77,891

Characteristics	Model 1 Result 1	Result 2	Model 2 Result 1	Result 2	Model 3 Result 1	Result 2
Number of Children						
None(ref)						
1-3			18.524***	4.418***	18.723***	4.449***
4-6			20.695***	4.348***	21.639***	4.437***
>7			7.253***	3.484***	7.815***	3.597***
Heard about STDs			1.453***	1.287***	1.353***	1.260***
Wealth Index						
Poorer/Poor(ref)						
Middle					1.460***	1.074
Richer/Richest					1.761***	1.214***

Note: **p<0.05 ***p<0.01