

The role of son preference in reproductive behaviour in Pakistan

R. Hussain,¹ F.F. Fikree,² & H.W. Berendes³

The sex of surviving children is an important determinant of reproductive behaviour in South Asia in general and Pakistan in particular. This cohort study evaluates the role of the sex of children on reproductive intentions and subsequent behaviour of women in urban slums of Karachi, Pakistan. The analysis is based on two rounds of surveys conducted in 1990–91 and 1995 of a cohort of married women aged 15–49 years. The results show that pregnancies became increasingly unwanted as the number of surviving sons increased. The sex of surviving children was strongly correlated with subsequent fertility and contraceptive behaviour. However, rather than an exclusive son preference, couples strove for one or more sons and at least one surviving daughter. The policy implications of the link between overt son preference and low status of women are discussed.

Keywords: cohort studies; contraception; Pakistan; pregnancy, unwanted; sex; sex behaviour; socioeconomic factors.

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Introduction

Reproductive intentions and behaviour in many developing countries are strongly influenced by the sex of the offspring (1–6). Empirical evidence from the analysis of the Demographic and Health Survey (DHS) data from 57 countries by Arnold (7) shows that son preference remains particularly strong in South Asian countries. Apart from Bangladesh, Pakistan has the second highest ratio of preference for sons over daughters; and among the women who expressed a preference for the sex of their next child, sons were preferred to daughters by nearly ten to one. However, analysis of cross-sectional survey data such as the World Fertility Survey (WFS) and the more recent DHS is made difficult by the lack of information on reported gender preference and subsequent reproductive behaviour at the level of the individual. Only three longitudinal studies of reproductive intentions and subsequent fertility behaviour in South Asia have been carried out: one in India by Vlassoff (8) and two others in Bangladesh (9, 10). To the best of our knowledge, no such study has been attempted in Pakistan. Using a cohort approach, the present article reports on the role of the sex of surviving children on the wantedness of a pregnancy and assesses the effect of the sex of

surviving children on subsequent fertility (parity progression) and contraceptive behaviour.

Materials and methods

The study was conducted in four urban squatter settlements of Karachi in 1990–91 and in 1995. An estimated 40% of Karachi's 12 million population live in squatter settlements. In the mid-1980s, the Department of Community Health Sciences, Aga Khan University, Karachi, established primary health care programmes (PHC) in four such squatter settlements, each with a population of around 10 000. The PHC programmes had a strong outreach component, which included monthly home visits by community health workers. Provision of family planning advice and services both at the home level and at the community health centre were an integral part of the programme. Women requesting tubal ligation were referred to appropriate low-cost public or nongovernmental facilities, and transport was often provided to facilitate the visit. Further details of the programme and its achievements have been published (11–13).

The first round of data collection was through a multi-stage prospective pregnancy outcome study of 999 pregnant women who were followed on a monthly basis from the time their pregnancy was identified to delivery or other outcome. This pregnancy is referred to as the "index pregnancy". At the time of the first interview, and after obtaining informed consent, a detailed history was obtained to construct the demographic, medical and obstetric profile of each participant. Questions on the wantedness of the index pregnancy were asked towards the end of the section on past contraceptive

¹ Senior Lecturer, School of Health, University of New England, Armidale, NSW 2351, Australia (e-mail: rhussain@metz.une.edu.au). Correspondence should be addressed to this author.

² Program Associate, Population Council, New York, USA.

³ Deceased. Formerly: Director, Division of Epidemiology, Statistics and Prevention Research, National Institute of Child Health and Human Development, National Institutes of Health, Bethesda, MD, USA.

behaviour. By this time, around 15–20 minutes after the start of the interview, it was felt that respondents would feel comfortable enough to answer more sensitive questions. A notable omission in this approach was the blurring of the distinction between unwantedness of the index pregnancy for reasons relating to spacing or to the limiting of family size. Further details on methodology and respondents' demographic profile are outlined by Fikree et al. (14).

The second round of data collection from the same cohort of women was carried out in 1995.^a Approximately three-quarters of the original cohort ($n = 765$) of subjects from the 1990–91 study were successfully re-interviewed. Of the 234 women who could not be interviewed in the second stage of the study, eight had died and 20 refused to participate. The remaining 206 women could not be contacted as they had left the study area. It is important to mention here that this level of population attrition was anticipated before the start of the second phase of the study, as most of these squatter settlements are still considered to be illegal by the municipality. This leads to a considerable degree of population mobility within and out of these settlements because of insecure tenancy arrangements. Nonetheless, to ensure that exclusion of women who had moved away from the study sites did not adversely affect data obtained from the second phase of the study, we obtained the family records of these women from the PHC centres.^b Comparison of the demographic and reproductive characteristics revealed no notable differences between women who had migrated out of the study area and those who were re-interviewed. In addition, no substantive changes were noted with regard to overall improvement in socioeconomic conditions or availability of additional health services in the study sites over the five-year period between the two phases of the study. However, it is worth noting that both the ongoing health promotion activities of the PHC programme and changes in women's parity status would have brought about some attitudinal shifts. Unfortunately, we did not supplement our quantitative data with additional qualitative information on perceptions about changes in gender preference and perceived ideal family size. This therefore limits our ability to provide specific recommendations that could be incorporated into the future health promotion activities of the PHC programme.

A number of exclusion criteria were applied to the analysis sample. Women who were primiparous ($n = 114$) or had no surviving children ($n = 32$) at the time of the first study^c were excluded. To avoid

potential bias in response to questions on the wantedness of the index pregnancy, study subjects who had medical or obstetric complications during the index pregnancy that required one or more referral visits to a consultant ($n = 50$) were also excluded, as were the responses of women whose index pregnancy ended in an abortion ($n = 12$). Finally, records of study women who provided incomplete information on contraceptive practices either in the first or second phase of the study ($n = 49$) were also excluded. The application of these exclusion criteria reduced the analysis sample to 508 women who participated in both phases of the study.

The focus of the analysis was two-fold: to assess the determinants of wantedness status of the index pregnancy; and to evaluate the effect of the "sex composition" of surviving children on additional fertility and contraceptive use. Both bivariate and multivariate analyses were used, the latter involving stepwise logistic regression modelling. The multivariate analysis for determinants of wantedness of the index pregnancy was used to assess the contribution of the sex of surviving children, while controlling for maternal characteristics such as age at marriage, duration of marriage, parity and past contraceptive use. The model also controlled for the effect of child mortality, in particular the survival of the preceding child and the interval between the preceding and the index pregnancy. Demographic variables in the model included the educational level of the respondent and her spouse, employment status of the respondent, ethnic affiliation, quality of housing and monthly cash income.

Similarly, the logistic regression models for determinants of additional fertility included the following variables: maternal educational level; religious affiliation; maternal age and duration of marriage; number of surviving sons and daughters; wantedness status of index pregnancy; and child mortality. The model for contraceptive use included the following: maternal educational level; religion; family opposition to contraceptive use; wantedness of the index pregnancy; and number of surviving sons and daughters. In this model, the two variables number of surviving sons and number of surviving daughters were recoded as a dichotomous variable, since preliminary analysis showed that a particular combination of the sex of surviving children appeared to be a more important predictor of contraceptive use than a monotonic increase in the number of sons.

Results

Although the majority of respondents had no formal schooling or basic literacy/numeracy skills, there was a high degree of consistency in the demographic information obtained from the two surveys. Also the information on reproductive events and contraceptive behaviour was not only consistent across the

^a The second set of data comes from fieldwork undertaken by R.H. as part of a doctoral thesis.

^b The records contained updated demographic information on all members of the household and reproductive history of all married women of child-bearing age until the time they actually left the study area.

^c These women were excluded from the study because in a pronatalist society, such as Pakistan, questioning women who had had no previous pregnancy or no surviving child on the "wantedness" of a pregnancy were considered culturally inappropriate.

two surveys, but also closely matched the information in the family records maintained by the PHC programme.^d Although the age at marriage was almost the same in both groups (wanted and unwanted pregnancy) at the time of the first study in 1990–91 (Table 1), women in the unwanted pregnancy group were older and had been married for longer ($P < 0.01$). This longer exposure time for women who reported their index pregnancy to be unwanted resulted in both a higher mean number of live births and number of living children, compared to women with a wanted pregnancy (Table 1). Furthermore, unwantedness of the index pregnancy was correlated with both the outcome of the preceding pregnancy and the interval between the previous pregnancy and conception of the index pregnancy. In cases where the outcome of the preceding pregnancy was a live birth and the child was still alive, the index pregnancy was more likely to be unwanted although the difference due to survivorship was not statistically significant (Table 1).

Although the sex of the previous surviving child did not appear to be an important determinant, unwantedness of the index pregnancy did vary markedly according to the sex of surviving children. Even at lower parities, where the overall proportion of women reporting their index pregnancy to be unwanted was relatively small, the sex of surviving children played an important role. For example, at primiparity 25% of the respondents reported their index pregnancy to be unwanted when the surviving child was a son, whereas the corresponding proportion was zero when the surviving child was a daughter. Similarly, at second parity 48% of the respondents reported the index pregnancy as unwanted when both the surviving children were sons, compared with 25% when both the surviving children were daughters (Fig. 1). At higher parity levels, women with three or more surviving sons and no or only one surviving daughter were much more likely to report their index pregnancy as unwanted compared to women with three or more daughters and no or only one surviving son (Fig. 1).

A multivariate analysis was carried out to evaluate whether unwantedness of the index pregnancy was directly associated with the sex of surviving children, or with overall parity differentials associated with a shorter duration of marriage. The results show that the sex of surviving children was the dominant explanatory variable for unwantedness of the index pregnancy when the effect of marriage duration was controlled for. Thus, with every unit increase in the number of surviving sons, a woman was two-and-a-half times more likely to report her index pregnancy as unwanted (odds ratio (OR) = 2.4; 95% confidence interval (CI) = 1.8–3.2). The corresponding figure for increase in unwantedness

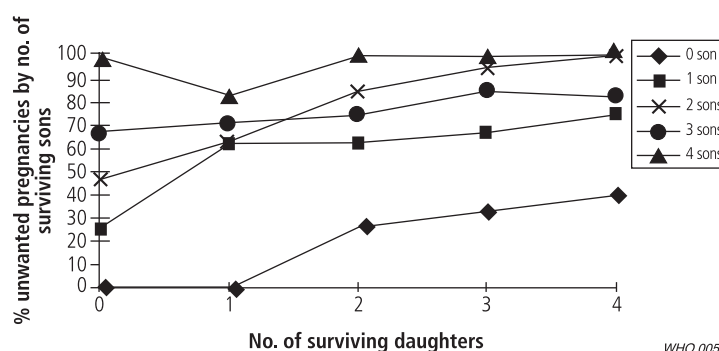
Table 1. Association between fertility characteristics, by wantedness of index pregnancy

	Unwanted pregnancy (n = 323)	Wanted pregnancy (n = 185)	P-value
Mean age of the respondent (years)	27.3 (4.7) ^a	25.3 (4.6)	0.000
Mean age at marriage (years)	17.0 (2.8)	17.1 (2.7)	0.509
Duration of marriage			
< 10 years	45.0%	67.0%	0.000 ^b
≥ 10 years	55.0%	33.0%	
Mean no. of pregnancies	5.8 (2.6)	4.2 (2.0)	0.000
Mean no. of live births	4.6 (2.5)	2.9 (1.8)	0.000
Mean no. of children alive	4.1 (2.2)	2.5 (1.6)	0.000
Mean no. of lost pregnancies	2.0 (1.4)	1.3 (1.2)	0.000
Outcome of last pregnancy			
Live birth	95.3%	89.7%	0.031 ^b
Other	4.7%	10.3%	
Child alive from preceding pregnancy			
No	4.9%	9.1%	0.074 ^b
Yes	95.1%	90.9%	
Sex of the preceding live child			
Male	52.6%	48.5%	0.378 ^b
Female	47.4%	51.5%	
Mean birth interval between preceding birth and index pregnancy (months)	22.6 (12.9)	25.7 (13.7)	0.003
Attempt to prevent current pregnancy			
No	69.5%	97.3%	0.000 ^b
Yes	30.5%	2.7%	

^a Figures in parentheses are standard deviations.

^b χ^2 test P-value (df = 1); all others P-values are based on Student's *t*-test.

Fig. 1. Association between sex of surviving children and unwantedness of index pregnancy



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^d The information on variables such as age, educational status, age at marriage and number of pregnancies and live births etc. was collected separately in both phases of the survey.

with every unit increase in the number of surviving daughters was approximately half that reported for sons (Table 2). Moreover, number of surviving sons produced the greatest change in the model deviance. Other significant predictors of unwantedness of the index pregnancy included attempts to prevent the pregnancy, survival of the child born in the preceding pregnancy, the interval between it and the index pregnancy, and ever-use of contraception. These results indicate first that in many cases the index pregnancy was due either to use of an inappropriate method of contraception or to contraceptive failure. Second, the very high odds ratio associated with short birth intervals suggests that in a number of cases the index pregnancy could have been unwanted for reasons of spacing, as respondents felt overwhelmed by the prospect of the increased workload of caring for two closely spaced children.

Analysis of the women's reproductive behaviour 4–5 years after the initial survey revealed that among those who did not want the index pregnancy, 25% had no further pregnancies, while the corresponding proportion for women who reported wanting the index pregnancy was 15% ($P < 0.05$). As discussed above, in some cases the index pregnancy could have been unwanted because of its timing, and therefore the additional fertility in this group was not totally unexpected. The more important question was to what extent the sex of the surviving children influenced additional fertility. At the univariate level, additional fertility was predominantly correlated with the sex of surviving children. At primiparity and second parity, this effect

was, not surprisingly, minimal as women were still actively involved in the family-building process (Table 3). However beyond parity level two, additional fertility became more closely associated with the surviving number of sons. However, the small number of observations in some of the study cells means that the results must be interpreted with caution.

In the multivariate analysis, the statistically significant predictors of additional fertility included sex of the surviving children, maternal education, and maternal age at marriage. Women who had no surviving sons at the time of the index pregnancy were almost six times more likely (OR = 5.7; 95% CI = 2.6–21.3) to have a further pregnancy, compared with women with five or more surviving sons (Table 4). Furthermore, the odds of having further pregnancies decreased considerably as the number of sons increased. Number of surviving sons made the largest contribution to the model deviance. In contrast, the number of surviving daughters acted as a strong factor against the likelihood of further childbearing (Table 4). These results appeared somewhat counterintuitive especially at lower parities. We therefore repeated the regression analysis after including an interaction term for surviving number of sons and daughters. Although the overall interaction effect was not statistically significant at $P < 0.05$, individual subcategories involving combinations of at least two or more surviving sons and more than two surviving daughters appeared to be negatively correlated with additional fertility (data not shown). This reinforces the impression that the relationship between number of surviving sons and additional fertility is not a simple linear one. Rather, it appears that couples continue to have more pregnancies in their quest for at least one surviving son and one or two daughters. However, once couples have on average three daughters and one or more surviving sons, the likelihood of additional fertility decreases dramatically. This issue is discussed further in conjunction with the findings of the multivariate analysis for determinants of contraceptive use. With regard to maternal education, the non-linear relationship between maternal schooling and additional fertility can be partially attributed to the poor quality of primary education in low-income areas, especially early primary education from grades one to three. As most of our study population in the primary education category had received only 1–3 years of formal schooling, in many respects these respondents did not differ markedly from other study respondents with no formal schooling.

To assess the effect of the sex of surviving children on contraceptive use, we used only data from the second phase of the study conducted in 1995. Approximately half of all study women (49%) reported current use of one or more modern methods of contraception. The mean point for first use of contraceptive methods was at around three children. At the univariate level, the sex of surviving children appeared to influence contraceptive use. For

Table 2. Multivariate analysis for determinants of unwantedness of index pregnancy

	Odds ratio ^a	Change in deviance (df = 1)
No. of living sons^b	2.4 (1.8–3.2) ^c	47.7
No. of living daughters^b	1.4 (1.0–1.9)	9.6
Birth interval		
> 24 months	Reference	
≤ 24 months	3.8 (2.7–4.1)	14.3
Attempt to prevent index pregnancy		
No	Reference	
Yes	3.2 (1.4–7.0)	13.7
Ever used contraception		
No	Reference	
Yes	1.5 (1.1–2.3)	5.3
Child alive (preceding pregnancy)		
No	Reference	
Yes	1.7 (1.3–2.1)	4.3

^a OR and CI are presented for variables significant at $P < 0.05$.

^b Used as continuous variables in the regression equation.

^c Figures in parentheses are 95% confidence intervals.

example, at second parity 14% of women with two surviving daughters and no surviving son reported using contraception, compared with 43% of women with two surviving sons and no surviving daughter (Table 5). However, rather than a linear pattern of monotonic increase in the proportion of women using contraception by increasing number of sons, a more complex pattern was observed. Contraceptive use in such situations seemed predicated not on an exclusive preference for sons, but rather on a combination that allowed for at least one surviving son and no more than two daughters. Our observations were validated by the various regression models we used to assess whether the sex of surviving children was associated with contraceptive use. The sex of the surviving children was a statistically significant predictor of contraceptive use only in regression models where it was used as a categorical variable and not in models incorporating it as a continuous-level variable. More specifically, of the different combinations of sex of surviving children, the only regression model that showed a statistically significant association included a combination of at least one surviving son and three or more surviving daughters. Women with this combination were twice as likely (OR = 2.1; 95% CI = 1.5–4.3) to use contraception than were women with one son and two or fewer daughters (Table 6). It appears that once the couples had one or more surviving sons, having a large number of daughters acted as an impetus for contraceptive use. The results presented earlier for determinants of additional fertility also point to a reduction in the likelihood of additional fertility with increasing number of daughters. The reasons appear to be mainly economic in terms of the cost of providing dowry for daughters, and are further elaborated on in the Discussion. However, it is important to note that the sex of surviving children made only a modest contribution to the model deviance compared with other explanatory variables included in the regression equation.

The other statistically significant predictors of contraceptive use included maternal education, maternal religion, and husband/family opposition to contraceptive use. A strong inverse association was observed between maternal education and contraceptive use. Women with no education were found to be among those least likely to use contraception (Table 6). Within the primary education subgroup (1–5 years), women with 1–3 years of education behaved, in terms of contraceptive use, very much like women with no education. However, for women with more than 1–3-years' primary education there was a 20% increased likelihood of using contraception for every additional year of schooling (data not shown). Women who reported "husband/family opposition" to contraceptives were the least likely users of contraception and this variable made the largest contribution to the model deviance (Table 6). Most of those falling into this category were Muslim Pathan and Baloch women, who also had the lowest level of education (data not shown). A

Table 3. Percentage distribution of further pregnancies, by sex of surviving children

	Further pregnancies		
	<i>n</i>	None (%)	One or more (%)
Sex			
One child			
No sons/one daughter	35	11.4	88.6
One son/no daughters	45	13.3	86.7
Two children			
No sons/two daughters	29	13.8	86.2
One son/one daughter	65	16.9	83.1
Two sons/no daughters	36	16.7	83.3
Three children			
No sons/three daughters	15	0.0	100.0
One son/two daughters	27	29.6	70.4
Two sons/one daughter	30	20.0	80.0
Three sons/no daughters	10	50.0	50.0
Four children			
No sons/four daughters	4	0.0	100.0
One son/three daughters	18	22.2	77.8
Two sons/two daughters	28	28.6	71.4
Three sons/one daughter	25	32.0	68.0
Four sons/no daughters	5	40.0	60.0
Five or more children			
No. sons < No. daughters	61	21.3	78.7
No. sons = No. daughters	20	45.0	55.0
No. sons > No. daughters	55	27.3	72.7

number of earlier field reports by the PHC programme revealed lower uptake of contraception by women belonging to these ethnic groups; and opposition by the husband and/or other members of the husband's family, notably the mother-in-law, was consistently cited as the main reason for non-use. The underlying reasons for opposing contraceptive use given by the husbands included their more pronatalist outlook, and religious grounds. It is worth noting that although in the present analysis, the interaction term for husband/family opposition and maternal education did not reach statistical significance at the $P < 0.05$ level, the underlying mechanism still appears to be a weak locus of control for reproductive decision-making. In retrospect, we feel that it would have been instructive to have separate open-ended response categories relating to reasons for family opposition to contraceptive use, to allow us to develop a better understanding of the underlying dynamics.

Finally, respondents who reported their index pregnancy as unwanted were twice as likely (OR = 2.2; 95% CI = 1.3–5.1) to be using contraception 4–5 years later compared with respondents reporting the index pregnancy as wanted (Table 6). It is worth recalling that failure to prevent the index

Table 4. Results of the multivariate analysis for determinants of further pregnancies

	Odds ratio ^a	Change in deviance
Maternal education		
None	1.9 (1.2–3.7) ^b	5.3; df = 2
Primary	2.1 (1.3–4.8)	
Post-primary	Reference	
Age at marriage	0.90 (0.7–0.9)	4.8
No. of living sons		
None	5.7 (2.6–21.3)	26.8; df = 5
One	2.1 (1.3–6.4)	
Two	1.6 (1.2–4.9)	
Three	0.7 (0.2–2.2)	
Four	1.0 (0.3–3.1)	
Five or more	Reference	
No. of living daughters		
None	0.4 (0.07–0.8)	9.6; df = 5
One	0.3 (0.07–0.7)	
Two	0.3 (0.05–0.5)	
Three	0.2 (0.04–1.0)	
Four	0.1 (0.02–0.9)	
Five or more	Reference	

^a Odds ratios and 95% confidence intervals are presented for variables significant at $P < 0.05$.

^b Figures in parentheses are 95% confidence intervals.

Table 5. Percentage distribution of current contraceptive use, by sex of surviving children

	Contraceptive use	
	<i>n</i>	Yes (%)
Sex		
One child		
No sons/one daughter	1	–
One son/no daughters	2	–
Two children		
No sons/two daughters	7	14.3
One son/one daughter	11	9.1
Two sons/no daughters	7	42.9
Three children		
No sons/three daughters	6	–
One son/two daughters	37	40.5
Two sons/one daughter	37	62.2
Three sons/no daughters	13	53.8
Four children		
No sons/four daughters	10	20.0
One son/three daughters	18	30.0
Two sons/two daughters	46	58.7
Three sons/one daughter	32	56.3
Four sons/no daughters	5	40.0
Five or more children		
No. sons < No. daughters	127	57.5
No. sons = No. daughters	27	55.6
No. sons > No. daughters	115	44.3

pregnancy was strongly associated with unwantedness of the pregnancy (Table 2). It is plausible that this experience, combined with promotion of family planning and easy accessibility of contraceptives at the home level through the community health workers, made these respondents more likely to accept contraception. Thus irrespective of the reasons for not wanting the index pregnancy (spacing or limiting family size), women by and large appeared to follow their reported reproductive intentions with real changes in contraceptive behaviour.

Discussion

As stated above, most of the empirical information about the effect of gender preference and the sex of surviving children is based on data from macro-level cross-sectional surveys, such as the WFS and the more recent DHS, rather than longitudinal studies. Hence the validity of the correlation between stated and actual reproductive behaviour has been contested (15–18). The results of the present longitudinal study indicate that the sex of surviving children, particularly the number of sons, is associated with pregnancies reported as unwanted and also influences subsequent reproductive behaviour. These results also suggest that the inferences based on the WFS and DHS data are robust and that macro-level data can be used in predicting reproductive behaviour. Additionally, a comparison of our study results with those obtained by the Pakistan DHS shows a similar pattern of contraceptive use by the sex of surviving children, i.e. a marked increase in the proportion of current users among women having two or more sons and one or more surviving daughters (7). The rationale underpinning contraceptive use among women with three or more daughters and at least one surviving son may be twofold. First, the surviving son can fulfil the key parental grounds for son preference such as meeting the economic, social and emotional needs of parents in their old age and carrying on the family name. Second, the economic implication of providing dowries for three or more daughters is a daunting prospect, especially for those on a low income. While there are a number of studies from India that clearly show how the dowry problem perpetuates son preference (19–22), the issue remains poorly researched in Pakistan. In view of the strong cultural similarity between northern India and Pakistan, we postulate that the underlying mechanisms may be comparable.

The social and demographic consequences of a strong son preference go far beyond their impact on fertility. A substantial body of evidence shows that there is discrimination against daughters with regard to food allocation and access to health services (23–28) and that they also suffer higher mortality especially during the first 4 years of life (7, 29, 30). Furthermore, selective discrimination continues against the daughters who survive in the

form of restricted access to formal education, thereby perpetuating the social disadvantage faced by women (31). Although the available empirical evidence shows a strong inverse association between female educational level, age at marriage, autonomy and fertility in much of South Asia including Pakistan (32–35), it would be simplistic to assume that the deeply entrenched cultural notion of sons being “superior” to daughters is limited to women with little or no formal education. Our argument is supported by findings from the Indian National Family and Health Survey, which show that among literate women there has been little attitudinal change with regard to son preference (36). Moreover, other studies indicate that there has been an intensification of gender discrimination against the girl child by women with lower fertility and relatively better education (37, 38) or higher socioeconomic status (6, 21).

Therefore, in order to make any substantial impact on the overt son preference in patriarchal societies such as Pakistan, there is a need to broaden the focus beyond recommendations about improving female education, and undertake a critical examination of the existing social structures. The present study suffers from the limitation that qualitative data that could provide an insight into how the study women themselves view the problem were not collected. Nonetheless, the implicit assumption often made by policy-makers and donor agencies that structural societal issues impeding the development of more egalitarian gender relations will disappear with the overall improvement in socio-economic development, appears to be an illusion (38, 39). Daughters will continue to be viewed as a “liability” — both economic and moral — unless efforts are made to decrease gender inequality through some strategically focused social development programmes for women. ■

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Table 6. Results of multivariate logistic regression analysis for determinants of contraceptive use in women with at least one surviving son

	Odds ratio	Change in deviance
Husband/family opposes contraceptive use		
No	Reference	47.4; df = 1
Yes	0.06 (0.02–0.2) ^b	
Maternal education		
None	0.5 (0.2–1.0)	9.5; df = 2
Primary	0.7 (0.3–1.7)	
Post-primary	Reference	
Wantedness of index pregnancy		
Yes	Reference	6.1; df = 1
No	2.2 (1.3–5.1)	
Religion		
Muslim	Reference	8.4
Other	2.6 (1.6–4.1)	
No. of surviving daughters		
≤ 2	Reference	4.5
≥ 3	2.1 (1.5–4.3)	

^a Odds ratios and 95% confidence intervals are presented for variables significant at $P < 0.05$.

^b Figures in parentheses are 95% confidence intervals.

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Résumé

Rôle de la préférence pour les fils dans le comportement reproducteur au Pakistan

La plupart des informations sur l'association entre les intentions déclarées en matière de procréation et les comportements s'appuient sur les données d'enquêtes transversales plutôt que sur les résultats d'études longitudinales. Le présent article rapporte l'influence du sexe des enfants survivants sur le caractère désiré ou non d'une grossesse et évalue l'effet du sexe des enfants survivants sur les grossesses ultérieures et le comportement en matière de contraception, en utilisant une étude de cohorte (étude longitudinale). L'étude a été réalisée dans quatre zones d'habitation précaire (squats) de Karachi à deux époques différentes : 1990-1991 et

1995. Lors de la première phase (1990-1991), il a été demandé à 999 femmes enceintes d'indiquer si leur grossesse actuelle (grossesse « indicatrice ») était désirée ou non. Lors de la deuxième phase de l'étude en 1995, des informations sur les événements génésiques et sur l'utilisation de la contraception entre 1990-1991 et 1995 ont été recherchées auprès de la même cohorte de femmes. Parmi les 999 femmes ayant participé à la première partie de l'étude, les trois quarts ($n = 765$) ont pu être réinterrogées. Une comparaison entre les femmes interrogées au cours de la deuxième enquête et celles qui n'ont pu être revues n'a montré aucune différence

significativa au niveau des caractéristiques démographiques ou génésiques entre les deux groupes. L'application de plusieurs critères d'exclusion des femmes interrogées lors des deux phases de l'étude a réduit l'échantillon analysé à 508 cas.

Les résultats de la présente étude montrent que le sexe des enfants survivants, et en particulier le nombre de fils, influence le caractère désiré ou non de la grossesse indicatrice. Par exemple, chez les femmes ayant déjà un enfant, 25 % des femmes interrogées ont indiqué que la grossesse indicatrice était non désirée lorsque l'enfant survivant était un fils, et 0 % lorsque l'enfant survivant était une fille. De même, chez les femmes ayant déjà deux enfants, 48 % des femmes interrogées ont indiqué que la grossesse indicatrice n'était pas désirée lorsque les deux enfants survivants étaient des fils, contre 25 % lorsque les deux enfants survivants étaient des filles. D'après les résultats d'une analyse multivariée, le sexe des enfants survivants était la variable explicative dominante pour le caractère non désiré de la grossesse indicatrice. A chaque fils survivant supplémentaire, les femmes indiquaient 2,5 fois plus souvent la grossesse indicatrice comme non désirée, chiffre qui était divisé par deux lorsque l'enfant survivant supplémentaire était une fille.

L'analyse de l'association entre le sexe des enfants survivants et le comportement reproducteur quatre à cinq ans après la première interview a nettement montré une préférence pour les fils, car la fécondité ultérieure

comme la non-utilisation d'une contraception étaient principalement corrélées avec le sexe des enfants survivants. Cependant, plutôt qu'une préférence exclusive pour les fils, les couples cherchaient à avoir un ou plusieurs fils survivants et pas plus de deux filles. Les autres facteurs prédictifs de la non-utilisation de la contraception étaient le faible niveau d'études de la mère, le jeune âge de la mère au mariage, et l'opposition du mari ou de la famille à l'emploi de la contraception.

La préférence manifeste pour les fils reflète la nature fortement patriarcale de la société pakistanaise et l'infériorité du statut des femmes en général, et en particulier des femmes n'ayant pas de fils. Malgré les preuves empiriques d'un lien entre l'éducation des femmes, le statut de la femme et la fécondité, ce lien ne se traduit pas automatiquement par une diminution de la préférence pour les fils. De plus, la préférence manifeste pour les fils joue un rôle majeur en aggravant le handicap social et sanitaire dont souffrent les fillettes. Par conséquent, alors que les efforts visant à améliorer l'éducation des femmes sont importants en tant que tels, il est également nécessaire d'évaluer de façon critique les facteurs sociétaux qui perpétuent les préférences quant au sexe des enfants. Cette dernière approche aura davantage de chances d'être couronnée de succès si l'on cherche à mettre en lumière les déterminants structurels des inégalités hommes-femmes et que l'on favorise les aspects du développement social qui bénéficient directement aux femmes.

Resumen

Influencia de la preferencia por un hijo varón en el comportamiento reproductivo en el Pakistán

La mayor parte de la información disponible sobre la relación entre los objetivos reproductivos declarados y el comportamiento en ese sentido se basa en datos de encuestas transversales más que en resultados de estudios longitudinales. En el presente artículo se informa sobre la influencia del sexo de los niños supervivientes en el deseo de quedar nuevamente embarazada y se evalúa el efecto del sexo de los niños supervivientes en los embarazos posteriores (probabilidad de ampliación de la unidad familiar) y en el uso de métodos anticonceptivos, utilizando para ello un estudio de cohortes o longitudinal. El estudio se llevó a cabo en cuatro asentamientos ilegales de Karachi en dos ocasiones: 1990-1991 y 1995. En la primera fase del estudio se pidió a 999 mujeres encintas que precisaran en qué medida su embarazo, considerado como embarazo «índice», había sido deseado. En la segunda fase del estudio, en 1995, se solicitó información a esa misma cohorte de mujeres acerca de los episodios reproductivos y el uso de métodos anticonceptivos entre 1990-1991 y 1995. De las 999 entrevistadas originalmente, se logró volver a entrevistar a las tres cuartas partes ($n = 765$). La comparación realizada entre las mujeres incluidas en la segunda encuesta y las que no estaban disponibles no reveló ninguna diferencia significativa en lo tocante a sus características demográficas o reproductivas. La aplicación de varios criterios

de exclusión a las mujeres entrevistadas en las dos fases del estudio redujo la muestra de análisis a 508 casos.

Los resultados del presente estudio muestran que el sexo de los niños supervivientes, en particular el número de varones, influía en la deseabilidad del embarazo índice. Por ejemplo, entre las mujeres que ya tenían un hijo, el 25% de las entrevistadas con un hijo varón señalaron que su embarazo índice no era deseado, mientras que la cifra correspondiente fue del 0% cuando el vástago superviviente era una niña. Análogamente, entre las mujeres que habían tenido dos hijos y respondieron a la encuesta, el 48% de aquellas cuyos dos vástagos supervivientes eran varones señalaron que el embarazo índice era no deseado, en comparación con el 25% cuando los dos supervivientes eran niñas. El análisis multivariable realizado mostró que el sexo de los niños supervivientes era la variable explicativa dominante de la no deseabilidad del embarazo índice. Por cada unidad de aumento del número de varones supervivientes, se multiplicaba por 2,5 la probabilidad de que una mujer calificara su embarazo índice de no deseado, mientras que la cifra correspondiente para cada unidad de aumento del número de hijas supervivientes equivalía aproximadamente a la mitad de la señalada para los varones.

El análisis de la relación entre el sexo de los niños supervivientes y el comportamiento reproductivo

4-5 años después de la entrevista inicial mostró fuertes indicios de una preferencia por los hijos varones, ya que tanto la fecundidad adicional como el no recurso a métodos anticonceptivos se correlacionaban predominantemente con el sexo de los niños supervivientes. Sin embargo, más que una preferencia exclusiva por los varones, las parejas se decantaban por uno o varios hijos supervivientes y un máximo de dos niñas. Otros factores predictivos de la no utilización de métodos anticonceptivos eran la escasa o nula educación de la madre, el matrimonio a edad temprana de ésta y la oposición del marido o la familia al uso de métodos anticonceptivos.

La preferencia manifiesta por un hijo varón refleja el carácter altamente patriarcal de la sociedad pakistani y el bajo status de que gozan las mujeres en general, y las mujeres sin hijos varones en particular. Aunque hay

pruebas empíricas de la existencia de una relación entre educación de la mujer, condición jurídica y social de la mujer y fecundidad, ello no se traduce automáticamente en una disminución de la preferencia por los varones. Además, la preferencia manifiesta por un hijo varón contribuye de manera sustancial a acentuar la inferioridad social y sanitaria que afrontan las niñas. Por consiguiente, aunque los esfuerzos tendentes a mejorar la educación de la mujer son importantes de por sí, es necesario además evaluar críticamente las estructuras sociales que perpetúan las preferencias de sexo. Este último enfoque tiene más probabilidades de conseguir su objetivo si al mismo tiempo se despliegan esfuerzos para poner de relieve los determinantes estructurales de las desigualdades en las relaciones entre los sexos y para propiciar un desarrollo social que beneficie directamente a las mujeres.

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