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

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Abstract

Context: Contraceptive use remains low in Pakistan, with only 17% of married women using a modern method. This paper examines the determinants of family planning service use and the barriers reported in accessing family planning services among urban poor women. The paper focuses on identifying the differing characteristics of women who report various types of barriers to using family planning services.

Methods: Data were collected from a household survey of 5338 married women of reproductive age (15-45) from six cities in Pakistan. A logistic model is fitted to identify the factors influencing a woman's use of family planning services. A multinomial model is fitted to examine the determinants of the barriers to service use.

Results A woman's use of family planning services was strongly linked to individual and household socioeconomic factors. The approval of her husband and other family members are a strong influence on a woman's ability to use family planning services. The reporting of economic, administrative and cognitive barriers to service use were largely influenced by individual and household socioeconomic factors, whilst psychosocial and physical access are closely associated with indicators of female autonomy.

Conclusions: The results highlight that even amongst seemingly homogenous urban slum populations there exists important demographic and socioeconomic variations in the use of family planning services and the experience of barriers to service use. 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.

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 & 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 & Conly 1996). Consequently, there exists a large unmet need for family planning services in Pakistan (Mahmood & 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 factors associated with family planning service use among women in urban slum areas, and examines the barriers faced in utilising these services. The paper focuses on identifying the characteristics of 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 has the potential to inform social policy which aims to address barriers to family planning service use with a view to increasing contraceptive use.

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 (Razzaque Rukanuddin & Hardee-Cleaveland 1992; Sathar & Casterline1998). 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 & Ringheim1997). 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 an social milieu that is unfavorable to the adoption of contraception(Mahmood & Ringheim 1997; Razzaque Rukanuddin & Hardee-Cleaveland 1992; Shelton et al. 1999). 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 (see for example, Mahmood & Ringheim1997; Sathar *et al*. 1988). 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 (Rosen & Conly1996; Sathar & Casterline1998). 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 & Conly1996). 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 (see for example, Tsui & 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). 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 individuals 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 focussed 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 (Kavitha & Audinarayana 1997; Magadi, Madise, & Rodrigues

2000) and younger maternal age (Bhatia & Cleland 1995a). Socioeconomic factors, however, have been shown to be of greater importance in determining health service utilization than demographic factors (Obermeyer & 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 & Cleland 1995a; Magadi, Madise, & Rodrigues 2000; Nuwaha & 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 (Obermeyer1993). Cost has often been shown to be a barrier to service utilization (Bloom, Lippeveld, & Wypij 1999; Griffiths & Stephenson 2001) and also influences the choice of service provider. Socioeconomic indicators such as urban residence (Addai1998), household living conditions (Bloom, Lippeveld, & Wypij 1999; Magadi, Madise, & Rodrigues 2000), household income (Kavitha & Audinarayana 1997) women's employment in skilled work outside the home (Addai 1998), high levels of husband's education (Nuwaha & Amooti-kaguna 1999) and occupational status (Nuwaha & 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, & 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 & 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 *purdah* 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, present a barrier to use for women who are observing *purdah*. 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* (Obermeyer1994) and thus the interpretation of the *Koran's* position on family planning is open to wide variations (Obermeyer1994; 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, & 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, & Whittaker 1997; Magnani *et al.* 1999; Mensch, Arends-Kuenning, & 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, & 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, & Wypij 1999).

This paper examines the use of family planning services and barriers to service utilization among women in urban slum areas of six cities 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 slum areas has the potential to inform the provision of family planning services.

Data

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 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. One slum area was

randomly selected from each study city, and 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, and presence of RTI/STI symptoms. The questionnaire also collected demographic and socio-economic information and indicators of women's autonomy.

Study Setting

The characteristics of the six slum areas were broadly similar. Each slum 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 of family planning service utilization: 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. Respondents may have attended a family planning service to receive a contraceptive method, for advice on family planning, or for sexual health services, and all reasons for attending a family planning service are included in the analysis. 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. The reasons for the non-use of family planning services, as reported by the respondents, are 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 an 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, socioeconomic, geographic and female autonomy factors. Demographic factors include the respondent's age and parity. 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 high. 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 areal 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.

Results

Determinants of family planning service utilization

Table One 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 One 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 Two 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 RRR[1] 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 then 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)

[1] RRR = Relative Risk Ratio

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 no education. Women at high parities (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.

There was a strong effect of age on the reporting of physical access as a barrier to family planning service use. Relative to women aged 15-19, women at all other ages were significantly less likely to report physical distance as a barrier to service use: 20-24 RRR 0.21, 25-29 RRR 0.26, 30-34 RRR 0.19, 35-39 RRR 0.34, and 40-45 RRR 0.73. 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 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.

Fifteen percent of women identified economic barriers as the main reason for not utilizing family planning services. 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 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.

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.

Women who reported administrative barriers to service use comprised 22% of those who had never used family planning services. The administrative barriers reported in the survey include 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, age or parity requirements). The data does not include information on actual administrative barriers.

Administrative barriers were most likely to be experienced by women in 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 wealthier households, 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.

Psychosocial barriers, defined as opposition to service use due to religion, husband's opposition or personal non-religious reasons, were reported by 50% of women as the main barrier to the use of family planning services. 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 poor, 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 of household members on a woman's ability to seek family planning services extends beyond the husband to include the influence of the 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. In a study of family planning use in Karachi, Pakistan, Pasha, Fikree, &

Vermund (2001) found the perceived opposition of the mother-in-law was a deterrent to women to adopt a family planning method. 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 use of family planning services.

Conversely, greater personal mobility can lead to increased use of family planning services 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 increases 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.

Not surprisingly, cognitive barriers to family planning service use were experienced by 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. Cognitive barriers were identified by only 8.8% of women

Young women with low levels of education and low personal mobility were most likely to identify physical access as a barrier to family planning service use. Young married women aged 15--19 and those 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. Conversely, women who were allowed to travel outside their neighborhood or who had higher levels of education were less likely to report physical distance as a barrier, indicating the role of education in providing both the financial resources and autonomy to surmount problems of distance in access to services.

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 six study sites, or on characteristics of the services (e.g. opening times, 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

The results highlight important socioeconomic and demographic variations in both the use of family planning services, and the types of barriers faced by women in accessing services. The six study sites were all densely populated urban slums, each with similar health service environments. However, even among seemingly homogenous urban slum populations there exists a wide range of potential barriers to accessing family planning services, and the extent to which these act as inhibitors to service use is closely related to the individual and household characteristics of the women.

In terms of the five dimensions of access suggested by Foreit *et al.* (1978), the results show that psychosocial barriers form the greatest obstacle to utilization of family planning services amongst women in urban slum areas of Pakistan. Women most likely to experience this barrier are uneducated, low parity women who reside in more traditional households with restricted personal mobility and the presence of a mother-in-law. Alternatively, young, newly married women, with low personal mobility reported barriers of physical access to family planning services. As expected, economic barriers are likely to be faced by women who are uneducated and from poorer households, while cognitive barriers are faced by women with no education and no exposure to the media. In addition, poorer, uneducated and lower parity women report administrative barriers. It is therefore

too superficial to assume that all urban poor women in Pakistan face barriers to family planning service use to the same extent. 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. Any public health interventions that aim to reduce barriers to family planning service use among urban poor women in Pakistan must thus recognize the heterogeneity of urban slum women, and tailor interventions to fit the barriers faced by different types of women.

Figure One: Distribution of Barriers to Family Planning Service Use

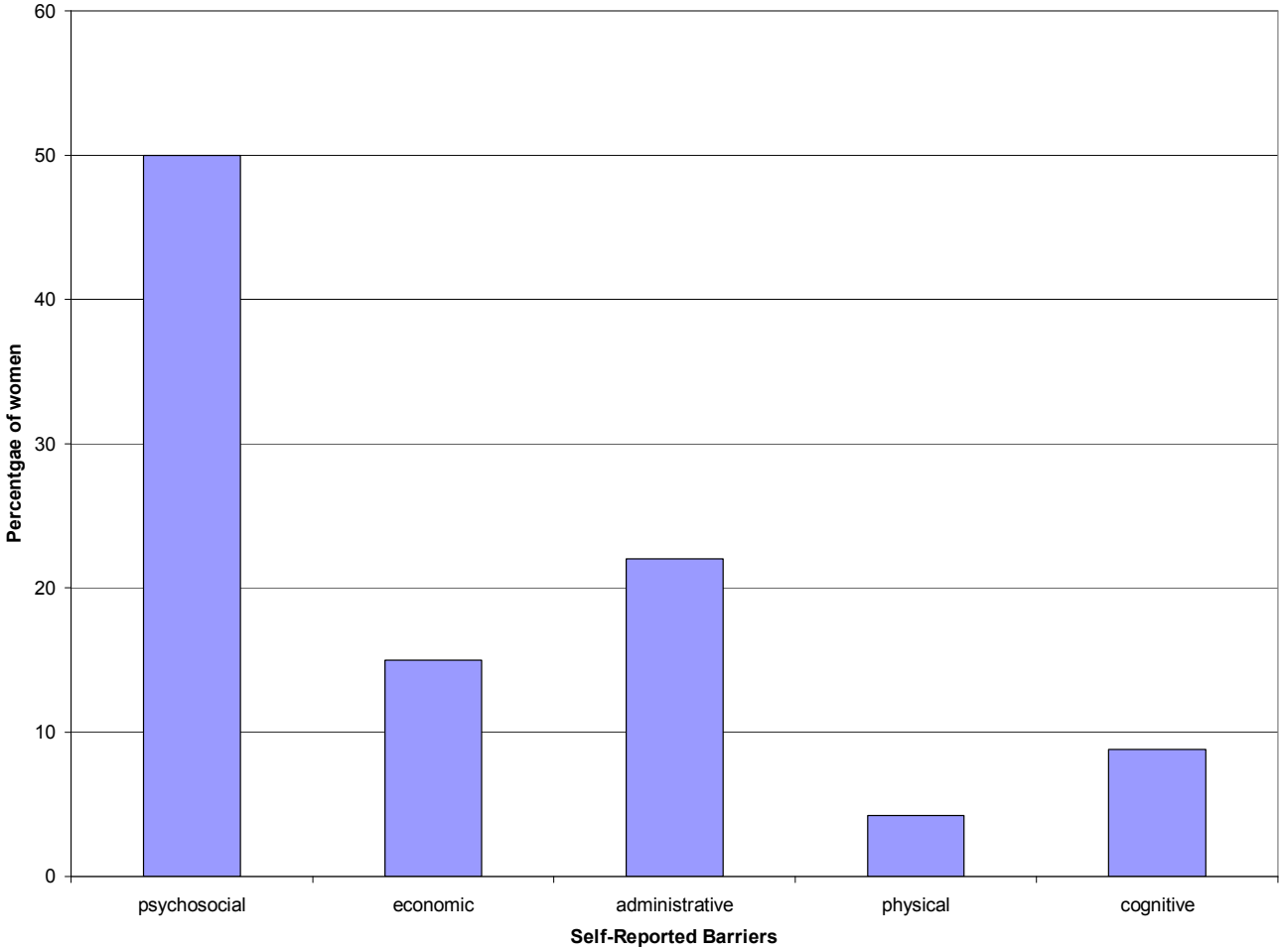

Table One: Determinants of Family Planning Service Use
Figures are Odds Ratios and 95% Confidence Intervals

	Odds Ratio	95% Confidence Interval
Age		
15-19	1.00	---
20-24	0.79	0.38, 1.64
25-29	1.04	0.50, 2.13
30-34	1.10	0.53, 2.28
35-39	0.79	0.38, 1.65
40-45	0.63	0.45, 1.59
Parity		
1	1.00	---
2/3	*2.06*	*1.49, 2.85*
4/5	*2.86*	*2.04, 4.02*
6+	*4.52*	*3.15, 6.49*
Education		
None	1.00	---
Primary	*1.35*	*1.08, 0.66*
Middle	*1.44*	*1.11, 1.85*
Secondary or higher	*1.63*	*1.26, 2.01*
Husband's Education		
None	1.00	---
Primary	*1.35*	*1.02, 0.74*
Middle	*0.55*	*1.21, 2.04*
Secondary or higher	*1.95*	*1.33, 2.35*
Household Asset Index		
Low	1.00	---
Middle	1.44	0.91, 1.44
High	1.18	0.86, 1.53
Works outside home	1.09	*0.87, 1.37*
Watches Television	*1.47*	*1.13, 1.91*
Listens to the Radio	*1.25*	*1.07, 1.46*
Mother-in-law in the household	*0.45*	*0.23, 0.67*
Ableto go outside neighborhood	*1.24*	*1.05, 1.43*
Husband approves of family planning	*10.31*	*7.78, 13.63*
Woman lives in Sindh	*1.44*	*1.23, 1.69*

Figures in itallics are significant at 5% level

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

	Psychosocial	Economic	Administrative	Physical	Cognitive
Age					
15-19	1.00	1.00	1.00	1.00	1.00
20-24	1.37 (0.55, 3.43)	1.23 (0.31, 4.87)	1.15 (0.40, 3.27)	*0.21 (0.13, 0.29)*	0.59 (0.15, 2.19)
25-29	1.03 (0.42, 2.53)	1.48 (0.38, 5.69)	0.92 (0.33, 2.57)	*0.26 (0.11, 0.41)*	0.40 (0.11, 1.44)
30-34	0.90 (0.35, 2.24)	1.60 (0.41, 6.22)	1.00 (0.35, 2.83)	*0.19 (0.10, 0.28)*	0.52 (0.14, 1.93)
35-39	1.19 (0.47, 2.97)	1.71 (0.43, 6.73)	1.59 (0.56, 4.53)	*0.34 (0.14, 0.54)*	0.53 (0.14, 2.00)
40-45	1.72 (0.68, 4.43)	1.37 (0.34, 5.54)	2.77 (0.96, 7.97)	*0.74 (0.50, 0.96)*	0.65 (0.17, 2.58)
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)	*0.45 (0.27, 0.75)*	0.64 (0.27, 1.53)	1.31 (0.60, 2.88)
6+	*0.58 (0.37, 0.92)*	*0.46 (0.23, 0.90)*	*0.22 (0.13, 0.39)*	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	*0.63 (0.49, 0.81)*	0.85 (0.58, 1.23)	0.96 (0.63, 1.33)	0.72 (0.40, 1.37)	*0.62 (0.38, 0.98)*
Middle	*0.60 (0.44, 0.82)*	0.94 (0.61, 1.46)	1.05 (0.70, 1.56)	*0.39 (0.17,0.89)*	*0.48 (0.26, 0.91)*
Secondary or higher	*0.46 (0.37, 0.68)*	0.81 (0.53, 1.24)	1.19 (0.61, 1.58)	*0.35 (0.16, 0.75)*	*0.70 (0.41, 0.96)*
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)	*0.50 (0.34, 0.75)*	0.61 (0.27, 1.38)	0.60 (0.36, 1.30)
Middle	0.54 (0.39, 0.73)	*0.44 (0.50, 0.82)*	*0.38 (0.25, 0.59)*	0.55 (0.26, 1.18)	0.61 (0.33, 1.13)
Secondary or higher	0.92 (0.70, 1.21)	*0.48 (0.13, 0.75)*	*0.36 (0.21, 0.82)*	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	*0.69 (0.53, 0.89)*	*0.60 (0.40, 0.88)*	*0.55 (0.42, 0.73)*	*0.37 (0.19, 0.72)*	1.18 (0.71, 1.95)
High	*0.65 (0.49, 0.86)*	*0.59 (0.39, 0.90)*	*0.79 (0.38, 0.80)*	*0.44 (0.29, 0.69)*	1.25 (0.73, 2.13)
Works outside home	*1.39 (1.06, 1.83)*	*1.24 (1.04, 1.42)*	0.98 (0.71, 1.35)	0.82 (0.43, 1.59)	*2.01 (1.14, 3.51)*
Watches Television	*0.48 (0.36, 0.64)*	0.88 (0.56, 1.38)	0.95 (0.63, 1.42)	1.10 (0.54, 2.22)	*0.33 (0.20, 0.53)*
Listens to the Radio	*0.80 (0.67, 0.96)*	*0.72 (0.55, 0.94)*	0.90 (0.71, 1.42)	*0.52 (0.32, 0.85)*	0.82 (0.58, 1.14)
Mother-in-law in the household	*1.59 (1.11, 2.07)*	1.11 (0.94, 1.28)	1.03 (0.84, 1.35)	*1.26 (1.04, 1.48)*	0.84 (0.72, 1.12)
Able to go outside neighborhood	*0.74 (0.52, 0.96)*	0.72 (0.41, 1.03)	0.84 (0.42, 1.29)	*0.71 (0.52, 0.96)*	0.75 (0.52, 1.17)
Woman lives in Sindh	*0.60 (0.50, 0.74)*	0.93 (0.70, 1.24)	*2.13 (1.64, 2.78)*	*0.14 (0.07, 0.25)*	*2.51 (1.70, 3.70)*

Figures in itallics are significant at 5% level

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