The Use of Segmentation to Develop a Strategy for Marketing the Use of Family Planning Services in Pakistan

INTRODUCTION

Despite having had a family planning program for over 5 decades, contraceptive prevalence use remains low in Pakistan: according to the 2006-07 DHS, only 22% of currently married women use a modern contraceptive method (NIPS and Macro International Inc., 2008). While several studies have examined factors associated with the use of contraceptive methods (Shah and Shah, 1984; Mahmood, 1992; Hashmi et al., 1993; Casterline et al., 2001), almost no attention has been paid to the determinants of the use of family planning services.

A factor that has been considered an important barrier to the use of family planning facilities has been that the lack of availability of clinics or providers that are conveniently located for women with limited mobility to access. Yet, the underutilization of existing family planning services suggests that factors other than the availability of services are important determinants of use of family planning facilities. An early study conducted in the major urban city of Pakistan, Karachi, showed that there was no correlation between attendance of a family planning clinic and its proximity to a woman's residence (Green and Krotki, 1966). A more recent study conducted in slum areas of six mid-sized cities in Pakistan to identify barriers to the use of family planning services among disadvantaged women found that psychosocial factors were the primary reasons identified by women for not using family planning facilities (Stephenson and Hennink, 2004). To our knowledge, no study has used nationally representative data to identify reasons for the use of family planning services.

This study is a market segmentation analysis conducted with the purpose of informing a strategy for marketing the use of family planning services in Pakistan. Our approach to market segmentation relies on Rossiter's recommendation regarding awareness-attitude-behavior as the bases for segmentation (Rossiter, 1987). We use Easterlin's Synthesis Framework (Easterlin, 1975) in which the regulation of fertility is determined by the a) level of motivation to avoid pregnancy and b) the costs of regulating fertility. According to Easterlin's framework, the costs of regulating fertility include both real and perceived social, psychological, health and monetary costs.

We rely on a review of the literature to identify some of the main costs to fertility regulation faced by women of reproductive age. Previous studies have shown that the perception that religion disapproves of family planning, the husband's opposition to family planning, the fear of side effects, the lack of communication between spouses as well as the limited availability of family planning services pose substantial obstacles to contraceptive use (Shah and Shah, 1984; Mahmood, 1992; Hashmi et al., 1993; Casterline et al., 2001). We analyze data from a national survey conducted to identify the impact of motivation and the costs of fertility regulation on the utilization of family planning services.

METHODS

Study Design

The data for this analysis comes from the Pakistan Social Marketing Survey (PSMS) 2007. The PSMS is a nationally representative survey of currently married women 15-49. The data for PSMS were collected by AcNielsen for Greenstar Social Marketing, with technical assistance from Population Services International and the Tulane University School of Public Health and Tropical Medicine. The survey was conducted in both urban and rural areas of all four provinces of Pakistan, with the exception of the Federally Administered Tribal Areas and the Federally Administered Northern Areas. A multi-stage, stratified, disproportionate, sampling methodology was used and 2,030 female respondents were interviewed. The sample was split evenly urban/rural residence. Weights were attached to the data to take the sampling strategy into account. The PSMS sample has been described in more detail elsewhere (Agha et al., 2007).

The questionnaire included sections on socio-demographic characteristics of respondents, their reproductive intentions and their use of family planning services. An important section of the questionnaire comprised of 36 statements regarding perceptions of the quality and availability of family planning services, norms about family planning, perceived social support for family planning, concerns about side effects of family planning and spousal support for family planning. Responses to these statements were on a five point scale, from strongly disagree to strongly agree. The 36 questionnaire items on perceptions and norms were developed after a review of the international literature on family planning and the family planning literature on Pakistan. These questionnaire items were pretested on a sample of 100 respondents and adjustments were based on the results of the reliability analysis conducted.

The outcome variable was based on a question asked to all women in the sample: “Have you ever gone any place to obtain family planning services?” Women who responded in the affirmative were coded as “1” and others were coded as “0”.

Statistical Analysis

Principal components analysis was conducted to identify the perceived costs of fertility regulation among married men and women in Pakistan. Seven principal components were identified through factor analysis: 1) Child-spacing protects mother’s health, caring spouses use FP; 2) My in-laws support FP; 3) I have access to choice of methods, and facilities with competent providers; 4) Providers can be trusted to maintain confidentiality, to advise on method use and side-effects; 5) I am not able to discuss FP with spouse or convince spouse to use FP; 6) Husband decides if wife can use family planning, God decides number of children; 7) Family planning can harm a woman’s womb, modern method can be very dangerous.

Geographic (region, urban/rural) and socio-demographic variables (age, gender, education, household wealth, number of children), a proxy for motivation to regulate fertility (whether additional children were wanted) and the perceived costs of family planning were included in the logistic regression analyses.

Results
Multivariate logistic regression analysis in Table 1 shows the correlates of having gone to a place to obtain family planning services among married women in Pakistan.

After controlling for socio-demographic factors, including fertility desires and beliefs and perceptions women in the Punjab, NWFP and Baluchistan were more likely to have visited a place to obtain family planning services than women in Sindh. There was no difference in the utilization of family planning services by urban or rural residence after other factors were taken into account. Education was not associated with the use of family planning services. There was no consistent association between household wealth and use of family planning services. Utilization of services was strongly associated with having more children. The odds of a woman with six or more children using family planning services were 9 times higher than a woman with fewer than children using these services. Even after controlling for the number of children, women who did not want more children in the future had twice the odds of using services as women who wanted more children or were undecided.

A woman's beliefs and perceptions were important determinants of her use of family planning services. Women who believed that child spacing protects a mother's health had twice the odds of using family planning services. The perception that her mother-in-law supported the use of family planning increased a woman's likelihood of using family planning services. The principal component analysis had identified the availability of methods and competent providers as part of the same underlying factor in a woman's mind. This factor had independent effect on the use of family planning services. Her inability to discuss family planning with her spouse lowered a woman's odds of using family planning services. The woman's perception that her husband was the decision-maker when it came to the use of family planning and that God was the decision-maker when it came to the number of children lowered the odds of her visiting a family planning facility.

Discussion: This study identifies important drivers of and barriers to the use of family planning services in Pakistan. The study shows that there are no important wealth differentials in the use of family planning services in Pakistan. The demand for fertility regulation is the primary force driving the use of family planning services in Pakistan: factors such as having a larger number of children and not wanting additional children are important drivers of the use of family planning services.

Independent of the influence of demographic factors on the use of services, women can be convinced to use services if there are improvements in the quality of service delivery. The perceived availability of products and services are an important determinant of the use of family planning services in Pakistan. It is noteworthy, that when they think of availability, Pakistani women do not consider the availability of methods as separate from the availability of competent providers of those methods.

A number of other factors are extremely important in determining a Pakistani woman's use of health services: the importance of child spacing, support from her in-laws, her

ability to discuss family planning with her husband, her belief in her husband's decision-making regarding family planning and in God's will. A marketing strategy that emphasizes beliefs that are supportive of women's use of family planning services and lowers beliefs that act as barriers is likely to increase the use of family planning services in Pakistan, independent of the effects of demographic factors and of the quality of services. These findings highlight multiple avenues for marketing the use of family planning services to Pakistani women.

Table 1. Factors associated with having gone to a place to obtain family planning services

	Have gone to a place to obtain family planning Services (n=2,030)
Province (ref: Sindh)	
Punjab	1.78**
NWFP	2.00**
Baluchistan	3.32***
Urban (ref: rural)	0.93
Age (ref: 40 plus)	
15-29	1.34
30-39	1.47*
Education (ref: none)	
Primary	1.01
Middle	0.93
Secondary	1.23
Matriculate	1.03
Wealth (ref: Fifth quintile)	
Fourth quintile	1.43
Third quintile	1.96**
Second quintile	1.27
First quintile	1.19
Number of living children (ref: 0-1)	
2-3	4.29***
4-5	7.39***
6 or more	9.40***
Fertility desires (ref: want more or undecided)	
Want more but after 1 year	1.46
Do not want more children	2.05***
Beliefs and perceptions	
Child-spacing protects mother's health, caring spouses use FP	1.96***
My in-laws support FP	1.81***
I have access to choice of methods, and facilities with competent providers	1.72***
Providers can be trusted to maintain confidentiality, to advise on method use and side-effects	1.14
I am not able to discuss FP with spouse or convince spouse to use FP	0.67***
Husband decides if wife can use family planning, God decides number of children	0.81**
Family planning can harm a woman's womb, modern method can be very dangerous	0.89
Pseudo R^2	35.1%

*p<0.05 **p<0.01 ***p<0.001