

Barriers to Family Planning Service Use among the Urban Poor in Pakistan

OPPORTUNITIES AND CHOICES WORKING PAPER NO. 2 FEBRUARY 2004

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Abstract

This paper examines the determinants of family planning service use and the barriers in accessing family planning services among urban poor women in Pakistan. Data were collected from a household survey of 5338 married women of reproductive age (15-45) from slum areas of six cities.

The use of family planning services by women in urban slums is strongly linked to individual and household socioeconomic factors. In particular, women were ten times more likely to have used a family planning service if her husband approved. This research has highlighted two key issues regarding the provision of family planning services to the urban poor. First, the urban poor cannot be treated as a homogenous group; there exist important socio-demographic variations within the urban poor population in relation to their use of family planning services and the barriers faced in service utilization. Second, although the urban poor are both economically and physically disadvantaged in access to services, women identified socio-cultural factors as the greatest barrier to family planning service use. This finding is consistent with studies focusing on the general population of Pakistan.

Introduction

Although fertility has shown some decline in Pakistan in recent years, contraceptive use remains low. Despite high knowledge of modern methods of contraception (94% of married women know of a modern method of contraception) only 17% of married women of reproductive age currently use a modern method of contraception (Pakistan Reproductive Health and Family Planning Survey 2001; Sathar and Casterline 1998). This is in part a product of poor physical access to family planning services. The coverage and quality of family planning services is poor, with only 10% of the population living within easy walking distance of government operated family planning services (Rosen and Conly 1996). Consequently, there exists a large unmet need for family planning services in Pakistan (Mahmood and Ringheim 1997). Previous research, however, into the barriers to family planning service use has highlighted the importance of looking beyond physical access to examine barriers that arise from the socioeconomic and cultural environment in which an individual lives (Bertrand *et al* 1995; Foreit *et al* 1978). Pakistan presents an interesting context for examining the range of potential barriers to the use of family planning services, with a low level of economic development and strict cultural norms that may inhibit service utilization. This paper identifies the barriers to family planning service use among women in urban slum areas. The paper also examines the characteristics of urban poor women who report different types of barriers to using family planning services. Gaining a better understanding of the types of women who are likely to experience particular barriers to family planning services is valuable for developing service promotion strategies and for informing service delivery protocols.

Family planning in Pakistan

Despite being one of the first countries to adopt an explicit Population Policy, fertility in Pakistan remains high with a Total Fertility Rate of 5.4 (Sathar and Casterline 1998; Razzaque Rukanuddin and Hardee-Cleaveland 1992). Pakistan's fertility rate is estimated to exceed the ideal number of children by more than one child, indicating a large unmet need for family planning services (Mahmood and Ringheim 1997). Indeed, Pakistan now has one of the highest figures for unmet need for family planning in the world, the product of both a lack of adequate services and a social milieu that is unfavorable to the adoption of contraception (Shelton et al 1999; Mahmood and Ringheim 1997; Razzaque Rukanuddin and Hardee-Cleaveland 1992). Much has been written of the subjugated position of women in Pakistan, with poor opportunities for education and employment and traditional norms that restrict their physical mobility and autonomy, and the resultant low uptake of family planning methods (Sathar et al 1988; Mahmood and Ringheim 1997). Although the 1990s saw improvements in the delivery of family planning services in Pakistan, with the advent of the social marketing of contraceptives, the Village-Based Family Planning Workers Program and increased media promotion of family planning, the coverage and quality of services remains poor (Sathar and Casterline 1998; Rosen and Conly 1996). It is estimated that only 10% of the population have physical access to the government operated Family Welfare Clinics, whilst population coverage for all types of family planning services stands at less than 50% (Rosen and Conly 1996). As a result only 17% of married women of reproductive age currently use a modern method of contraception (24% are using any method of family planning), with female sterilization accounting for 35% of all family planning use (United Nations 2001).

Barriers to family planning service use

The influence of physical access on the utilization of family planning services is well-founded, with many studies demonstrating the greater use of services among women who live in relative proximity to a service (Tsui and Ochoa 1992). Research into the barriers faced in accessing reproductive health services, however, now recognizes that problems of access extend beyond physical access to services, and include issues of economic, administrative, cognitive and psychosocial access (Bertrand *et al* 1995; Foreit *et al* 1978). Furthermore, the barriers to family planning service use are seen as extending beyond factors operating at the individual and household levels, to include characteristics of the social and cultural environment and the health service infrastructure. This view of access recognizes the importance of attributes of the health system in shaping an individual's ability to seek health care, highlighting the importance of the supply environment on health care utilization. This conceptualization of access incorporates factors operating at the individual, household and community level to influence an individual's ability to utilize a health service, thus framing an individual's access to services in terms of the socioeconomic, cultural and service supply context in which they live.

Previous studies of the use of reproductive health services have largely focused on factors operating at the individual and household levels, broadly categorized as demographic, socioeconomic, cultural and health experience factors. Demographic factors that have been shown to increase the likelihood of using reproductive health services are; low parity (Magadi, Madise, and Rodrigues 2000; Kavitha and Audinarayana 1997) and younger maternal age (Bhatia and Cleland 1995a). Socioeconomic factors, however, have

been shown to be of greater importance in determining health service utilization than demographic factors (Obermeyer and Potter 1991). Whilst demographic factors may shape the desire to use services (e.g. younger women may have more modern attitudes towards health care use) the socioeconomic status of an individual and the household in which they live determines the economic ability to utilize health services (Foreit *et al's* (1978) economic dimension of access). In terms of socioeconomic factors, the most consistently found determinant of reproductive health service utilization is a woman's level of educational attainment (Addai 1998; Bhatia and Cleland 1995a; Magadi, Madise, and Rodrigues 2000; Nuwaha and Amooti-kaguna 1999; Obermeyer 1993). It is thought that increased educational attainment operates through a multitude of mechanisms in order to influence service use, including increasing female decision-making power, increasing awareness of health services, changing marriage patterns and creating shifts in household dynamics (Obermeyer 1993). Cost has often been shown to be a barrier to service utilization (Griffiths and Stephenson 2001; Bloom, Lippeveld and Wypij 1999) and also influences the choice of service provider. Socioeconomic indicators such as urban residence (Addai 1998), household living conditions (Magadi, Madise, and Rodrigues 2000; Bloom, Lippeveld and Wypij 1999), household income (Kavitha and Audinarayana 1997) women's employment in skilled work outside the home (Addai 1998), high levels of husband's education (Nuwaha and Amooti-kaguna 1999) and occupational status (Nuwaha and Amooti-kaguna 1999) have also proven to be strong predictors of a woman's likelihood of utilizing reproductive health services.

Both demographic and socioeconomic determinants of reproductive health service utilization are mediated by cultural influences on health service behavior (Basu 1990; Goodburn, Gazi and Chowdhury 1995). The health behaviour of individuals is often mediated by community beliefs and norms, such that individual behavior is influenced by community perceptions of individual actions (Foreit *et al's* (1978) psychosocial aspect of access) (Rutenberg and Watkins 1997). Although individual demographic and socioeconomic factors may shape an individual's desire and ability to use a service, the cultural environment in which an individual lives exerts a strong influence on the extent to which these factors actually lead to service utilization.

The most evident psychosocial influences on family planning service use amongst women in Pakistan are the behavioral norms that relate to residence in an Islamic society. The prevailing value systems of *pardah* and *izzat* encourage the segregation of the sexes and the confinement of women to the family home, reducing women's mobility and access to services. Family planning services with male practitioners, or those located in areas where there may be males present a barrier to use for women who are observing *pardah*. Women may need permission from their husband or household elders to seek health care. Additionally, the doctrine of Islam has often been interpreted to forbid the use of family planning methods (Obermeyer 1994: Underwood 2000). The absence of a central authority or hierarchically organized clergy in Islam results in the lack of a single interpretation of the *Koran* (Obermeyer 1994) and thus the interpretation of the *Koran's* position on family planning is open to wide variations (Obermeyer 1994: Underwood 2000). The ambiguity of the *Koran* towards family planning means that attitudes towards

family planning in Muslim communities are often shaped by local consensus of opinion (Amin, Diamond and Steele 1997). Hence women's use of family planning services is often shaped by the prevailing religious attitudes of those in their community. Therefore, family planning services may be physically accessible in the local community, but cultural influences may mean that they may not be socially accessible.

In addition to individual, household and community barriers to family planning service use, previous studies have highlighted the influence of the supply environment on an individual's ability to utilize services (Foreit *et al's* (1978) administrative aspect of access). Numerous studies have demonstrated an association between service quality (or perceived quality) and an increased use of family planning services (Koenig, Hossain and Whittaker 1997; Magnani *et al* 1999; Mensch, Arends-Kuenning and Jain 1996). In the conceptualization of the five dimensions of access, Foreit *et al* (1978) note the importance of medical barriers (e.g. regulations that inhibit contraceptive method choice) and service quality (e.g. long waiting times or limited supply of methods) as potential inhibitors to the use of family planning services. In a study of family planning service provision in Tanzania, (Speizer *et al* 2000) found that provider bias in method promotion and age restrictions to the use of some contraceptive methods lead to the creation of restrictive barriers to contraceptive adoption. Similarly, Williams, Schutt-Aine and Cuca (2000) demonstrate high levels of dissatisfaction with family planning services in their analysis of exit interview data from eight Latin America countries, with long waiting times and cost of services highlighted as the main areas of dissatisfaction. Thus, the characteristics of family planning services themselves may act as a barrier to service use.

The influence of service characteristics on service use may also be influenced by a woman's experience of health services. Previous contact with health professionals creates both confidence and familiarity in using health services, making a woman more likely to use other reproductive health services. A woman's previous exposure to health services has been shown to be a strong predictor of her propensity to utilize reproductive health services (Basu 1990; Bloom, Lippeveld and Wypij 1999).

The Urban Poor

The urban poor in developing countries are expected to increase significantly in number over the next 25 years, such that the balance of population in developing countries will shift from predominantly rural to mostly urban (PUPD 2003; Hinrichsen *et al* 2002). The greatest increases will occur in Asia and Africa, with the most significant increases in urban growth in the smaller, secondary cities rather than large urban centers. One of the implications of this change in population is the massive increase expected in the number of urban poor. The World Bank estimates that worldwide 30% of poor people live in urban areas, by 2020 the proportion is projected to reach 40% and by 2035 half of the world's poor people are projected to live in urban areas (Ravallion 2001).

The urban poor in slum areas face additional health penalties that may erase the urban health advantage. Generally urban residents have higher standards of living and better reproductive health than rural residents, however, the spatially concentrated urban poor, those in urban slums and squatter settlements, show levels of health that are significantly worse than their rural counterparts (PUPD 2003; Harpham *et al* 1995; APHRC 2002). In

addition, the reproductive health of the urban poor can be worse in smaller cities: unmet need for family planning is 25% in cities with less than 100,000 inhabitants, and 15% in cities with a population between 500,000 to 1 million (PUPD 2003). While large urban areas have a marked advantage in the provision of amenities and services, the smaller urban areas are significantly underserved. The urban poor in smaller urban cities are in a distinctly inferior position relative to other urban residents in terms of access to basic amenities (electricity, clean water, sanitation and adequate health care). They are also underserved in terms of access to reproductive health services compared with their counterparts living in larger cities (PUPD 2003). Given that the greatest increase in population is expected to occur in the smaller cities of developing countries, increased poverty rates and worsening reproductive health can be expected in secondary cities of developing countries. Researchers often neglect to investigate the health and service issues of the population in smaller cities (PUPD 2003). Therefore, greater research attention needs to be directed at the health issues of the urban poor, particularly those in secondary cities, who will form a group of increasing numerical and policy significance as urbanization increases (Hewett and Montgomery 2001).

This paper examines the barriers to family planning service utilization among urban poor women in slum areas in Pakistan. The aim of this paper is firstly to identify the factors associated with family planning service use and to identify the barriers to service utilization. Secondly, the paper identifies the homogeneity of these barriers amongst poor women in urban slums, and identifies the characteristics of women who report different types of barriers to using family planning services. A greater understanding of the factors

that enable family planning service use and the barriers experienced by different types of women in urban poor areas has the potential to inform the provision of family planning services.

Data

Little is known about the health of the urban poor because most survey instruments do not capture this sub-group and the extent to which surveys miss the urban poor is unknown (Diamond *et al* 2001). Although Demographic and Health Surveys (DHS), commonly used for health research, provide nationally representative samples, they may omit hard to reach urban poor groups. This study focuses specifically on the urban poor, collecting data from slum settlements in six cities of Pakistan. Previous research of family planning use among the urban poor in Pakistan has concentrated on residents of Karachi, the largest city (Pasha, Fikree and Vermund 2001), however, the present study focuses on the urban poor residing in secondary cities, providing a more representative sample of Pakistan's urban poor. Data were collected in 2000 via a household-based questionnaire conducted with married women of reproductive age (15-45). The study was undertaken in slum areas of six mid-sized cities in the Punjab and Sindh provinces; Gujrat, Gujranwala, Sargodha, Larkana, Hyderabad, and Shikarpur. The cities were selected to represent a range of urban environments, in terms of levels and types of economic and health sector development. In each city there was a distinct area of urban poor in which the study was conducted; within each slum area four clusters were identified. Each of these slum areas was mapped, and households were selected from each cluster using systematic random sampling. Within each sampled household married

women of reproductive age were interviewed. A sample of 5,338 married women of reproductive age was collected. The questionnaire collected information on women's knowledge, attitude and use of contraception, demand for family planning, experiences of using family planning services. The questionnaire also collected demographic and socio-economic information and indicators of women's autonomy.

Study Setting

The characteristics of the urban slum areas were broadly similar. Each slum area was approximately 3-5 kilometers in radius and comprised of high density, low-income households. All slum areas were located in the industrial sectors or periphery areas of each city. Due to the size of the slum areas there was variation in the quality of the infrastructure within each slum, such that all slums contained some areas of relatively well-constructed housing and paved roads as well as pockets of unmade roads with open sewers and informal housing structures. Employment was generally in manual unskilled occupations, in particular laboring, agriculture, small vendors and a range of cottage industries. The health service environments within each slum were variable. Typically there was a predominance of small private health clinics and pharmacies located within the slum area and throughout the city, where family planning services were available. The Government hospital or Government-operated Family Welfare Clinic was often located outside the study area and access required using public transport.

Method

The analysis examines two areas: the use of family planning services, and the reasons for the non-use of family planning services. Model One examines the determinants of family

planning service utilization by fitting a logistic model to a binary outcome coded one if the respondent reports having ever used a family planning service. Family planning services include both public and private services. The analysis sample is restricted to married women with at least one child (n=4304).

Model Two examines factors associated with the reasons for non-use of a family planning service. Although it is possible that the decision not to use family planning services is the product of a number of factors, women were asked to report the main reason for their non-use of family planning services. The reasons for the non-use of family planning services, as reported by the respondents, were then categorized according to Foreit *et al's* (1978) five dimensions of access: *economic* (cost), *psychosocial* (religious opposition, opposition of the husband, and respondents own non-religious opposition), *cognitive* (lack of knowledge of family planning services or methods), *physical* (distance to services), and *administrative* (poor services and heard of bad experiences at services). A multinomial model is fitted, using women who have attended a family planning service as the comparison group, facilitating an examination of the influence of socioeconomic and demographic factors as predictors of the barriers to family planning service use. The barriers to service use are self-reported, and 1376 women (27%) reported a desire for more children as the main reason for not attending a family planning service. Additionally, 93 women (2%) reported that they were currently using natural methods of family planning (breastfeeding or withdrawal). As the aim of the analysis is to examine barriers to service use, women who want more children or who are using natural methods of family planning are excluded from the analysis, thus

removing those who do not have a desire to use services (and thus potentially do not face barriers) from the analysis. The analysis sample is thus 2835 married women of reproductive age with at least one child.

The determinants of each of the outcomes are examined in terms of demographic (parity), socioeconomic, geographic and female autonomy factors. Socioeconomic factors include the respondent's level of educational attainment, the educational attainment of her husband, and whether the respondent works in paid employment outside the home. Factor analysis was performed to create an asset index using data on the ownership of household goods and the presence of electricity and sanitation facilities in the household. The asset index is intended as a proxy measure for the socioeconomic status of the household (Filmer and Pritchett 1988), and is divided into three categories: low, medium and high¹. The models also control for media exposure, as to whether the respondent watches television or listens to the radio. The province is included in the models to control for regional differences in the provision of health services. Indicators of female autonomy and decision-making are identified through; the presence of a mother-in-law in the household, the husband's approval of family planning, and the woman's ability to go outside her neighborhood with another adult.

¹ Principal Components Analysis was used to create the asset index. The variables used in the creation of the index are whether the household has electricity, the type of roof, floor and wall materials, household water source, and the ownership of household goods (television, radio, refrigerator, bicycle, motorcar, room cooler). The score was then divided into 3 equal groups, labeled low, medium and high.

Results

Determinants of family planning service utilization

Table 1 shows the results of the modeling of family planning service utilization. The educational status of both the woman and her husband displayed significant positive relationships with a woman's odds of utilizing a family planning service. Relative to women with no education, women with primary, middle and secondary or higher education had significantly greater odds of utilizing a family planning service (primary OR 1.35, middle OR 1.44 and secondary and above OR 1.63). Similarly, relative to women whose husband's had no education, women whose husband's had primary, middle and secondary or higher education had greater odds of utilizing a family planning service (primary OR 1.35, middle OR 1.55 and secondary and above OR 1.95). The asset index, a proxy for household socioeconomic status, was not significantly related to the utilization of family planning services. It is suggested that the inclusion of both the woman's and her husband's educational status captures much of the socioeconomic influence on family planning service utilization. Women who reported watching television or listening to the radio had significantly greater odds of utilizing family planning services (watch television OR 1.47 and listen to the radio OR 1.25).

TABLE ONE HERE

The odds of using a family planning service increased with parity. Relative to women with only one child, women at all other parities displayed greater odds of using a family planning service (parity 2-3 OR 2.06, parity 4-5 OR 2.86, and parity 6+ OR 4.52). Two

indicators of female autonomy were significantly associated with the use of family planning services. Women who reported that their husband approved of family planning were more than ten times more likely to use a service (OR 10.31) and women who were able to go outside of their neighborhood with another adult (OR 1.24) had greater odds of utilizing a family planning service. The presence of a mother-in-law in the household reduced the odds of a woman having ever used a family planning service (OR 0.45). Women who live in the Sindh province have significantly greater odds of utilizing a family planning service (OR 1.44) than women who live in the Punjab province.

Reasons for non- use of family planning services

Seventy-five percent of the sample (n=4001) reported never using a family planning service. Figure 1 shows the distribution of the reasons for the non-use of family planning services among urban slum women categorized into Foreit *et al's* (1978) five dimensions. Psychosocial barriers, which include husband's opposition and religious opposition, account for 50% of reported barriers to family planning service use, administrative barriers accounted for 22%, cognitive barriers for 8.8% and economic barriers for 15%. Physical distance was reported as a barrier to service use by only 95 (4.3%) respondents.

FIGURE ONE HERE

Table 2 shows the results of the multinomial model of the reported barriers to family planning service use: the comparison group is women who have used a family planning service. The reporting of psychosocial barriers to family planning service use was largely driven by the woman's level of education attainment. Relative to women with no

education, women with all levels of education were less likely to report psychosocial barriers to service use (primary RRR² 0.63, middle RRR 0.60, secondary or higher RRR 0.46). Similarly, the asset index had a significant negative effect on the reporting of psychosocial barriers. Women from households with medium (RRR 0.69) and high (RRR 0.65) asset scores were less likely to report psychosocial barriers than women from households with low asset scores. Exposure to media also reduced the reporting of psychosocial barriers, with women who reported watching television (RRR 0.48) or listening to the radio (RRR 0.80) being less likely to report psychosocial barriers. Women at high parities (parity 6+ RRR 0.58) showed a lower likelihood of reporting psychosocial barriers to family planning service use than women with only one child. The presence of a mother-in-law in the household significantly increased the reporting of psychosocial barriers to family planning service use (RRR 1.59). Women who were employed outside the home showed a significant increase in the likelihood of reporting psychosocial barriers (RRR 1.39), whilst women who were able to travel outside their neighborhood had a lower likelihood of reporting psychosocial barriers (RRR 0.74)

TABLE TWO HERE

Economic barriers to family planning service use were largely driven by socio-economic indicators. Relative to women from households with a low asset score, women from households with a medium (RRR 0.60) or high (RRR 0.59) asset score had a lower likelihood of reporting economic barriers. Similarly, women whose husbands had middle level education (RRR 0.44) and secondary or higher education (RRR 0.48) had a lower likelihood of reporting economic barriers to service use than women whose husbands had

² RRR = Relative Risk Ratio

no education. High parity slum women (parity 6+ RRR 0.46) showed a lower likelihood of reporting economic barriers to family planning service use than women with only one child. Women who reported listening to the radio were less likely to report economic barriers (RRR 0.72), although there was no effect of television watching on the reporting of economic barriers. Women who worked outside the home were more likely to report economic barriers to family planning service use (RRR 1.24).

The reporting of administrative barriers to family planning service use declined with the husband's level of educational attainment, the household asset score and parity. Relative to women whose husbands had no education, women whose husbands had any level of education were less likely to report administrative barriers to service use (primary RRR 0.50, middle RRR 0.38, secondary or above RRR 0.36). Women from households with medium (RRR 0.55) or high asset scores (RRR 0.79) were also less likely to report administrative barriers. Relative to women at parity one, women at parity 4-5 (RRR 0.45) and 6+ (RRR 0.22) were less likely to report administrative barriers to family planning service use.

Women with middle level (RRR 0.39) and secondary or above education (RRR 0.35) were less likely to report physical distance as a barrier than women with no education. Women from households with medium (RRR 0.37) or high asset scores (RRR 0.44) were also less likely to report physical distance as a barrier than women from households with a low asset score. The presence of a mother-in-law in the household increased the reporting of physical distance as a barrier to family planning service use (RRR 1.26),

whilst the ability to travel outside the neighborhood decreased the reporting of physical barriers (RRR 0.71).

The reporting of cognitive barriers to family planning service use was lower among women with education of primary (RRR 0.62), middle (RRR 0.48) and secondary or above (RRR 0.70), and women who reported watching television (RRR 0.33). Women who worked in paid employment outside the home were more likely to report cognitive barriers to service use (RRR 2.01).

There were significant differences in the reporting of barriers to family planning service use between women in Punjab and Sindh, which remained after controlling for individual and household characteristics. Women who live in Sindh were less likely to report psychosocial (RRR 0.60) and physical (RRR 0.14) barriers to family planning service use than women in Punjab, although they were more likely to report administrative (RRR 2.13) and cognitive barriers (RRR 2.51).

Discussion

The results demonstrate the influence of each of Foreit *et al's* (1978) five dimensions of access on the propensity of urban poor women to use family planning services, and in particular that the five dimensions have differential impact on women's ability to use family planning services according to individual and household characteristics.

The greatest obstacles to family planning service use for urban poor women are the psychosocial barriers; which include the opposition of religion, husband or personal opposition to family planning. Half of all urban poor women identified psychosocial reasons as the primary barrier to using family planning services. Typically, women reporting psychosocial barriers are most likely to display more traditional characteristics in terms of household structure and personal autonomy. These women are most likely to be the poorest, have no education, no exposure to radio or television, and have only one child. They are also likely to live in a household with their mother-in-law present and have restricted personal mobility to travel unaccompanied outside the local area.

In Pakistani households the weight of decision-making lies with the male and thus the approval of the husband is a crucial for a woman to use family planning services. This is clearly shown by the finding that women whose husband's approved of family planning were ten times more likely to have used a family planning service. However, the influence on a woman's ability to seek family planning services extends beyond the husband to other household members, in particular, a mother-in-law. Women who lived in households with a mother-in-law present were less likely to have used a family planning service and more likely to report psychosocial barriers to family planning service use. A study of family planning use in squatter settlements in Karachi found the perceived opposition of the mother-in-law was a deterrent to women to adopt a family planning method (Pasha, Fikree and Vermund 2001). The presence of a mother-in-law may represent the presence of more traditional attitudes towards family planning use in the household. A mother-in-law may also represent familial pressure for larger families,

particularly for sons. Women living in households with a mother-in-law present thus potentially face the dual burden of negative attitudes towards the use of family planning services from both the husband and the mother-in-law. Given that 48% of women lived in a household with their mother-in-law present, this is a significant psychosocial barrier to the use of family planning services. The strong influence of household members on a woman's ability to utilize family planning services stresses the importance of targeting family planning messages not only to the potential users of such services, but also to those who influence a woman's decision to utilize family planning services, most notably husbands and mother-in-law or elders.

Greater personal mobility can lead to increased use of family planning services by urban poor women and a reduction in the reporting of psychosocial barriers to service use. Given the prevailing *purdah* system, women who are able to travel outside their neighborhood are likely to be from less conservative households, and thus more likely to have greater personal freedom to utilize family planning services, particularly those that require permission from husband's.

Women with no education were most likely to report psychosocial barriers to the use of family planning services. In a society in which women's mobility is restricted by *purdah*, women who are allowed to attend school are likely to be from more progressive households. A woman's involvement in education may also increase her exposure to the health system and provide her with the functional autonomy to utilize services, allowing her to surmount the psychosocial barriers faced by less educated women. Similarly, the

lack of media exposure amongst women reporting psychosocial barriers to service use, suggests a relationship between increased access to information and a woman's ability to surmount psychosocial barriers to service use.

Women who were employed outside the home were more likely to report psychosocial barriers to family planning service use. Only 754 respondents (14%) reported working outside the home, and were employed mainly in unskilled manual work. The percentage of women in paid employment declines with the level of household wealth: 28% of women from households with a low asset score are in paid employment compared to only 4% of women from households with high asset scores. Given the social norms of women's restriction to the home, the participation of women in the workforce is unusual and is most common among the poorest households where it may be an economic necessity, as women in paid employment were also more likely to report economic barriers to service use. Women who work outside the home are thus likely to be from households without the disposable income to allow the use of family planning services.

Administrative barriers were the second most commonly reported barrier to family planning services identified by urban poor women. Administrative barriers in this study referred to the *perception* that services are of poor quality and fear of using services due to reports of bad experiences of others. The barriers are thus perceptions of service quality, and do not reflect actual administrative barriers that may be in place at family planning services (for example, parity requirements). The data does not include information on actual administrative barriers. Given that poor perception of family

planning services constitute the second greatest barrier amongst urban poor women, this points to the need for family planning promotion efforts to target urban slum areas to dispel some of the fears about service quality.

Administrative barriers were most likely to be experienced by women in the poorest households with a low assets score and whose husbands had no education. The lower reporting of administrative barriers among women from relatively wealthy households may reflect the types of services that such women would use. Women from the wealthier households of urban slums, with greater funds available for health service use, are more likely to utilize private health services. Hence, such women may also be less likely to report issues of quality as barriers to service use as they can afford to utilize better quality services. In addition, women at parity four and above were less likely to identify administrative barriers to service use. Women of higher parities are likely to have had more contact with general health services for themselves or their children and may be less likely to be deterred by anecdotal information about poor services.

Economic barriers to service use were reported by only 15% of urban poor women. Not surprisingly, these are most likely to be the poorest women and those with little or no education. Women from households with higher asset scores and whose husband had a higher level of education were less likely to report economic barriers to service use. The results, therefore, highlight that even in slum areas the advantages afforded to women from relatively richer households whereby greater economic wealth reduces the presence of economic barriers to family planning service use. It is also important to note that the

use of free family planning services still incurs costs in the form of transport and absence from household economic activity, and even these costs can form a significant barrier for the poorest households. This finding reinforces the need to continue cost-free family planning services that are physically and economically accessible to women in urban slum areas.

The economic advantages are, however, limited to a small proportion of the sample: 71% of women and 41% of their husbands were either illiterate or received only primary level education; whilst 25% of women are in households with low asset scores. Thus the economic advantages afforded to those with high levels of education and women from 'richer' households are restricted to a small proportion of the populations in slum areas, and the majority of women from urban slums still face potential economic barriers to service use.

Few women reported cognitive barriers to family planning service use. Not surprisingly, these were women with no education and no exposure to the media, indicating the effect of education in creating greater awareness of and exposure to the health system. The social marketing of contraceptives increased rapidly in Pakistan in the 1990s, and thus women who have access to the media are more likely to have gained knowledge of family planning methods, potentially reducing cognitive barriers to family planning service use. Media exposure may also impact other household members who are exposed to the same social marketing messages. This may create greater household awareness and

discussion of family planning, potentially reducing the opposition of other household members to service use.

Physical barriers to family planning services were reported by the fewest women in urban slums, however, those who did report physical barriers were those with the lowest level of personal mobility. Women who lived in a household with a mother-in-law present were the most likely to report physical distance as a barrier to service use. Young newly married women have low status in the Pakistani household, and thus their personal mobility is likely to be strictly limited, restricting their ability to access to family planning services. It is these women who would most benefit from community based distribution of contraceptives within the urban slum areas.

This study has examined the barriers to family planning service use in terms of individual and household characteristics, although the data does not permit an examination of the influence of the service environment on the barriers to service use. The data does not include information on the types of services available in the study sites, or on characteristics of the services (e.g. opening times and cost). It may be expected that the local service environment would strongly influence both the use of services and the types of barriers a woman may face in accessing services. For example, women who live in areas with a predominance of private services may be more likely to faces economic barriers to service use. The lack of service data is thus a limitation of this study, and the study should thus be regarded as an examination of only the individual and household determinants of the barriers to family service planning use.

Conclusion

This research has highlighted two key issues regarding the provision of family planning services to the urban poor. First, the urban poor cannot be treated as a homogenous group; there exist important socio-demographic variations within the urban poor population in relation to their use of family planning services and the barriers faced in service utilization. The type of barrier a woman faces in accessing family planning services is a product of not only her own individual characteristics, but is influenced by the characteristics of her household and other household members. Therefore, even amongst seemingly homogenous urban slum populations there exists a wide range of potential barriers to accessing family planning services. It is therefore too superficial to refer to the urban poor populations as a homogenous group with access issues based on poverty and physical proximity to services. Any public health intervention that aims to reduce barriers to family planning service use among urban poor women in Pakistan must recognize the heterogeneity of urban slum women, and tailor interventions to fit the barriers faced by different types of women.

Second, this research shows that the urban poor are a population sub-group who are both economically and physically disadvantaged in access to services. Yet despite these disadvantages, women in urban slums identified socio-cultural factors as the greatest barrier to family planning service use. This finding is consistent with studies focusing on the general population of Pakistan, whereby contraceptive use is strongly influenced by socio-cultural factors, such as a husband or mother-in-law (Pasha, Fikree and Vermund 2001; Casterline, Sathar and Haque 2001). In a strong Islamic society it is unsurprising

that religious and cultural norms surrounding contraceptive use are a significant influence on service use regardless of an individual's place of residence. Therefore, interventions aimed at overcoming cultural barriers to family planning use (such as messages targeting men) are equally applicable to urban slum areas as to the general population in Pakistan. However, such interventions should also recognize the unique circumstances of poverty and poor physical access to services encountered by urban poor women, and take steps to provide low cost services that also meet the specific socio-cultural needs of women in an Islamic society.

Acknowledgement

This research was funded by the David and Lucille Packard Foundation.

Figure 1: Distribution of Barriers to Family Planning Service Use

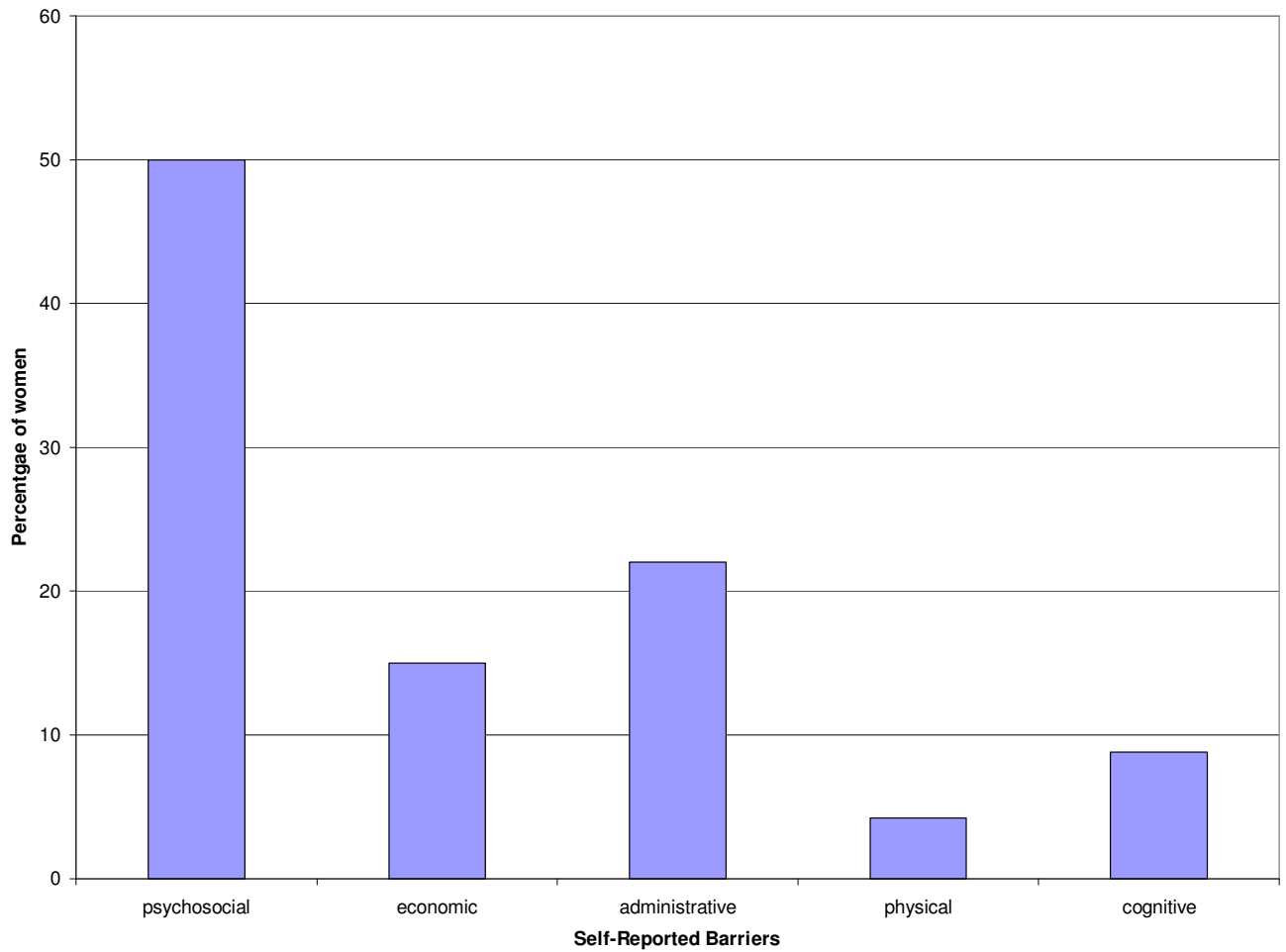


Table 1: Determinants of Family Planning Service Use
Figures are Odds Ratios and 95% Confidence Intervals

	Odds Ratio	95% Confidence Interval
Parity		
1	1.00	---
2/3	<i>2.06</i>	<i>1.49, 2.85</i>
4/5	<i>2.86</i>	<i>2.04, 4.02</i>
6+	<i>4.52</i>	<i>3.15, 6.49</i>
Education		
None	1.00	---
Primary	<i>1.35</i>	<i>1.08, 1.66</i>
Middle	<i>1.44</i>	<i>1.11, 1.85</i>
Secondary or higher	<i>1.63</i>	<i>1.26, 2.01</i>
Husband's Education		
None	1.00	---
Primary	<i>1.35</i>	<i>1.02, 1.74</i>
Middle	<i>1.55</i>	<i>1.21, 2.04</i>
Secondary or higher	<i>1.95</i>	<i>1.33, 2.35</i>
Household Asset Index		
Low	1.00	---
Middle	<i>1.44</i>	<i>0.91, 1.97</i>
High	<i>1.18</i>	<i>0.86, 1.53</i>
Works outside home	<i>1.09</i>	<i>0.87, 1.37</i>
Watches Television	<i>1.47</i>	<i>1.13, 1.91</i>
Listens to the Radio	<i>1.25</i>	<i>1.07, 1.46</i>
Mother-in-law in the household	<i>0.45</i>	<i>0.23, 0.67</i>
Able to go outside neighborhood	<i>1.24</i>	<i>1.05, 1.43</i>
Husband approves of family planning	<i>10.31</i>	<i>7.78, 13.63</i>
Woman lives in Sindh	<i>1.44</i>	<i>1.23, 1.69</i>

Figures in italics are significant at 5% level

Table 2: Determinants of Barriers to Family Planning Service Use
Figures are Relative Risk Ratios and 95% Confidence Intervals

	Psychosocial	Economic	Administrative	Physical	Cognitive
Parity					
1	1.00	1.00	1.00	1.00	1.00
2/3	0.85 (0.56, 1.27)	0.66 (0.38, 1.13)	0.74 (0.46, 1.19)	0.78 (0.34, 1.74)	0.95 (0.44, 2.05)
4/5	0.70 (0.46, 1.07)	0.40 (0.35, 1.07)	<i>0.45 (0.27, 0.75)</i>	0.64 (0.27, 1.53)	1.31 (0.60, 2.88)
6+	<i>0.58 (0.37, 0.92)</i>	<i>0.46 (0.23, 0.90)</i>	<i>0.22 (0.13, 0.39)</i>	0.52 (0.19, 1.36)	0.54 (0.22, 1.30)
Education					
None	1.00	1.00	1.00	1.00	1.00
Primary	<i>0.63 (0.49, 0.81)</i>	0.85 (0.58, 1.23)	0.96 (0.63, 1.33)	0.72 (0.40, 1.37)	<i>0.62 (0.38, 0.98)</i>
Middle	<i>0.60 (0.44, 0.82)</i>	0.94 (0.61, 1.46)	1.05 (0.70, 1.56)	<i>0.39 (0.17, 0.89)</i>	<i>0.48 (0.26, 0.91)</i>
Secondary or higher	<i>0.46 (0.37, 0.68)</i>	0.81 (0.53, 1.24)	1.19 (0.61, 1.58)	<i>0.35 (0.16, 0.75)</i>	<i>0.70 (0.41, 0.96)</i>
Husband's Education					
None	1.00	1.00	1.00	1.00	1.00
Primary	0.72 (0.53, 0.98)	1.04 (0.65, 1.67)	<i>0.50 (0.34, 0.75)</i>	0.61 (0.27, 1.38)	0.60 (0.36, 1.30)
Middle	0.54 (0.39, 0.73)	<i>0.44 (0.50, 0.82)</i>	<i>0.38 (0.25, 0.59)</i>	0.55 (0.26, 1.18)	0.61 (0.33, 1.13)
Secondary or higher	0.92 (0.70, 1.21)	<i>0.48 (0.13, 0.75)</i>	<i>0.36 (0.21, 0.82)</i>	1.04 (0.54, 2.00)	0.94 (0.56, 1.55)
Household Asset Index					
Low	1.00	1.00	1.00	1.00	1.00
Middle	<i>0.69 (0.53, 0.89)</i>	<i>0.60 (0.40, 0.88)</i>	<i>0.55 (0.42, 0.73)</i>	<i>0.37 (0.19, 0.72)</i>	1.18 (0.71, 1.95)
High	<i>0.65 (0.49, 0.86)</i>	<i>0.59 (0.39, 0.90)</i>	<i>0.79 (0.38, 0.80)</i>	<i>0.44 (0.29, 0.69)</i>	1.25 (0.73, 2.13)
Works outside home	<i>1.39 (1.06, 1.83)</i>	<i>1.24 (1.04, 1.42)</i>	0.98 (0.71, 1.35)	0.82 (0.43, 1.59)	<i>2.01 (1.14, 3.51)</i>
Watches Television	<i>0.48 (0.36, 0.64)</i>	0.88 (0.56, 1.38)	0.95 (0.63, 1.42)	1.10 (0.54, 2.22)	<i>0.33 (0.20, 0.53)</i>
Listens to the Radio	<i>0.80 (0.67, 0.96)</i>	<i>0.72 (0.55, 0.94)</i>	0.90 (0.71, 1.42)	<i>0.52 (0.32, 0.85)</i>	0.82 (0.58, 1.14)
Mother-in-law in the household	<i>1.59 (1.11, 2.07)</i>	1.11 (0.94, 1.28)	1.03 (0.84, 1.35)	<i>1.26 (1.04, 1.48)</i>	0.84 (0.72, 1.12)
Able to go outside neighborhood	<i>0.74 (0.52, 0.96)</i>	0.72 (0.41, 1.03)	0.84 (0.42, 1.29)	<i>0.71 (0.52, 0.96)</i>	0.75 (0.52, 1.17)
Woman lives in Sindh	<i>0.60 (0.50, 0.74)</i>	0.93 (0.70, 1.24)	<i>2.13 (1.64, 2.78)</i>	<i>0.14 (0.07, 0.25)</i>	<i>2.51 (1.70, 3.70)</i>

Figures in italics are significant at 5% level

References

Addai, I. 1998, "Demographic and Sociocultural Factors Influencing Use of Maternal Health Service in Ghana", *African Journal of Reproductive Health*, vol. 2, no. 1, pp. 73-80.

Amin, S., Diamond, I., & Steele, F. 1997, "Contraception and Religiosity in Bangladesh," in *The Continuing Demographic Transition*, G. W. Jones et al., eds., Clarendon Press, Oxford, pp. 268-289.

African Population and Health Research Centre (2002). Population and Health Dynamics in Nairobi's Informal Settlements. Report of the Nairobi Cross-Sectional Slum Survey (NCSS). African Population and Health Research Centre

Basu, A. M. 1990, "Cultural Influences on Health Care Use: Two Regional Groups in India", *Studies in Family Planning*, vol. 21, no. 5, pp. 275-286.

Bertrand, J. T., Hardee, K., Magnani, R. J., & Angle, M. A. Access. 1995. Quality of Care and Medical Barriers in Family Planning Programs. *International Family Planning Perspectives*, vol. 21, no.2, 64-69+74.

Bhatia, J. & Cleland, J. 1995a, "Determinants of Maternal Care in a Region of South India", *Health Transition Review*, vol. 5, pp. 127-142.

Bloom, S. S., Lippeveld, T., & Wypij, D. 1999, "Does Antenatal Care Make a Difference to Safe Delivery? A Study in Urban Uttar Pradesh, India", *Health Policy and Planning*, vol. 14, no. 1, pp. 38-48.

Casterline, J.B, Sathar, Z, and ul Haque, M. 2001. Obstacles to Contraceptive Use in Pakistan: A Study in Punjab. *Studies in Family Planning*, 32(2): 95-110.

Diamond I., Matthews Z., and Stephenson R. (2001) *Assessing the Health of the Poor: Towards a Pro-Poor Measurement Strategy*. Department for International Development Issues Paper, London, UK.

Filmer, D and Pritchett, L. 1988. Estimating Wealth Effects without Expenditure Data or Tears: An Application to Educational Enrollments in States of India. World Bank Policy Research Working Paper no.4. Washington D.C. Development Economics Research Group, The World Bank.

Foreit, J, Gorosh, M.E, Gillespie, D.G, Merritt, C.G 1978. Community-Based and Commercial Contraceptive Distribution: An Inventory and Appraisal. *Population Reports*, Series J, no.19.

Goodburn, E. A., Gazi, R., & Chowdhury, M. 1995, "Beliefs and Practices Regarding Delivery and Postpartum Maternal Morbidity in Rural Bangladesh", *Studies in Family Planning*, vol. 26, no. 1, pp. 22-32.

Griffiths, P. & Stephenson, R. 2001, "Understanding Users' Perspectives of Barriers to Maternal Health Care Use in Maharashtra, India", *Journal of Biosocial Science*, vol. 33, pp. 339-359.

Harpham, T. and Tanner M (eds) (1995) *Urban Health in Developing Countries*. Earthscan, London.

Hewett P., and Montgomery M. (2001) *Poverty and Public Services in Developing Country Cities*. Policy Research Division Working Paper No. 154, Population Council, New York.

Hinrichsen D., Salem R., and Blackburn R. (2002) *Meeting the Urban Challenge. Population Reports*, Series M, No. 16. Baltimore, The Johns Hopkins Bloomberg School of Public Health, Population Information Programme, Fall 2002.

Kavitha, N. & Audinarayana, N. 1997, "Utilization and Determinants of Selected MCH Care Services in Rural Areas of Tamil Nadu.", *Health and Population - Perspectives and Issues*, vol. 20, no. 3, pp. 112-125.

Koenig, M., Hossain, M. B., & Whittaker, M. 1997. The Influence of Quality of Care upon Contraceptive Use in Rural Bangladesh. *Studies in Family Planning*, vol. 28, no.4, 278-289.

Magadi, M. K., Madise, N. J., & Rodrigues, R. N. 2000, "Frequency and Timing of Antenatal Care in Kenya: Explaining the Variations between Women of Different Communities", *Social Science and Medicine*, vol. 51, pp. 551-561.

Magnani, R. J., Hotchkiss, D. R., Florence, C. S., & Shafer, L. A. 1999. The Impact of the Family Planning Supply Environment on Contraceptive Intentions and Use in Morocco. *Studies in Family Planning*, vol. 30, no.2, 120-132.

Mahmood, N. & Ringheim, K. 1997. Knowledge, Approval and Communication about Family Planning as Correlates of Desired Fertility among Spouses in Pakistan. *International Family Planning Perspectives*, vol. 23, no.3, 122-129+145.

Mensch, B., Arends-Kuenning, M., & Jain, A. 1996. The Impact of the Quality of Family Planning Services on Contraceptive Use in Peru. *Studies in Family Planning*, vol. 27, no.2, 59-75.

Nuwaha, F. & Amooti-kaguna, B. 1999, "Predictors of Home Deliveries in Rakai District, Uganda", *African Journal of Reproductive Health*, vol. 3, no. 2, pp. 79-86.

Obermeyer, C. M. 1993, "Culture, Maternal Health Care, and Women's Status: A Comparison of Morocco and Tunisia", *Studies in Family Planning*, vol. 24, no. 6, pp. 354-365.

Obermeyer, C. M. 1994. Reproductive Choice in Islam: Gender and State in Iran and Tunisia. *Studies in Family Planning*, vol. 25, no.1, 41-51.

Obermeyer, C. M. & Potter, J. E. 1991, "Maternal Health Care Utilization in Jordan: A Study of Patterns and Determinants", *Studies in Family Planning*, vol. 22, no. 3, pp. 177-187.

Pakistan Reproductive Health and Family Planning Survey. 2001. Preliminary Report no.1. National Institute of Population Studies. Islamabad, Pakistan.

Pasha, O., Fikree, F. F., & Vermund, S. 2001. Determinants of Unmet Need for Family Planning in Squatter Settlements in Karachi, Pakistan. *Asia-Pacific Population Journal*, vol. 16, no.2, 93-108.

Panel on Urban Population Dynamics (2003). Montgomery M., Stren R., Cohen B., Reed H. (eds) *Cities Transformed*. Washington DC: National Academy Press.

Ravallion M. (2001) *On the Urbanisation of Poverty*. Washington DC, World Bank, July 2001.

Razzaque Rukanuddin, A. & Hardee-Cleaveland, K. 1992. Can Family Planning Succeed in Pakistan? *International Family Planning Perspectives*, vol. 18, no.3, 109-115+121.

Rosen, J. & Conly, S. R. 1996, *Pakistan's Population Program: The Challenge Ahead*, Population Action International, Washington, D.C, 3.

Rutenberg, N. & Watkins, S. C. 1997, "The Buzz Outside the Clinics: Conversations and Contraception in Nyanza Province Kenya", *Studies in Family Planning*, vol. 28, no. 4, pp. 290-307.

Sathar, Z. & Casterline, J. B. 1998. The Onset of Fertility Transition in Pakistan. *Population and Development Review*, vol. 24, no.4, 773-796.

Sathar, Z., Crook, N., Callum, C., & Shahnaz, K. 1988. Women's Status and Fertility Change in Pakistan. *Population and Development Review*, vol. 14, no.3, 415-432.

Shelton, J. D., Bradshaw, L., Hussein, B., Zubair, Z., Drexler, T., & Reade McKenna, M. 1999. Putting Unmet Need to the Test: Community-Based Distribution of Family Planning in Pakistan. *International Family Planning Perspectives*, vol. 25, no.4, 191-195.

Speizer, I., Hotchkiss, D. R., Magnani, R. J., Hubbard, B., & Nelson, K. 2000. Do Service Providers in Tanzania Unnecessarily Restrict Clients' Access to Contraceptive Methods? *International Family Planning Perspectives*, vol. 26, no.1, 13-20+42.

Tsui, A. O. & Ochoa, L. H. 1992, "Service Proximity as a Determinant of Contraceptive Behavior: Evidence from Cross-National Studies of Survey Data.," in *The Role of Family Planning Programs as a Fertility Determinant*, J.Phillips & J.Ross, eds., Oxford University Press, London.

Underwood, C. 2000. Islamic Precepts and Family Planning: The Perceptions of Jordanian Religious Leaders and their Constituents. *International Family Planning Perspectives*, vol. 26, no.3, 110-117.

United Nations. World Contraceptive Use Chart 2001. 2001. United Nations, Population Division, Department of Economic and Social Affairs.

Williams, T., Schutt-Aine, J., & Cuca, Y. 2000. Measuring Family Planning Service Quality through Client Satisfaction Exit Interviews. *International Family Planning Perspectives*, vol. 26, no.2, 63-71.