FERTILITY BEHAVIOR OF THE CHILDLESS WOMEN IN BANGLADESH

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Abstract

Fertility has been one of the major issues of population policies in Bangladesh. Currently married women who are still childless have different demographic characteristics and reproductive health conditions. Much can be done in terms of family planning and reproductive health targets if the characteristics of this group is well understood. This paper explores the fertility behavior of the childless women in Bangladesh using Bangladesh Demographic and Health Survey 2007 dataset. Among 10,146 surveyed currently married women 11% (n=1,112) reported to have no children. Most of these women (88.7%) were aged less than 30 years. Among the childless women 59.4% were fecund, 27.1% were currently pregnant and the rest were in-fecund or at menopausal stage. Among the childless women 18.9% were currently using contraception and another 14.5% reported to have unmet need for contraception. Overall 54% childless women had desire to have children within two-year time. About 76% of the respondents preferred 2 children family norm. About 11% of the childless currently married women had experience of either pregnancy loss or termination. Two binary logistic regression models were fitted to explore the determinants of 'current use of contraception' and 'unmet need for contraception'. Finally, the research suggests important policy recommendations.

Key words: Childless women, fertility, logistic regression

Introduction

Fertility has been one of the oldest issues in population policies all around the world. From the point of view of fertility, it is important to know in what circumstances women are when they start their family life and how transition to parenthood varies between countries and between different social policy models. Majority of the people (89.5%) in Bangladesh are Muslims, while the remaining Bangladeshis practice other religions such as Hinduism (9.6%), Buddhism and Christianity. One of the general cultural beliefs in Bangladeshi community is that marriage and procreation are inseparable. According to Ebigbola (2000), modernization has not weakened the deep-rooted tradition of having a child as soon as possible after marriage.

Childlessness has serious adverse effect on couples especially the woman and this is due to the perception and societal beliefs regarding childlessness. Rendall and Smallwood (2003) and Berrington (2004) show that, women in UK with higher education were more likely to remain childless. They showed that, over time, there has been a trend towards increasing polarisation in fertility, by education. This is consistent with findings by Rindfuss *et al.* (1996) and Martin (2000) in US.

Currently married women who are still childless have different demographic and reproductive health conditions compared to their counterparts. Much can be done in terms of family planning and reproductive health targets if the characteristics of this group is well understood. This study explores the fertility behavior of the childless women in Bangladesh

Materials and Methods

Data

This study utilizes the nationwide data of Bangladesh Demographic and Health Survey 2007 (NIPORT, 2009). Bangladesh Demographic and Health Survey (BDHS) is a two-stage nationally representative survey which covers six administrative divisions and all the 64 districts. In rural areas thanas are divided into unions and then mauzas, a land administrative unit. Urban areas are divided into wards and then mahallas. A total of 361 primary sampling units (PSUs) were selected in the first stage of sampling including 227 rural PSUs and 134 urban PSUs. A household listing operation was carried out in all selected PSUs from January to March 2007. The resulting lists of

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households were used as the sampling frame for the selection of households in the second stage of sampling. On average, 30 households were selected from each PSU, using an equal probability systematic sampling technique. In this way, 10,819 households were selected for the sample. About 10,146 currently married women aged 10-49 were selected of which 11% (n=1112) reported to have no children at the time of survey. This sub-sample is the basis of this research.

Methods

Frequency distributions and bi-variate analysis (Islam, 2008) were performed to explore the related characteristics of the study sample. Graphical presentation, especially bar charts, pie charts, and Pareto charts (Newbold *et al.* 2008) were constructed to diagnosis the current situation of the relevant factors. This was the basis of further in-depth multivariate analyses. Two binary logistic regression models were fitted to explore the determinants of the response variables (Agresti, 1990). The response variables were a) current use of contraception (yes=1, no=0) and b) unmet need for contraception (yes=1, no=0). Independent variables considered were age, area of residence, division, education, desired number of children, and experience of pregnancy loss or termination etc.
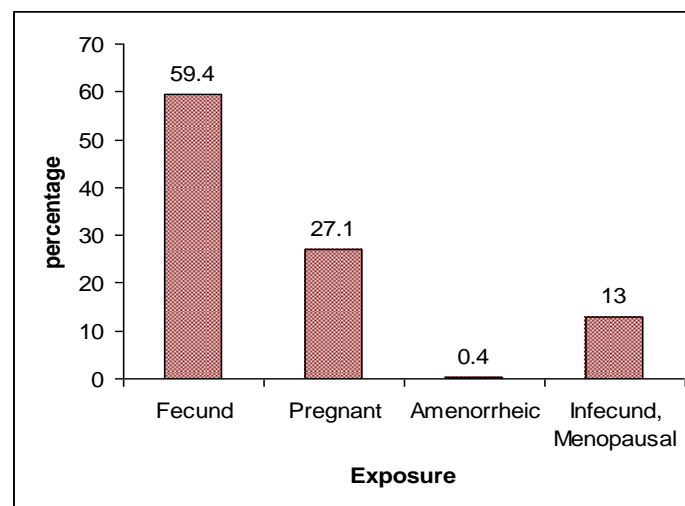
Results and Discussion

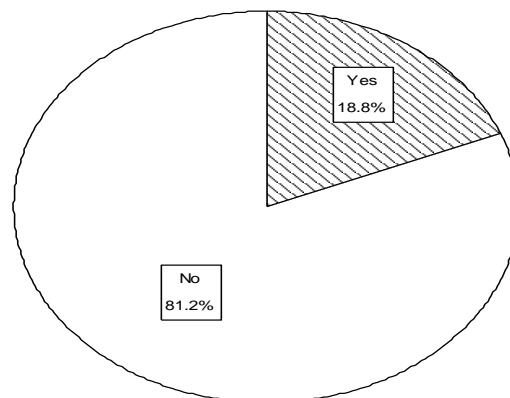**Fig. 1. The Bar Chart for the Exposure**

Fig. 2. The Pie Chart of Current Use of Contraception (yes=1, no=0)

Among the currently married women reported to have no children about 88.7% were aged less than 30 years. Among the childless women 59.4% were fecund, 27.1% were currently pregnant and the rest were in-fecund or at menopausal stage (Fig. 1). Among the childless women 18.9% were currently using contraception (Fig. 2, 3) and another 14.5% reported to have unmet need for contraception mostly to space (14.3%). Overall 54% childless

women had desire to have children within two years time. About 76% of the respondents preferred 2 children family norm. About 11% of the childless currently married women had experience of either pregnancy loss or termination.
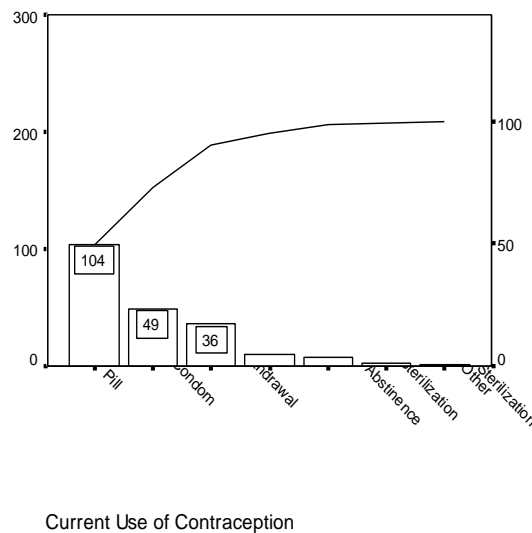

Current Use of Contraception

Fig. 3. The Pareto Chart of the Method of Current Use of Contraception

Binary logistic regression model (Table 1) suggested some significant determinants of the response variables considered. The likelihood of use of contraception decreases with increase of age of the respondents. The result indicates that the childless women from Barisal, Chittagong, Dhaka, Khulna and Rajshahi had respectively 7.215, 2.373, 3.820, 5.398, and 4.800 times higher likelihood of using contraceptives compared to that from Sylhet division. The childless women of urban area had higher likelihood of using contraceptive compare to that from rural area. Age of the first marriage and educational levels of husband had positive significant influence on using contraception.

Table 1. Logistic regression estimates of the effects of different socio-economic and demographic characteristics on current use of family planning among childless women

Independent Variables		β	Standard Error	Odds Ratio
Age of the respondent		-0.082[***]	0.022	0.921
Division (r:Sylhet)				
	Barisal	1.976[***]	0.415	7.215
	Chittagong	0.864[**]	0.426	2.373
	Dhaka	1.340[***]	0.407	3.820
	Khulna	1.686[***]	0.418	5.398
	Rajshahi	1.569[***]	0.410	4.800
Area of residence (r: Rural)				
	Urban	0.009	0.177	1.009
Age of the first marriage		0.099[***]	0.033	1.104
Husbands Education (Years of schooling)		0.078[***]	0.019	1.081
Intercept		-3.418[***]	0.603	0.033

Note : *Level of Significance* $\alpha^{*} = 0.01, \alpha^{**} = 0.05, \alpha^{***} = 0.001$

The likelihood of unmet need to space decreases with increase of age of the respondents. The result indicates that primary, secondary and higher educated childless women had respectively 1.193, 1.976, and 2.792 time higher likelihood of unmet need to space compared to uneducated (Table 2). The childless women of urban area had higher likelihood of unmet need to space compare to that from rural area.

Table 2. Logistic regression estimates of the effects of different socio-economic and demographic characteristics on unmet need for contraception among childless women

Independent Variables	β	Standard Error	Odds Ratio
Age of the respondent	-0.167	0.031	0.846
Division (r: Sylhet)			
Barisal	-0.015	0.332	0.985
Chittagong	-0.083	0.315	0.921
Dhaka	-0.240	0.309	0.786
Khulna	-0.772[**]	0.365	0.462
Rajshahi	-0.540	0.340	0.583
Area of residence (r: Rural)			
Urban	0.425[**]	0.187	1.530
Respondent Education (r: No education)			
Primary	0.177	0.411	1.193
Secondary	0.681[*]	0.378	1.976
Higher	1.027[**]	0.422	2.793
Intercept	1.022	0.733	2.780

Note : *Level of Significance* α[*] = 0.01, α[**] = 0.05, α[***] = 0.001

About 13% of the study respondents reported to be in the infecund/menopausal stage. These women will need medical and mental support to overcome their problems. Infertility related problems may occur for respondents aged more than 30 years and there should be appropriate program interventions. It was a good indication that most of the respondents were in favor of the ongoing two children family norm. However, there were still many whose expected family size was more than two. Program can target these women to fulfill the country's family planning targets by improving the informed choices for family planning options. Furthermore, unmet need for family planning can be met by proper service and delivery options. There were incidents of pregnancy loss/terminations among the respondents. Awareness programs on abortion related complications should be taken to prevent future reproductive health related complicacies.

References

Agresti A. 1990. Categorical Data Analysis, John Wiley & Sons. pp.85-91.

Berrington A. 2004. Perpetual postponers? Women's, men's and couple's fertility intentions and subsequent behavior. Popul. Trends. 117:9-19.

Ebigbola J A. 2000. National Population Policy; A Viable Option to Human Development. Ibadan: African Bookbuilders.

Islam N M. 2008. An Introduction to Statistics and Probability. 3rd edition, Mullick & Brothers. pp.54-60.

Martin, S P. 2000. Diverging fertility among US women who delay childbearing past age 30. Demography. 37:523 – 533.

Newbold P, Carlson L W and Thorn M B. 2008. Statistics for Business and Economics. 6th edition, Pearson Prentice Hall. pp.14-20.

NIPORT (National Institute of Population Research and Training, Bangladesh). 2009. Bangladesh Demographic and Health Survey 2006-2007, Calverton, Maryland and Dhaka, Bangladesh, NIPORT, Mitra and Associates, and ORC Macro.

Rendall M S and Smallwood S. 2003. Higher qualifications, first-birth timings and further childbearing in England and Wales. Popul. Trends. 111:18-26.

Rindfuss, R R Morgan S P and Offutt K. 1996. Education and the changing age pattern of American fertility. Demography. 33:277 – 290.