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Preferences for the Sex of Children and their Influence on Reproductive Behaviour

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The World Fertility Survey (WFS) is an international research programme whose purpose is to assess the current state of human fertility throughout the world. This is being done principally through promoting and supporting nationally representative, internationally comparable, and scientifically designed and conducted sample surveys of fertility behaviour in as many countries as possible.

The WFS is being undertaken, with the collaboration of the United Nations, by the International Statistical Institute in co-operation with the International Union for the Scientific Study of Population. Financial support is provided principally by the United Nations Fund for Population Activities and the United States Agency for International Development. Substantial support is also provided by the UK Overseas Development Administration.

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El proyecto está a cargo del Instituto Internacional de Estadística, contando con la colaboración de las Naciones Unidas y en cooperación con la Unión Internacional para el Estudio Científico de la Población. Es financiado principalmente por el Fondo de las Naciones Unidas para Actividades de Población y por la Agencia para el Desarrollo Internacional de los Estados Unidos. La Oficina Británica para el Desarrollo de Países Extranjeros proporciona también un gran apoyo financiero.

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Errata

Preferences for the Sex of Children and their Influence on Reproductive Behaviour

WFS Comparative Studies no 27

This errata slip is printed on gummed paper. The corrections may be affixed over the original figure titles.

page 16 **Figure 2** Difference in the percentage of women wanting no more children between those with an equal number of boys and girls and those with specified imbalanced family compositions (see page 15 for explanation)

page 20 **Figure 3** Difference in the percentage of women currently using contraception between those with an equal number of boys and girls and those with specified imbalanced family compositions

page 24 **Figure 4** Fertility rates (vertical axis) according to number of sons (horizontal axis) for specified family sizes

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Preface

One of the main objectives of the WFS programme is the collection and dissemination of internationally comparable data on human fertility, obtained through nationally representative interview surveys carried out in a large number of countries. Many institutions and research workers at international and national levels are engaged in cross-national comparative analysis of the data collected. The WFS London headquarters also undertake comparative analysis such as cross-national summaries.

The cross-national summaries present basic results from WFS surveys in developing countries on a wide range of topics. These summaries are published in the *WFS Comparative Studies* series.

Several of the cross-national summaries are concerned solely with providing detailed and systematized information on the comparability, or lack thereof, of the field procedures, survey characteristics, questionnaire content and wording and content of the First Country Reports (*WFS Comparative Studies* nos 1–4, 5, which is in preparation, and 16). Such detailed appraisals constitute an essential reference base for anyone using WFS data for comparative analysis.

Other cross-national summaries present comparable results from as many surveys as possible on a wide range of specific topics. Each summary has, in addition to the tabular material, a brief accompanying text, which draws attention primarily to any non-comparability of the data and to any obvious interpretational pitfalls to which the tables may be subject. Furthermore, although these summaries are not intended to be analytic in their orientation, some brief highlighting of the major noteworthy differences and similarities is included.

A first group of topical cross-national summaries based upon data from 19 countries for which the First Country Report and standard recode tapes were available early in 1980 is near completion with the publication of twelve issues (*WFS Comparative Studies* nos 6–15, 17 and 19).

The present publication is issued in the series of a second group of cross-national summaries based generally upon data from 28 developing countries, with Africa being represented for the first time, and dealing with a further set of topics.

The cross-national summaries are intended to assist analysts and policy-makers by providing a ready tool for comparison of data between countries, but at the same time they draw attention to the limits, if any, of such comparability. It is intended in due course to update and rationalize issues in both groups of summaries so as to cover eventually all developing countries participating in the WFS programme.

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Project Director

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1 Introduction

1.1 BACKGROUND

The subject of parental attitudes and aspirations concerning the sex of children has attracted considerable analytical attention in the past few decades. An extensive review of findings may be found in Williamson (1976). This interest has been aroused mainly by evidence that these sex or gender preferences may sustain higher levels of childbearing than would be the case if the sex of children was a matter of indifference; this is so because couples may continue childbearing beyond their overall desired family size in order to achieve some favoured number or distribution of sons and daughters. Research interest has been heightened by the belief that routine and widespread pre-determination of the sex of a baby, either before conception or by selective termination of pregnancy, may become feasible in the future and by speculation as to the consequences of such an innovation.

In theory, parental preferences can take many possible forms. Among the more plausible are the desire for at least one child of each sex, the desire for a minimum number of children of a particular sex (eg at least two sons), or for an approximately equal number of sons and daughters. These and other possible desiderata may co-exist in a complex manner. Similarly, the possible origins of gender preferences are many and varied. They are often assumed to have an economic rationale. Particularly in patrilocal societies, a greater long-term economic return may be expected by parents from sons than from daughters. In societies with strongly defined sex differentiation of work, it is possible that sons may be considered more productive than daughters, or vice versa. Closely linked to these economic factors are considerations of security in old age and insurance against risk. To the extent that such protection is customarily expected from offspring of a particular sex, a parental imperative to bear children of that sex may result. Alternatively, the origins of gender preferences may lie in religious beliefs and observances; they may also be sought in systems of inheritance, lineage, bride-wealth or in psychological needs.

In this study no *a priori* assumptions are made about the nature or origins of sex preferences nor are complex behavioural models tested. The approach is essentially descriptive, the main aim being to identify the nature of preferences and to examine the relationship between composition of families and reproductive behaviour.

Until recently, most of the direct survey evidence concerning gender preferences came from questions on the total or additional number of children desired, followed by supplementary questions on the desired number of boys and girls. However, both at the individual and aggregate level, this measure of gender preference was found to be inadequate and cumbersome, because it was based on a simple first choice and because the issues of desired size and desired sex composition were confounded. Subsequently, more detailed and greatly improved measures of size and gender preference were developed, the Coombs scales, which allowed the two phenomena to be disentangled (Coombs, Coombs and McClelland 1975). Though the publication of these new techniques coincided with the start of the World Fertility Survey, the topic of preferences was not considered of sufficient importance for the Coombs scales to become an integral part of the WFS recommended data collection instrument, the core questionnaire, though they were added to two national questionnaires (Malaysia and Republic of Korea). Indeed the core questionnaire contains only a single explicitly relevant item, namely a simple question concerning the preferred sex of the next child. Obviously, answers to this question cannot be used as an individual-level measure of gender preference as they are confined to women who considered themselves both physically capable and desirous of having more children and are heavily influenced by the sex of children already born. Furthermore the respondents in WFS surveys are exclusively women; different results might have been obtained had husbands also been interviewed. There is evidence that husbands are more likely to express a son preference than are wives, though there are exceptions (Williamson 1976; Coombs and Fernandez 1978). However, as will be shown below, the WFS data are of considerable descriptive value, particularly for comparing a large number of populations.

While cross-cultural variations in explicitly stated gender preferences are of mild interest, their importance lies in their possible impact on fertility decisions and behaviour. With WFS data, as indeed with most data sets, these effects can only be studied inferentially, by comparing the behaviour of couples with different family compositions. Where behaviour diverges between couples with the same total number of children but with varying numbers of boys and girls in the family, underlying preferences may be inferred. The inference takes the form of imputing a greater satisfaction with their existing family composition to parents who say that they desire no more children or act to stop having more children than to other parents. Many such analyses have been performed both at the national level and cross-nationally. In this report, we examine: (a) the propensity to cease childbearing, as indicated by the stated desire to have no more children; (b) family limitation behaviour as indicated by current use of contraception; and finally (c) the rate of fertility itself, in relation to the sex composition of surviving children.

Two deficiencies in this analytic approach have been pointed out by McClelland (1979). First, the observed aggregate association between family composition and subsequent behaviour may not capture the full extent of individual family effects if individual preferences vary and their effects are mutually cancelling at the aggregate level.

For instance if half of all married couples want more boys than girls and the other half want more girls than boys and if both types of couples are prepared to act upon these preferences, then the effect of preferences on the level of fertility will be considerable but no relationship between family composition and subsequent childbearing will be discernible. Thus an aggregate analysis may seriously underestimate the impact of preferences. Secondly, McClelland questions the underlying assumption of the inferential approach, namely that families with an undesired composition will necessarily be more likely to continue childbearing than those who have achieved a more desired composition. Fear of obtaining an even less desirable balance of boys and girls with the birth of the next child or overall size considerations may inhibit the former group from continuing childbearing. Particularly if parents with, say, three children of the same sex consider themselves destined to produce only offspring of this sex, this fear could be a powerful deterrent.

Theoretical objections have also been advanced by Ben-Porath and Welch (1976). If a preference for one sex over another is based on considerations of differential net price or cost rather than on tastes, couples burdened with children of the more 'expensive', disfavoured sex are less able to afford extra children than those with offspring of the 'cheaper' gender. Thus the correct interpretation of an observed effect of composition on future fertility may be the opposite of that usually assumed.

Though these objections and complexities have some validity, in practice it is unlikely that they are sufficiently important to invalidate the traditional analysis of the impact of gender composition on fertility behaviour that is presented in this report. The economist's conceptual distinction between prices and tastes and their application to reproductive decisions seems to us unlikely to be paralleled in the minds of couples of societies included in the present study. While the long-term economic benefit derived from sons may differ from that derived from daughters, the short-term costs of nurture are not likely to diverge so greatly. And if they do diverge it will be because of expenditure on education, with the favoured sex receiving more schooling. Thus it is possible that the net price of children might blur or weaken the impact of tastes but implausible to expect any stronger effect. The possible heterogeneity of preferences is a potentially important objection, but there is convincing evidence from the data presented in this report (particularly table A1) that a reasonably high degree of uniformity in desired gender compositions exists within societies. Furthermore it is likely that these preferences are more a reflection of pervasive societal norms rather than of personal idiosyncrasies.

Naturally many factors other than gender preferences influence family size decisions; not least are considerations of overall size and the risk of acquiring an even less desirable composition with the birth of another child. In this analysis, we can only hope to measure the effects of composition on fertility, net of the influence of all these other factors. In conclusion, we accept that WFS data will permit no profound understanding of the origins of gender preferences nor of the complex ways in which they may interact with other aspirations in their influence (if any) on fertility behaviour. However we believe that an essentially descriptive presentation of these data will be both valid and valuable.

1.2 METHODOLOGY

The basic data presented in this report are contained in four tables dealing respectively with: (a) the preferred sex of the next child, explicitly stated by women wanting at least one more child; (b) the proportions stating a wish to stop childbearing; (c) the proportions practising contraception at the time of survey; (d) the fertility rate in the five years preceding the survey. The data in the first three tables are cross-classified by current family size and gender composition, and, in the last table, by family size and composition at the start of the five-year period.

The structure of all four tables is identical, consisting of the following array of 12 possible combinations of size and composition:

Family composition	Family size		
	2 children	3 children	4 children
All boys	a_1	c_1	e_1
All but one boy	—	d_1	f_1
Balance	b	—	g
All but one girl	—	d_2	f_2
All girls	a_2	c_2	e_2

Several features of this table structure deserve comment. First, attention is restricted to a limited range of family sizes. Women with less than two children are excluded because an overwhelming majority of them will not be interested in family limitation; in most WFS surveys, negligible proportions want less than two children. Also excluded are women with more than four surviving offspring. Apart from wishing to avoid the presentation of an excessive volume of data, the decision to exclude larger families reflects the belief that compositional effects are unlikely to be found, because the vast majority of larger families will contain at least one child, and typically two or more of each sex. Furthermore, it would require sample sizes considerably greater than those of the WFS programme to examine all possible combinations of boys and girls among families with five or more children. An additional positive justification for narrowing the focus of interest to two-, three-, and four-child families is that this range is of crucial importance for family limitation decisions; a majority of younger women in most WFS surveys express a desire for two, three or four children.

The absence of demographic controls, such as current age or marital duration of mothers, should also be noted. Because the live birth sex ratio is more or less a biological constant, on average the characteristics of women with different balances of boys and girls, within specified overall family sizes, are the same. This assertion may not be strictly true if there are pronounced gender-specific differentials in infant and child mortality and is violated where gender composition is a major determinant of the tempo of fertility. This latter possibility does not matter in the case of attitudes towards family limitation and contraception; the confounding effects of current age or marital duration,

once family size is controlled, are likely to be minor. However, in the analysis of fertility, any age or duration differences between women of varying family compositions could have potentially serious consequences for the interpretation of results, because these two factors are major determinants of fertility. However, a check revealed that such differences were minor and can be disregarded in the context of this analysis.

In addition to straightforward description of the proportions and rates in tables A1–A4, two simple models are fitted to the data. The first, termed the 'no composition effects' model, assumes that the response does not vary according to sex composition, after taking into account overall family size. For each column in the prototype table above, the individual cell responses are compared with the overall pooled response for that column to give measures of discrepancy or deviance. These deviances are summed across all three columns to give an overall measure of goodness of fit. To the extent that this model fits the data, a conclusion of no significant effects of composition is reached. Where the 'no composition effects' model provides a poor fit ($p < 0.1$) to the data of a particular country, the magnitude and variability of effects has to be ascertained by inspection of the whole table.

In addition, one further model is applied, in an attempt to elucidate the nature of the effect. This model makes use of the inherent symmetry of the cross-classified data (see illustration above). The two cells, b and g, in which composition is perfectly balanced are ignored, but the model assumes that, in the remaining cells, the response is unaffected by the direction of imbalance (ie whether towards more boys or more girls). Specifically, the model assumes that the response in cells a_1 and a_2 are the same and similarly for the paired cells c, d, e and f. If this 'symmetrical effects' model fits the data, the conclusion may be drawn that the attitude or aspect of behaviour in question is not significantly influenced by a differential preference between sons and daughters. In other words, the effect is symmetrical.

The 'no composition effects' and 'symmetrical effects' models were fitted to the tables using the statistical package GLIM (Baker and Nelder 1978) whose principal use is the fitting of generalized linear models to data. A discussion of the applicability of such models to tables of proportions and rates can be found in Little (1978) and Hobcraft *et al* (1982). In this analysis, a logit–linear model was used for the proportions wanting no more children and the proportions contracepting, and a log–linear model for the fertility rates. The key output after each fit is an overall measure of goodness of fit of the model to the data called the deviance (log–likelihood ratio statistic) and its residual degrees of freedom. If the fitted model adequately represents the data to within sampling variation, the deviance has in large samples a chi-square distribution, with residual degrees of freedom given by the difference between the number of non-empty cells in the table and the number of parameters in the model. The goodness of fit of the 'no composition' effects and 'symmetrical effects' models were assessed using the deviance and its residual degrees of freedom.

2 Findings

2.1 STATED PREFERENCE FOR THE SEX OF THE NEXT CHILD

As mentioned above, the WFS core questionnaire contains the following question concerning the preferred sex of the next child: 'Would you prefer your next (first) child to be a boy or a girl?' This was asked of all pregnant women (in slightly modified form) and of all currently married women who wanted at least one more child and considered themselves physically capable of having another child (ie self-reported fecund). Provision in the questionnaire was made for three pre-coded answers (boy, girl, either) plus an open-ended fourth category for other answers to be specified. In certain national surveys, this fourth category was not included and, in most surveys, other answers were pooled together in a single code. In this analysis, 'undecided', 'either', 'other' and 'not stated' responses have been combined to form a single group, whose only common feature is that the respondent did not state a clear preference for a boy or a girl.

Answers for the whole sample of currently married, fecund women who want another child,[1] are shown in the right-hand column of table 1 and in figure 1. One of the more prominent features of these data is the appreciable proportions of women who did not state a preference. For the majority of countries, this proportion lies between 20 and 40 per cent; it rises to over 40 per cent in three cases (Kenya, Jordan and Haiti). No obvious regional pattern is evident.

In high fertility countries, a relative lack of concern with the gender of the next child would not be surprising, because most families can expect at least one and probably more children of both sexes.

However, there is no discernible association between the level of national fertility and the proportion in the undecided/other category. For instance, Costa Rica, with one of the lowest fertility levels of the 27 countries, has a high percentage (36 per cent) of respondents who stated no clear preference. Undoubtedly, cultural variations exist in the willingness to state a choice on a subject essentially unamenable to human intervention. In this analysis, such variations cannot be distinguished from genuine differences in levels of concern for the sex of future children.

The relationship between family size and the proportion who are not prepared to state a preference for the sex of their next child takes several forms. The commonest pattern (eg Thailand, Colombia, Philippines) is a U-shaped distribution. Among women with no children, a high proportion are undecided; the proportion initially drops and then rises, as family size increases. In Sri Lanka and Paraguay, the initial decline is apparent, but there is no increase at higher sizes, while in Kenya, Lesotho, Jordan and Syria there is no link with family size. Only in Korea, and to a lesser extent in Pakistan, does the proportion without a clear preference continue to decline more or less monotonically as size increases. Interpretation of these figures is obscured by the confounding effect of size preferences and by the selectivity, among high parity women, of those who wish to continue childbearing. Nevertheless, one tentative conclusion can be drawn: the desire for a child of a particular sex does not appear to be a major motive (except in Korea and possibly Pakistan) in the desire to continue childbearing among women who already have four or more living children.

We turn now to discuss the percentage of women who state a clear preference for the gender of their next child. In two Arab countries (Jordan and Syria), three countries of the Indian sub-continent (Bangladesh, Nepal, and Pakistan) and finally in Korea, respondents expressed an overwhelming preference for boys over girls, with typically only one woman wanting a daughter for every five or more who want a son. This extreme group is followed by a fair number of countries (Lesotho, Sri Lanka, Sudan, Thailand, Fiji, Malaysia, Dominican Republic and Mexico) where a son preference is clearly apparent but is less pronounced than in the first group. There are only two countries (Jamaica, Venezuela) where a daughter is more likely to be preferred than a son. In Jamaica the difference is large; 52 per cent would prefer a daughter compared to 31 per cent a son. In Venezuela the corresponding figures are 43 and 33 per cent.

The final and largest group comprises countries in which there is little or no evidence of overall gender preference. This group includes all the countries of Latin America and the Caribbean (except Dominican Republic, Mexico, Jamaica and Venezuela), as well as Indonesia, Philippines and Kenya.

These findings are summarized below by apportioning the undecided category equally between the other two categories and then taking the ratio of the enlarged 'prefer boy' group to the similarly enlarged 'prefer girl' group.

Strong son preference		Moderate son preference		Equal preference		Daughter preference	
Pakistan	4.9	Lesotho	1.5	Kenya	1.1	Venezuela	0.8
Nepal	4.0	Sri Lanka	1.5	Indonesia	1.1	Jamaica	0.7
Bangladesh	3.3	Sudan	1.5	Peru	1.1		
Korea	3.3	Thailand	1.4	Guyana	1.1		
Syria	2.3	Fiji	1.3	Trinidad and Tobago	1.1		
Jordan	1.9	Malaysia	1.2	Colombia	1.0		
		Dominican Republic	1.2	Paraguay	1.0		
		Mexico	1.2	Costa Rica	1.0		
				Panama	1.0		
				Philippines	0.9		
				Haiti	0.9		

[1] Though all pregnant women were asked the question on gender preference, their answers are only preserved on WFS standard recode files if they wanted another child, after the one they were currently expecting.

Table 1 Preferences for the sex of the next child among currently married, fecund women who want another child, by number of living children

		No of living children						
		0	1	2	3	4	5+	All
Africa								
Kenya	B[a]	28	30	25	26	21	23	25
	G	23	21	22	21	23	19	21
	U	49	49	53	53	56	58	54
Lesotho	B	59	51	49	51	45	45	51
	G	22	35	30	34	35	37	31
	U	19	14	21	15	20	17	18
Sudan (North)	B	39	43	43	44	42	41	42
	G	19	26	24	27	19	22	23
	U	42	31	33	29	39	37	35
Jordan	B	35	35	37	43	46	46	41
	G	11	13	18	13	10	7	11
	U	54	52	45	44	44	47	48
Syria	B	50	45	47	56	49	52	50
	G	6	12	15	14	9	8	11
	U	44	43	38	30	42	40	39
Asia								
Bangladesh	B	60	60	61	58	59	58	60
	G	2	12	12	13	6	7	7
	U	38	28	27	29	35	35	33
Nepal	B	71	63	64	66	71	71	67
	G	1	8	13	15	10	5	7
	U	28	29	23	19	19	24	26
Pakistan	B	73	65	71	74	74	74	71
	G	2	6	8	5	4	8	5
	U	25	29	29	21	22	18	24
Sri Lanka	B	55	47	49	57	51	58	51
	G	16	43	35	25	28	27	31
	U	29	10	16	18	21	15	18
Fiji	B	43	45	41	43	46	43	43
	G	12	39	32	40	36	31	31
	U	45	16	27	17	18	26	26
Indonesia	B	34	35	34	34	31	35	34
	G	19	33	31	37	33	25	29
	U	47	32	35	29	36	40	37
Korea	B	63	60	68	83	94	97	67
	G	3	19	22	11	2	3	14
	U	34	21	10	6	4	0	19
Malaysia	B	24	37	37	39	42	37	36
	G	13	33	30	34	30	26	29
	U	63	30	33	27	28	37	35
Philippines	B[a]	26	38	35	39	33	24	34
	G	19	43	39	41	39	39	38
	U	55	19	26	20	28	37	28
Thailand	B	55	45	51	51	45	47	49
	G	16	45	33	36	38	29	34
	U	29	10	16	13	17	24	17

Table 1 (*cont*)

		No of living children						
		0	1	2	3	4	5+	All
Americas								
Colombia	B	49	40	41	50	34	32	42
	G	30	43	46	42	44	38	41
	U	21	17	13	8	22	30	17
Paraguay	B	32	41	32	35	35	35	36
	G	30	41	40	39	37	33	37
	U	38	18	28	26	38	32	27
Peru	B	34	38	41	40	32	38	38
	G	28	43	35	41	31	22	35
	U	38	19	24	19	37	40	27
Venezuela	B	32	36	35	30	25	28	33
	G	33	46	44	50	55	32	43
	U	35	18	21	20	20	40	24
Costa Rica	B	19	38	28	38	32	31	32
	G	25	37	33	36	29	25	32
	U	56	25	39	26	39	44	36
Dominican Republic	B	48	43	54	50	50	38	47
	G	32	52	35	41	33	37	39
	U	20	5	11	9	17	25	14
Mexico	B	33	40	36	41	42	33	37
	G	17	35	31	35	24	22	28
	U	50	25	33	24	34	45	35
Panama	B	35	41	32	49	48	41	39
	G	29	44	51	37	35	32	41
	U	36	15	17	14	17	27	20
Guyana	B	39	43	37	41	36	28	39
	G	27	41	35	44	44	35	36
	U	34	16	28	15	20	37	25
Haiti	B	22	29	36	15	8	17	25
	G	26	33	28	32	20	26	29
	U	52	38	36	53	72	57	46
Jamaica	B	26	37	24	42	29	31	31
	G	50	51	60	47	57	44	52
	U	24	12	16	11	14	25	17
Trinidad	B	44	41	38	51	46	42	42
	G	28	43	35	39	45	41	36
	U	28	16	27	10	9	17	22

[a]B = prefer boy, G = prefer girl, U = undecided, either, other or not stated.

It has been suggested that a preference for the first child to be a boy is prevalent, even in cultures where a desired sex ratio for subsequent children is balanced (eg Markle 1974). A comparison of the answers given by women with no living children with those women with at least one child offers little support for this view (table 1). As pointed out earlier, the percentage stating no particular preference is especially large for women without any children and, partly as a consequence, the percentage preferring a boy rises above 50 in only 7 of the 27 countries. Nevertheless, in a number of cases, there is evidence of a stronger son preference for the first child than for subsequent children.

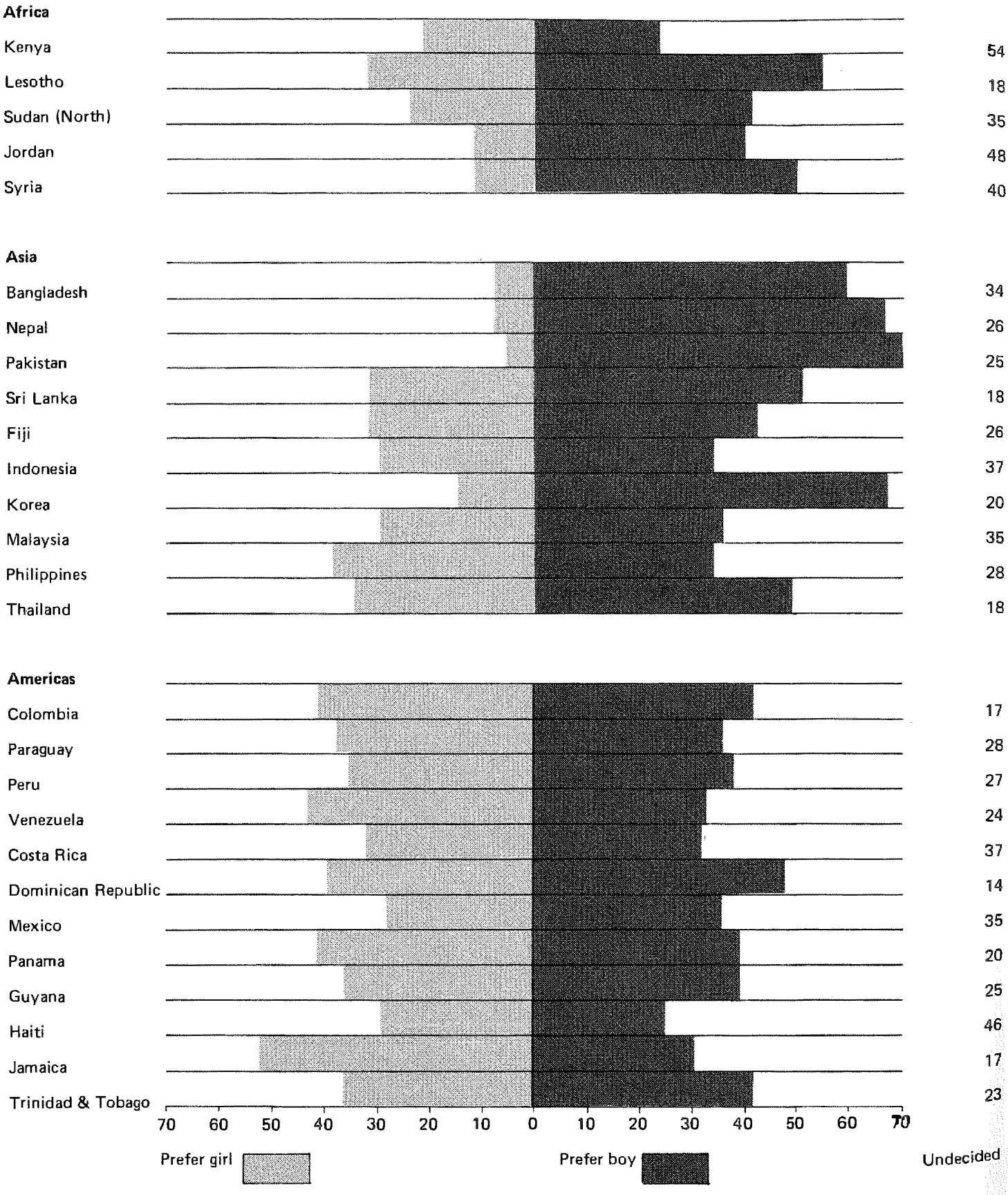


Figure 1 Percentage of women preferring a boy, a girl or undecided

Table 2 Preferences for the sex of the next child in selected countries among currently married, fecund women who want another child, by existing family size and composition

			Syria	Mexico	Philippines	Venezuela
Two living children						
Number of boys	2	B[a]	21	8	1	4
		G	46	80	89	90
		U	33	12	10	6
	1	B	47	33	25	22
		G	2	18	30	42
		U	51	49	45	36
	0	B	80	73	84	81
		G	0	4	1	8
		U	20	23	15	11
Three living children						
Number of boys	3	B	20	5	0	0
		G	54	86	95	90
		U	26	9	5	10
	2	B	42	13	5	3
		G	14	58	65	75
		U	44	29	30	22
	1	B	74	66	71	60
		G	2	7	4	14
		U	24	27	25	26
	0	B	89	70	93	82
		G	0	8	0	0
		U	20	22	7	18
Four living children						
Number of boys	4	B	17	8	0	0
		G	50	69	96	83
		U	33	23	4	17
	3	B	31	7	3	0
		G	18	53	66	92
		U	51	40	31	8
	2	B	38	37	32	22
		G	1	15	30	45
		U	61	48	38	33
	1	B	79	71	62	56
		G	0	4	4	22
		U	21	25	34	22
	0	B	82	92	100	100
		G	0	8	0	0
		U	18	0	0	0

[a]B = prefer boy, G = prefer girl, U = undecided, either, other or not stated.

For instance in Thailand, among those with no living children, 55 per cent stated a preference for a boy, compared to 16 per cent in favour of a girl. The corresponding figures for all family sizes are 49 and 34 per cent. A similar pattern is also found in Sri Lanka, Fiji, Indonesia, Malaysia, Colombia and Mexico. In Venezuela, the overall daughter preference disappears for the first child, though, interestingly, in Jamaica the daughter preference is maintained.

Apart from the special case of women with no children, the relative preference for boys and girls does not change systematically as family size increases. The only striking exception to this generalization is Korea, where the proportion preferring a boy increases and the proportion preferring a girl decreases across family sizes one to five or more. Similar but less pronounced tendencies are also found in Jordan, Nepal and Pakistan.

A more detailed scrutiny of explicit preferences is

provided in table A1, which shows the relationship between number of sons and daughters in the family and preferred sex of the next child. The 27 countries fall into four main groups, which correspond closely to the groups described earlier. In the first group of countries (Pakistan, Nepal, Bangladesh, Korea, Syria, Jordan), there is a preference for a daughter only when there are boys but no living girls in the family; with all other family compositions, a clear bias in favour of boys is apparent. In table 2, Syria represents an illustrative example of this group. As may be seen in this table, an appreciable proportion of women without a daughter nevertheless state a preference for the next child to be a son. This tendency is even more pronounced in Pakistan but is less apparent in the other four countries.

Respondents in the second group of countries, most of which were previously classified as having a moderate preference for boys, exhibit a preference for balance, but, where there is already a balance, a preference for sons over daughters. Lesotho, Sri Lanka, Sudan, Thailand, Fiji, Malaysia, Mexico and Peru fall into this group and the pattern is exemplified in table 2 by Mexico.

The largest group, comprising Dominican Republic, Kenya, Indonesia, Guyana, Trinidad, Colombia, Paraguay, Costa Rica, Panama, Philippines and Haiti is dominated by a desire for a balanced composition. Among women with imbalanced families, the majority want a child that will contribute towards balance; and where there is already balance, no marked preference for either sex is shown. The Philippines illustrates well this situation.

The final group contains the two countries, Jamaica and Venezuela, where a preference for girls was observed earlier. In both cases, balance is also a consideration and the majority in favour of girls is confined to women who have fewer girls than boys in the family or who have equal numbers of girls and boys.

2.2 SEX RATIO OF LAST WANTED BIRTH

If a preference for boys over girls, whatever precise form it takes, actually influences decisions concerning family limitation, the last child should be disproportionately male. The reverse should be true for girl-preferring societies. This will be so because, at each parity increment, parents will tend to be more satisfied with the advent of a baby of the favoured sex than of the disfavoured sex and are thus more likely to cease further childbearing.

With WFS data, the identification of the last child can only be made with certainty for sterilized women or with reasonable probability for women in the oldest age group or those with a long open interval, for instance, an open interval of five years or more. However, the last *wanted* child can be identified in those surveys (20 out of 28) which used the fertility regulation module by making use of data on desire for more children in conjunction with data on the wantedness of the last child.

Women wanting more children or undecided have not yet reached a last wanted birth; for those who want no more children but wanted their last child, the most recently born child is defined as the last wanted birth. Finally, for those women who want no more children and did not want their last child, the penultimate birth is assumed to be the last wanted birth.

For the remaining surveys which did not use the fertility regulation module, no data are available on the wantedness of the last child. However, by making the assumption that women who want no more children nevertheless did want their last child, an approximate identification of the last wanted child is possible.

The sex ratios of last wanted births and, for comparison, of all preceding births, are shown in table 3. Ignoring deviations of ±10 per cent from the expected biological value of 103–105, we find very few outliers, except for the six countries previously classified as exhibiting a strong preference for sons. Of these, Korea is the most extreme, with a sex ratio for the last wanted birth of 152.

Table 3 Sex ratios of last wanted births compared to sex ratios of all preceding births, confined to currently married, fecund, non-pregnant women

Country	Sex ratios	
	Last wanted births	All preceding births
Kenya	100.9	98.6
Lesotho	94.7	102.1
Sudan (North)	104.8	103.8
Jordan	134.3	103.5
Syria	122.0	104.3
Bangladesh	119.8	100.2
Nepal	130.7	99.9
Pakistan	131.6	107.8
Sri Lanka	99.7	103.4
Fiji	116.7	104.8
Indonesia	98.2	98.6
Korea	151.6	88.6
Malaysia	111.2	102.9
Philippines	96.1	106.5
Thailand	107.6	106.5
Colombia	104.9	104.3
Paraguay	104.9	103.4
Peru	96.4	103.0
Venezuela	104.4	98.1
Costa Rica	94.4	104.3
Dominican Republic	108.7	104.4
Mexico	101.9	103.3
Panama	104.2	104.6
Guyana	108.0	100.1
Haiti	104.8	102.8
Jamaica	97.1	107.5
Trinidad and Tobago	96.6	98.4
Senegal[a]	NA	NA

[a]The question on desire to have more children was not asked in the Senegal survey.

2.3 SELF-DECLARED PROPENSITY TO CEASE CHILDBEARING

The WFS core questionnaire contains three main measures of attitude toward family size and family limitation. All currently married, fecund women were asked if they wanted another child at some time in the future. Women answering affirmatively were then asked how many additional children they wanted. Finally, all women, regardless of their fecundity or marital status, were asked a more hypothetical question on total desired family size.

For this analysis of the effect of sex composition of living children on fertility preferences, the first of these three items (whether another child is wanted) has been singled out for examination because of its relatively straightforward nature. A fair degree of overlap and consistency exists between the three variables and, almost certainly, similar results would have been obtained regardless of the measure chosen.

The detailed findings, in terms of the percentage of women wanting no more children, are shown in table A2, for family sizes of two, three and four. These results are summarized in figure 2 for women with two and with four living children. This figure is composed of a series of bar charts which indicate the absolute differences in the percentage wanting no more children between women with a perfectly balanced composition and those with specified imbalances. The upper series of charts relating to two-child families has two bars for each country; the left-hand bar indicates the difference in the percentage wanting no more children between women with two sons and women with a balanced composition of one son and one daughter; the right-hand bar represents the equivalent difference between women with two daughters and women with one child of each sex. The absolute magnitudes of the differences are, of course, gauged by the heights of the bars and the directions of differences by whether the bars protrude above the vertical line which indicates a positive difference (ie a higher percentage of women with the unbalanced composition want no more children than of women with the balanced composition) or below which indicates a negative difference. The lower series of bar charts in figure 2 are constructed in an analagous manner for four-child families. The four bars for each country represent the four possible unbalanced combinations (viz. 4 boys/0 girls, 3 boys/1 girl, 1 boy/3 girls, 0 boys/4 girls).

Two features of figure 2 are dominant. The first is the more pronounced differences in Asia than in the other regions, suggesting that Asian mothers are particularly sensitive to the composition of their families. The second feature is the relative infrequency of positive deviations from the balanced position; in other words, the proportions of women stating a desire to stop childbearing are rarely higher among those with unequal numbers of boys and girls than among those who have already achieved equality. Balance, then, is generally conducive to a self-declared interest in family limitation, though, as we shall see, there are a number of exceptions.

A more detailed examination of figure 2 and table A2 reveals a considerable variety of patterns among countries. In the two countries of sub-Saharan Africa, Kenya and Lesotho, the impact of composition on the desire to cease childbearing is minor. Among the Arab states, the data for Sudan (North) also show little variation, except for the minority of respondents with four daughters and no sons who are much less favourable to family limitation than women with other compositions. As might be expected from the earlier results, the other two Arab countries, Jordan and Syria, exhibit clear evidence of a son preference. Among two-child families in both countries, about 20 per cent of respondents with one or two boys say that they want no more children, compared to under 10 per cent of women with two girls. Among three-child families, the difference between the son-dominated and daughter-dominated families is of the same magnitude (ie a ratio of two to one); for women with four children the inferred strong son preference persists in Jordan but, unexpectedly, erodes in Syria where the highest proportion wanting to stop childbearing is found for those with a balanced composition.

In the Asian region, Bangladesh,[2] Nepal, Pakistan and Korea once again form a reasonably homogeneous group. At family size two, the two-son combination appears to be at least as acceptable, if not more so, than one child of each sex, while the two-daughter family is clearly perceived to be less satisfactory. This is particularly striking in Korea where only 38 per cent of women with two girls want no more children, compared to 72 and 77 per cent of those with one and two boys, respectively. At family size four, the three boy and one girl combination is slightly preferred to a balanced family of two boys and two girls, as evidenced by the proportions wanting no further children, while women with all sons hold similar attitudes to those with balanced families. Women with less than two boys in the family are much less likely to state an interest in limiting their family size to four children.

A second fairly homogeneous group of countries can be identified within the Asian region, namely Sri Lanka, Fiji, Indonesia, Malaysia and Philippines. As illustrated in figure 2, women with a balanced composition, without exception, are on average more likely to want to stop childbearing than women with a sex imbalance among their surviving children. Furthermore the differences are typically substantial, in the range of 10–30 per cent. In Philippines and Indonesia, the results display an almost perfect symmetry in the direction and magnitude of deviations from balance. Thus women with a family of two girls are as likely to want to stop childbearing as those with two boys; those with two girls and one boy are similar in their attitude to those with two boys and one girl and so on.

In Sri Lanka, Fiji and Malaysia, such striking symmetry is not apparent; rather, there is a tendency for women with a surplus of sons to be more favourably disposed to family limitation than women with a surplus of daughters. In Malaysia, for instance, 28 per cent of women with three sons and no daughters wished to limit their families, compared to 15 per cent of women with three daughters only; the corresponding figures are 44 and 31 per cent for those with a two-boy/one-girl and a two-girl/one-boy combination, respectively. Thus for Sri Lanka, Fiji and Malaysia, perfectly balanced numbers of sons and daughters appear to be most conducive to family limitation, but, where balance

[2] The Bangladesh data are not strictly comparable with other data, because the relevant question asked whether another child was wanted *soon*.

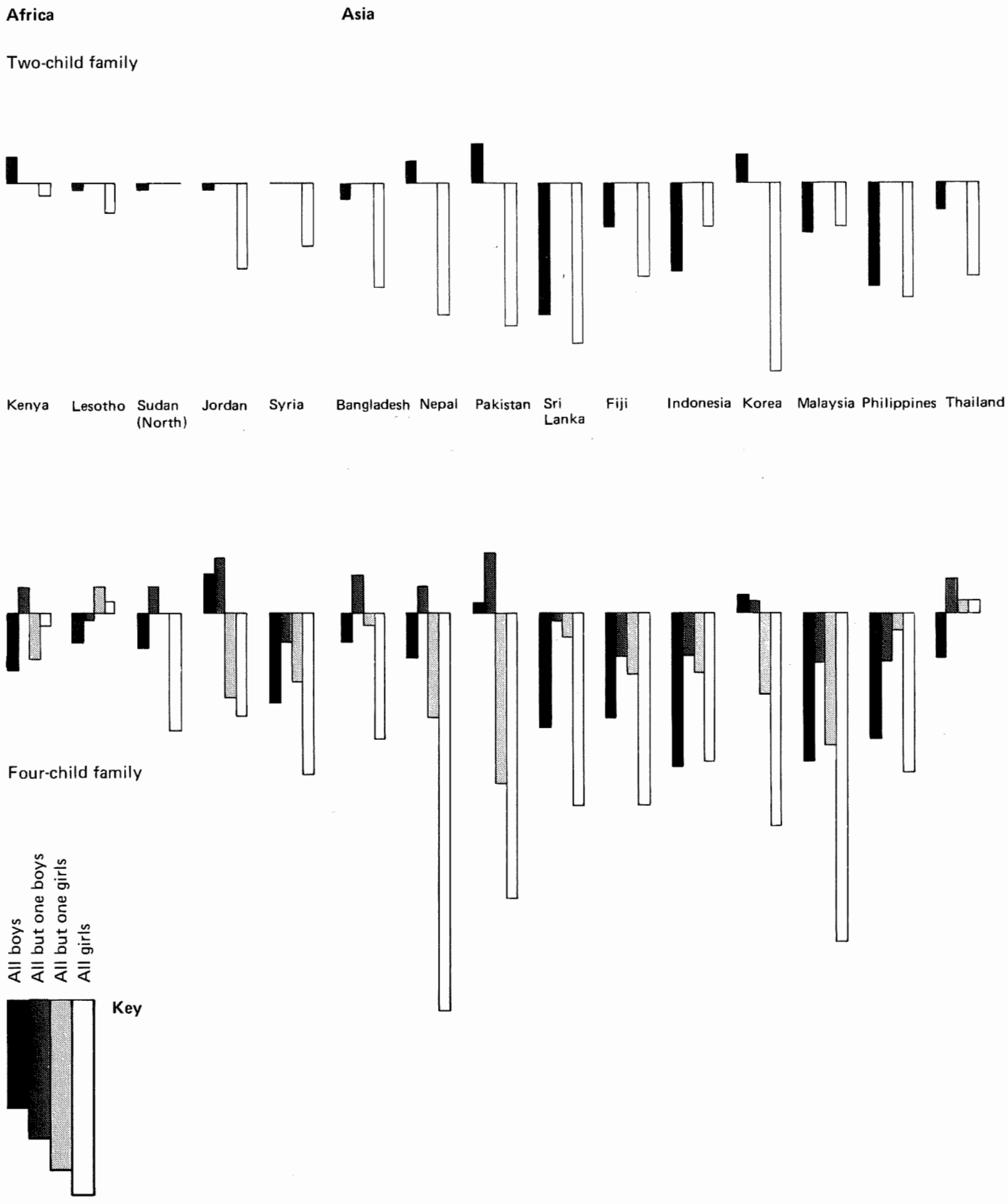
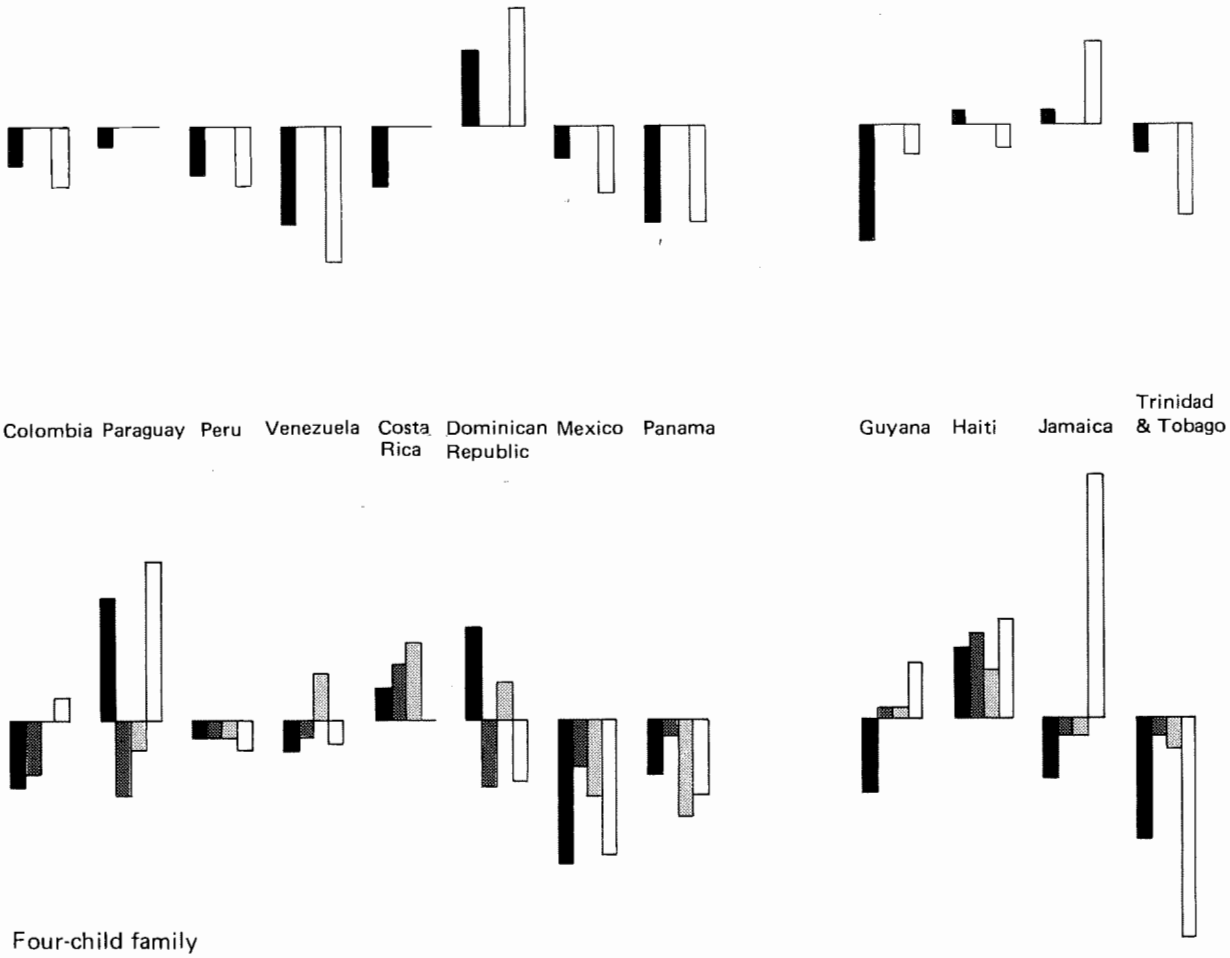


Figure 2 Percentage of women wanting no more children

Americas

Two-child family



Four-child family

Figure 2 (*cont*)

does not exist, an excess of sons over daughters is perceived to be more satisfactory than an excess of daughters over sons.

In Thailand, the final country of the Asian region, the effect of composition on the self-reported propensity to limit family size appears to be less pronounced than in the other countries of this region. Among two and three-child families, there is a preference for balanced compositions and evidence of a greater satisfaction from sons than from daughters. However, among four-child families, differences are negligible; nearly 90 per cent of women state a desire to stop childbearing, regardless of the numbers of sons and daughters.

As mentioned earlier, the associations between family composition and attitude to further childbearing are weak in Latin America and the Caribbean, by comparison with most of the Asian countries. Indeed, as will be shown below, the differences in the proportions wanting no more children are typically not significant ($p > 0.1$), the exceptions being Venezuela, Mexico, Panama, Guyana and Trinidad and Tobago. In Venezuela and Panama there are appreciable but symmetrical differences between unbalanced and balanced compositions for two-child families. Over 50 per cent of women with a boy and a girl wish to limit their family size, compared to between 34 and 39 per cent of women with two children of the same sex. Much less differentiation is observed among larger families, a pattern which suggests that considerations of total family size increasingly over-ride compositional influences. In Mexico, the reverse appears to be the case; composition effects are more pronounced at family sizes three and four than at two.

The results for Guyana defy straightforward interpretation, reflecting perhaps the multi-racial nature of this country. A greater degree of satisfaction with a more balanced composition can be inferred for respondents with

Table 4 The effect of composition on the stated desire to have no more children: observed levels of significance (p-values) for two models

	No of respondents	Percentage wanting no more children	Goodness of fit: p-values	
			'No composition effects' model	'Symmetrical effects' model
Africa				
Kenya	1633	21	.2609	–
Lesotho	1033	14	.9611	–
Senegal[a]	NA	NA	NA	NA
Sudan (North)	846	16	.2812	–
Jordan	774	30	.0007	.0001
Syria	1078	34	.0024	.0031
Asia				
Bangladesh[b]	1911	80	.0000	.0000
Nepal	1934	50	.0000	.0000
Pakistan	1279	46	.0000	.0000
Sri Lanka	2095	73	.0000	.0019
Fiji	1570	54	.0000	.2388
Indonesia	2684	55	.0000	.4666
Korea	2306	84	.0000	.0000
Malaysia	2026	36	.0000	.0000
Philippines	3206	61	.0000	.2685
Thailand	1243	69	.0041	.0625
Americas				
Colombia	1030	64	.4431	–
Paraguay	874	34	.6505	–
Peru	1855	64	.4548	–
Venezuela	891	62	.0270	.3236
Costa Rica	1051	53	.6977	–
Dominican Republic	578	59	.2139	–
Mexico	1810	52	.0048	.0608
Panama	1091	65	.0286	.2200
Guyana	1047	63	.0058	.3312
Haiti	575	65	.8942	–
Jamaica	755	58	.2028	–
Trinidad and Tobago	1096	61	.0076	.1522

[a]The question on desire to have more children was not asked in the Senegal survey.
[b]The relevant question in the Bangladesh survey asked whether any more children were desired *soon*.

two or three living children but, at family size four, the association between composition and desire to cease childbearing is not pronounced. Thus, as in Venezuela and Panama, it appears that overall family size becomes the decisive factor. In Trinidad and Tobago, the data suggest that the desire for balance and a son preference co-exist. Finally, we may note that the results for Jamaica, though not statistically significant ($p = 0.2$), are consistent with a preference for daughters. Among women with two children, 57 per cent of those with daughters only state a desire to have no more children compared to 46 per cent and 48 per cent, respectively, for those with one and no daughters. Differences of a similar magnitude and direction are maintained at family sizes three and four. These results contrast with those for Venezuela, where the previous evidence of a daughter preference is not confirmed by table A2.

The statistical significance of the results in table A2 is summarized in table 4. As outlined earlier in section 1.2, two models are used. The 'no composition effects' model assumes that, within each family size, the percentages wanting no more children are constant across the various family compositions. The degree to which this model fits the data is indicated in table 4, by p-values derived from chi-squared distributions with nine degrees of freedom. This model provides a reasonable fit ($p > 0.1$) for 10 of the 27 countries for which data are available. These include Kenya, Lesotho and Sudan (North), plus 7 of the 12 Latin American and Caribbean countries. The model can be rejected with reasonable statistical confidence in Venezuela and Panama and with a high degree of confidence ($p < 0.01$) in the remaining countries, which comprise all the Asian group plus Jordan, Syria, Mexico, Guyana and Trinidad and Tobago.

For countries where the effects of composition were statistically significant at the 0.1 level, the 'symmetrical effects' model is fitted. This model assumes that the percentage of women wanting no more children is symmetrical across compositions, in the sense that, while the degree of imbalance might affect the response, its direction will have no effect (see section 1.2 for a more detailed exposition). The right-hand column of table 4 indicates a good fit for this model in the case of Fiji, Indonesia, Philippines, Venezuela, Panama and Guyana and a moderate fit for Trinidad and Tobago. We may conclude that for these countries there is significant evidence of compositional effects on self-declared desire to limit family size but that the latter do not take the form of a differential preference between sons and daughters.

The symmetrical effects model provides a poor fit for the other countries to which it was applied. In the majority of cases, the reason is obvious from an inspection of table A2 and figure 2 and stems from the existence of a strong or moderate inferred preference for sons.

2.4 CURRENT USE OF CONTRACEPTION

In the last section, the association between family composition and the stated desire of women to have no more children was examined. In this section, the analysis is taken a step further by examining the association between composition and current use of contraception. While data in the previous section were based on the non-pregnant subsample of currently married, fecund women, the figures on contraceptive practice in this section are based on all currently married, fecund women. Pregnant women, though not currently exposed to risk of conception, are included in the denominator because their exclusion could distort the cross-national comparison.

Current use refers to reported use at time of survey of any method of contraception, including sterilization. It thus encompasses both the motivation to limit family size and to space births. Lightbourne, Singh and Green (1982) have pointed out that a high proportion of current users in WFS surveys appear to be spacers rather than limiters; but this fact need not be regarded as a disadvantage because it is reasonable to regard both the tempo as well as the quantum of fertility as being of approximately equal interest. As indicated in table 5 below, levels of use among women with two to four living children vary widely, from under 10 per cent in the countries of sub-Saharan Africa, Nepal and Pakistan to over 60 per cent in Venezuela, Costa Rica, Panama and Trinidad and Tobago.

The detailed cross-classifications of current use by family size and composition may be found in table A3 and are summarized in figure 3, which is constructed in an identical manner to figure 2. These two figures provide a striking contrast. A much more pronounced impact of composition on the desire to have no more children was observed for most of the Asian countries than for other regions. However, for contraception, the position is reversed, with larger absolute effects in Latin America and the Caribbean than in Asia. Part of the reason for this apparent discrepancy lies in the very low levels of use in such countries as Bangladesh, Pakistan and Nepal; but even in countries where contraception is relatively widespread, such as Malaysia, Indonesia and Philippines the associations between composition and use are much more modest than those observed for the stated desire to limit family size. In contrast, the effects on use in Latin America and the Caribbean tend to be as large as those for the attitudinal data.

Among women with only two living children, a balanced composition of one son and one daughter is generally more conducive to contraceptive practice than unbalanced compositions, both in Asia and the Americas. The few exceptions are clearly identified in figure 3. They include Jordan, Korea and Dominican Republic where women with two sons are most likely to be contracepting. In Africa and Asia, the inferred preference for balance holds for women with four children though many differences are small and there are again a number of exceptions. In Latin America and the Caribbean, however, this is not the case, for there are as many positive as negative deviations in use.

The most important distinction between the data relating to stated desire to cease childbearing and those relating to contraceptive use lies in the statistical significance of the results. In the former case, the null hypothesis of no composition effects could be rejected in 17 countries with reasonable or high confidence. Composition effects on contraception are significant at the 0.1 level in only seven cases (Sri Lanka, Fiji, Korea, Malaysia, Philippines, Dominican Republic and Mexico). As noted earlier it is not surprising that significant effects are absent in the countries of Asia where contraceptive practice is still very low

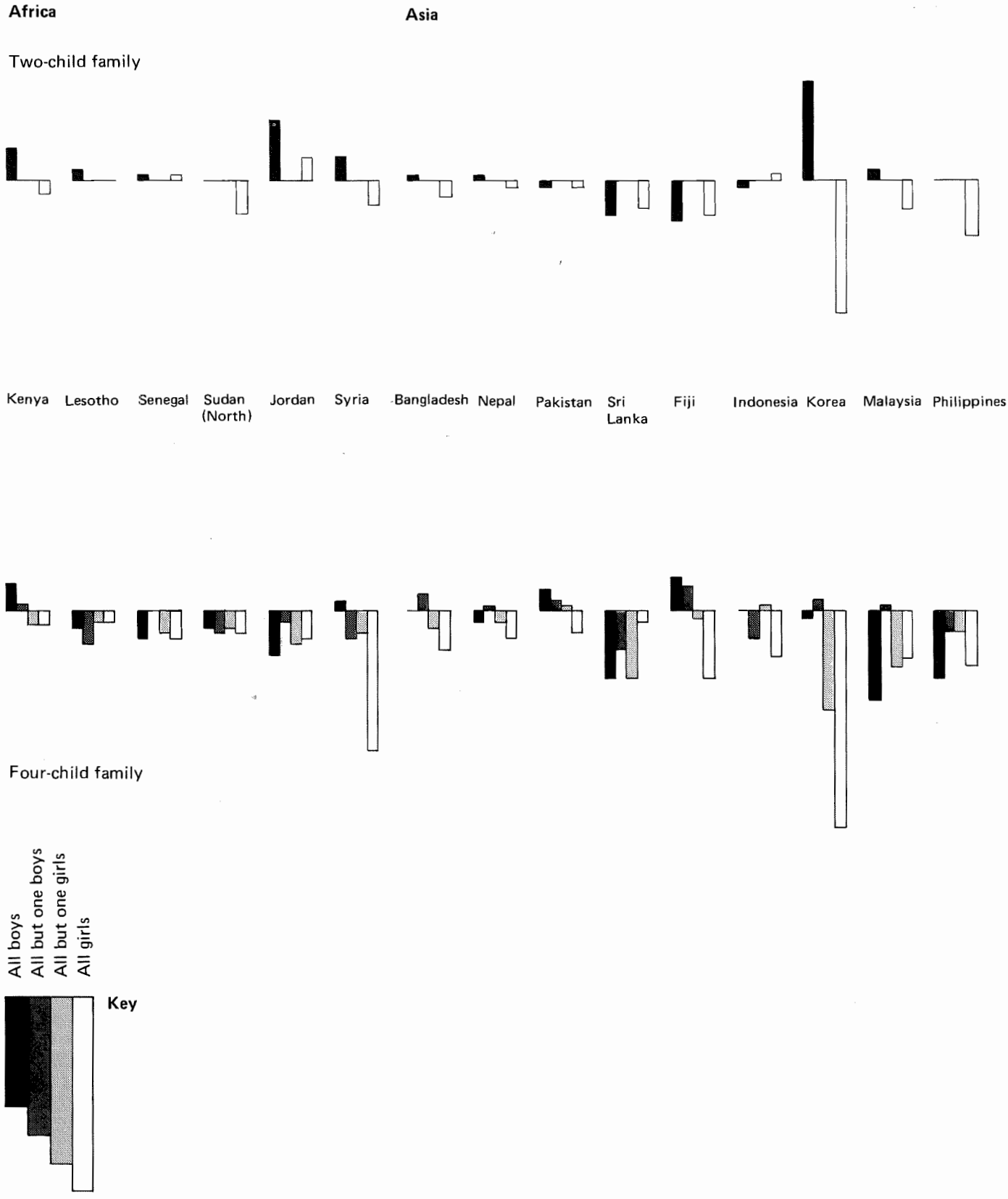


Figure 3 Percentage of women currently using contraception

Americas

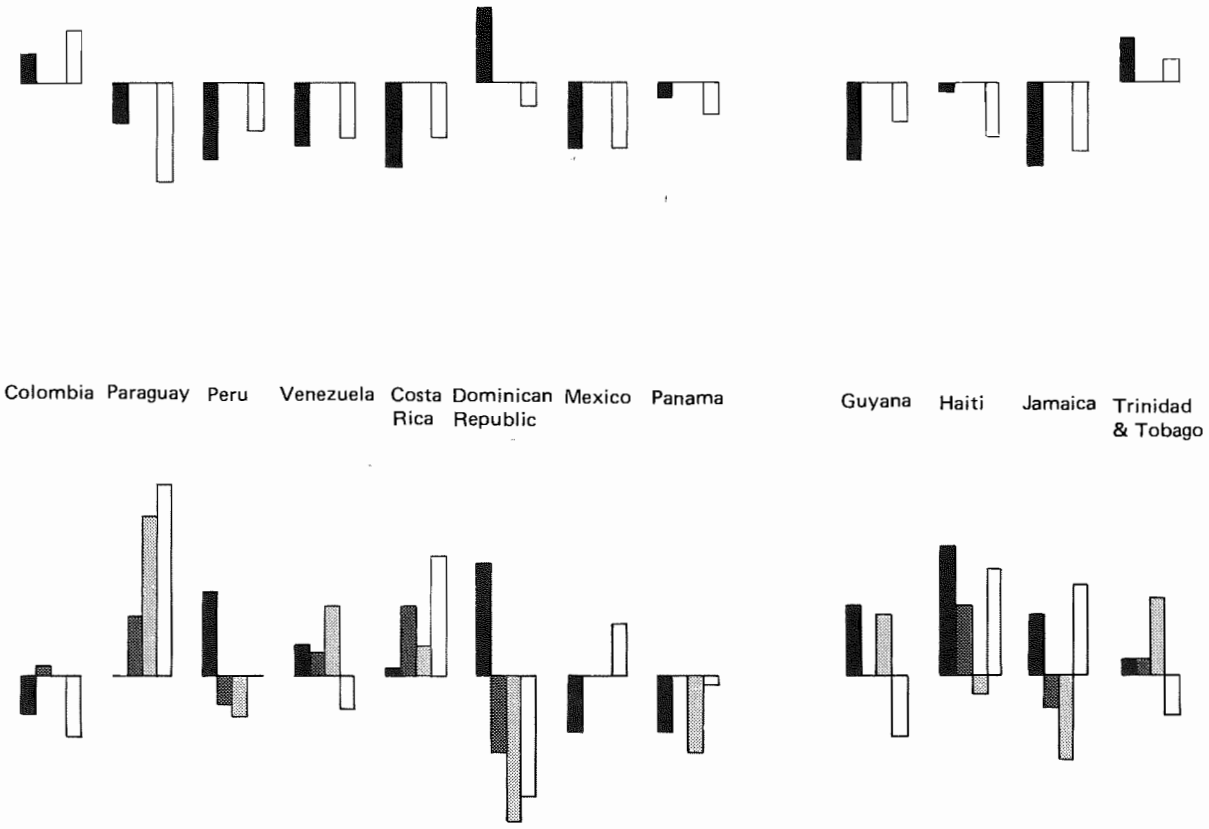


Figure 3 (*cont*)

Table 5 The effect of composition on current use of contraception: observed levels of significance (p-values) for two models

	No of respondents	Percentage currently using	Goodness of fit: p-values	
			'No composition effects' model	'Symmetrical effects' model
Africa				
Kenya	2018	8	.5992	–
Lesotho	1181	8	.8523	–
Senegal	1187	4	.6895	–
Sudan North	1037	7	.6645	–
Jordan	1047	26	.6457	–
Syria	1419	25	.1546	–
Asia				
Bangladesh	2204	11	.4251	–
Nepal	2189	3	.1323	–
Pakistan	1612	7	.7440	–
Sri Lanka	2330	40	.0764	.8320
Fiji	1796	47	.0793	.1301
Indonesia	3029	41	.7359	–
Korea	2499	49	.0000	.0000
Malaysia	2270	40	.0132	.0058
Philippines	3719	49	.0395	.1362
Thailand	1376	48	.2332	–
Americas				
Colombia	1158	52	.7684	–
Paraguay	994	51	.1088	–
Peru	2150	40	.3440	–
Venezuela	1008	61	.3481	–
Costa Rica	1129	76	.2723	–
Dominican Republic	672	42	.0995	.4534
Mexico	2076	41	.0317	.0319
Panama	1207	64	.6321	–
Guyana	1159	34	.3746	–
Haiti	697	26	.3574	–
Jamaica	831	45	.2506	–
Trinidad and Tobago	1190	63	.4053	–

(Bangladesh, Nepal and Pakistan) or in the majority of Latin American and sub-Saharan African countries where attitudinal associations were not marked. On the other hand, the negative findings for Indonesia with previous evidence of a marked preference for balanced families and for Jordan and Syria, where previous data implied a strong son preference, are more surprising. A closer look at the Jordan and Syria results shows an implicit son preference among two-child families but little or no effect of composition at larger family sizes. There is no obvious explanation for this incongruity between the attitudinal and behavioural data.

We turn now to consider in more detail the nature of composition effects for those seven countries with statistically significant results. The dominant pattern implies a preference for sons. This is most strikingly apparent in Korea. Regardless of overall family size, the level of contraception is about 60 per cent among women with two sons; it falls to about 40 per cent for those with only one son and further to 30 per cent or lower with no sons. Pronounced effects of this nature are not found in the other countries. In Fiji, Malaysia, Philippines, Dominican Republic and Mexico, preferences for balance and for sons over daughters co-exist. Higher levels of use are typically found either among women with a balanced composition or with more boys than girls but rarely among the group with more girls. In none of these countries does the symmetrical effects model provide a good fit to the data. However, in seventh country, Sri Lanka, this model does provide a good fit. Thus, of the 28 countries, Sri Lanka is the only one where the degree of gender imbalance among children is related to the use of contraception but the direction of imbalance is immaterial.

2.5 RECENT FERTILITY

In the previous section, the association between the sex composition of families and current use of contraception was examined. We now examine the association with fertility itself. Previous studies of this nature have typically analysed parity progression ratios, by number of preceding

Table 6 The effect of composition on marital fertility in the five years preceding the survey: observed levels of significance (p-values) for two models

	Woman-years	Birth rate per 1000 woman-years	Goodness of fit: p-values	
			'No composition effects' model	'Symmetrical effects' model
Africa				
Kenya	10071	325	.2854	–
Lesotho	5701	211	.1445	–
Senegal	5406	284	.9846	–
Sudan (North)	5055	282	.9971	–
Jordan	4916	364	.7330	–
Syria	6230	335	.2812	–
Asia				
Bangladesh	10532	238	.5565	–
Nepal	9248	225	.0714	.0318
Pakistan	8093	264	.0303	.0091
Sri Lanka	11350	168	.4605	–
Fiji	7524	187	.0210	.0572
Indonesia	15398	173	.5721	–
Korea	10828	152	.0000	.0000
Malaysia	10570	185	.0140	.0353
Philippines	15466	237	.0009	.0407
Thailand	6633	178	.4307	–
Americas				
Colombia	4941	182	.4718	–
Paraguay	4255	188	.0356	.0067
Peru	10147	234	.2875	–
Venezuela	4052	200	.9067	–
Costa Rica	4896	138	.0716	.5892
Dominican Republic	3044	228	.1195	–
Mexico	9708	261	.0082	.0010
Panama	5846	164	.6089	–
Guyana	4499	201	.7904	–
Haiti	3101	224	.0769	.3274
Jamaica	3961	179	.0588	.0283
Trinidad and Tobago	4792	119	.0893	.3299

sons and daughters. In this study, we use marital fertility rates in the five-year period preceding the survey instead of progression ratios, mainly for reasons of computational ease. Fertility rates are defined as the number of births per thousand woman-years of exposure during the five-year period, where exposure includes all years lived following first marriage. Thus time spent in the divorced, separated or widowed state is counted in the denominator. For certain countries, rates were re-run on a 'within-marriage' exposure base, but no appreciable differences were observed. For the majority of countries, the average number of births over the whole five-year period is slightly in excess of one and therefore this measure of fertility corresponds closely with the parity progression ratio.

Fertility rates are cross-classified by family size and composition at the start of the five-year period. This reconstruction of family characteristics was made possible by the birth history data in the standard recode files, which contain, for every child, the sex, the date of birth and, where applicable, the age at death.

The detailed results may be found in table A4 and their statistical significance is summarized in table 6. In so far as contraception (including sterilization) is the dominant mode of birth control within marriage, we expect to find significant effects of composition on fertility to be confined to those countries where appreciable effects on contraception were previously observed.[3] In a general way, this expectation is fulfilled but there are a number of very interesting exceptions.

As shown in table 6, family composition has no discernible effect on fertility in the countries of north and sub-Saharan Africa. This is consistent with the negative findings in regard to contraception.

In the Asian region, significant effects are again observed for Fiji, Korea, Malaysia and the Philippines but not for Sri Lanka. More interestingly, however, composition appears to have an effect on the rate of childbearing in

[3] It should be pointed out that, because fertility rates are classified by family size and composition at a point five years prior to the survey rather than by current size and composition, the distribution of individual cases among the cells of table A4 is quite different from their distribution in tables A2 and A3.

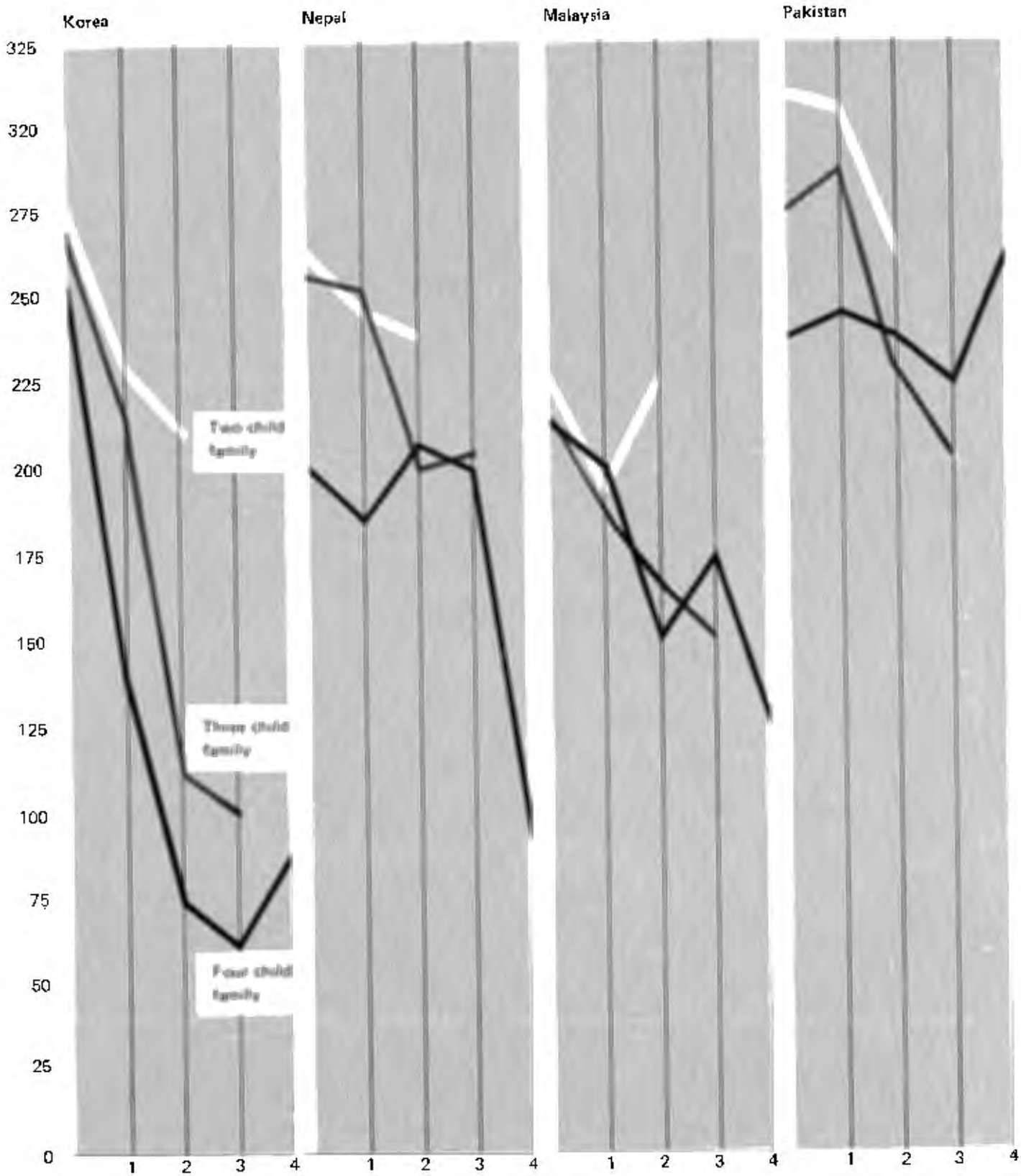


Figure 4 Fertility rates

Nepal and Pakistan, both countries with very low levels of contraception but a pronounced preference for sons.

Among the Caribbean and Latin American countries, the association between composition and contraception was significant at the 0.1 level for only Dominican Republic and Mexico, though Paraguay also came close to this confidence level. In the case of fertility, highly significant effects can be noted for Mexico ($p = 0.008$) but not for Dominican Republic ($p = 0.119$). In addition, the results for Paraguay, Costa Rica and three Caribbean countries, Haiti, Jamaica and Trinidad and Tobago, are significant at the 0.1 level.

At first glance, it is puzzling to observe the greater number of statistically significant effects for fertility than for contraception. One reason may be the larger universe of observations for the analysis of fertility (based on all exposure since marriage) than for contraception (based on currently married, fecund women) which may just raise the results to statistical significance. A contributory reason for the discrepancy may be chance; the effects of composition on fertility in the seven countries where no effect on contraception was observed are not highly significant, with p-values ranging from 0.030 to 0.089, and thus there is a little under one in ten probability of the observed pattern of association arising by chance.

Three further possible explanations should be considered. First, there could be appreciable differences in the length of breastfeeding boys and girls, which in turn could influence the tempo of fertility. However, analysis of WFS data reveals small and generally non-significant differences and thus this possibility can be discounted (Smith and Ferry, forthcoming). Secondly, contraceptive use may have been under-reported in these surveys. There is independent evidence of such under-reporting in Pakistan (Vaessen 1981), but this explanation is unconvincing for the other countries. Thirdly, induced abortion may be widely used in these countries to regulate marital fertility. A previous analysis of WFS data has indicated that fertility levels in the Caribbean are much lower than predicted by the Bongaarts model from data on nuptiality, contraception and lactation (Cleland and Chidambaram 1981). Therefore the induced abortion hypothesis is plausible for Haiti, Jamaica and Trinidad and Tobago. Unfortunately there is little direct evidence concerning levels of induced abortion in these countries so this line of argument must remain inconclusive.

We turn now to examine in more detail the nature and magnitude of effects, for those 12 countries where the results are statistically significant. We start with the four countries (Korea, Malaysia, Nepal and Pakistan) where the evidence of an effect of son preference on fertility is unmistakable. The results are summarized in figure 4. The magnitude of the effects for Korea far exceeds those for the other countries. At each family size, fertility rises steeply as the number of sons decreases below two. For instance, among Korean women who had four children at the start of the five-year period, those with only one son had twice the fertility rate of those who started with at least two sons, while women with no sons experienced a fertility rate three times as high.

In Malaysia, a preference for balance is indicated by the results for the two-child family, but at family sizes three and four fertility is heavily influenced by the number of surviving sons. Among women with three children, the fertility rate per thousand years of exposure rises monotonically from 152, 163, 186 to 215 births as the number of sons decreases. A similar gradient in fertility rates from 124 to 216 is apparent among women who started with four living children.

In view of their much lower levels of contraceptive practice, it is not surprising that composition effects on fertility are less strong in Nepal and Pakistan than in Korea or Malaysia. In Nepal, fertility rates per thousand woman-years rise from 235 to 260 with declining number of sons in two-child families and similarly, from about 200 to 255 among three-child families. In Pakistan, the strength of association is about the same as in Nepal at the two-child stage but is more pronounced for women with three children, rising from a rate of 200 to nearly 300.

For both Nepal and Pakistan, it is puzzling to note that the sex composition effect is more marked at smaller family sizes than at larger sizes. In these high fertility countries, the reverse would be more readily explicable because efforts to control family size are unlikely to begin until there are at least three or four surviving children. Despite the fact that sons and daughters are breastfed for similar durations, the possibility remains that family composition in Nepal and Pakistan affects the timing of births more than the number of births. The mechanism of the effect is presumably unreported birth control or coital frequency.

For the other eight countries with composition effects that are significant at the 0.1 level, the nature of effects is less clear cut and their magnitudes typically less than in the four cases discussed above. In Fiji, Philippines, Trinidad and Tobago, Paraguay and Mexico there is some evidence that couples respond to a deficit of sons by increased fertility. In Fiji, this tendency is confined to couples with small families and no sons. In the Philippines, a steep rise is observed in fertility from rates of 210 to 300 births per thousand woman years as the number of sons in three-child families decreases. However, among women with four children, the inferred preference for sons is less obvious, and among women with two children there is no discernible effect of composition at all. Thus, in this country, there is little evidence of any consistent preference effect.

In Trinidad and Tobago a slight preference for sons appears to co-exist with a desire for balance. Among women with two children, the fertility rates are 156, 121 and 187 for those with two, one and no sons. For women with three children, a fertility level of about 100 is recorded for those with more sons than daughters, while a rate of nearly 140 is recorded for those with more daughters. At family size four, however, composition effects are negligible. In Paraguay, a substantial son preference effect is observed for women with two children but little effect thereafter. Finally in Mexico, the associations between composition and fertility are small and evidence of son preference confined to family sizes two and three.

The three remaining countries with significant effects are Costa Rica, Haiti and Jamaica. In Costa Rica, the 'symmetrical effects' model fits well and thus a desire for balance appears to be the dominant force. For Haiti, the only clear finding is that couples with no daughters tend to have particularly high fertility. In Jamaica, also, the data for family size two and three are consistent with a preference for daughters.

3 Summary and Discussion

An attempt is made in table 7 to summarize the effects of family composition on reproductive attitudes and behaviour. In many respects the findings are consistent with previous evidence. For instance, the general absence of a preference for sons in Latin America and the possibility of a preference for daughters among Caribbean women have been noted by Williamson (1976). Similarly, the weak relationships in Thailand (Kamnuansilpa *et al* 1982), the absence of a son preference in Indonesia (Gille and Pardoko 1966), the strong son preference in Korea (Park 1978), in Malaysia (Coombs and Fernandez 1978), and in Pakistan (Khan and Sirageldin 1977) come as no surprise.

There are however some genuinely new findings and some results which diverge from previous research. Hitherto, little was known about this subject in sub-Saharan Africa. The data presented here suggest little if any effect of parental sex preferences on reproductive attitudes in this region, although this generalization is based on only three countries and should be re-examined when the data from other WFS African surveys become available.

The findings for the Arab countries are more interesting. In her review, Williamson, using a system based on the sex ratios of ideal family sizes, rates women in rural Egypt, Algeria and Tunisia as having 'very strong son preference',

Table 7 Summary of main results

		Nature and magnitude of effects of composition on		
	Explicit sex preference	Stated desire to cease childbearing	Contraception	Marital fertility
Africa				
Kenya	–	–	–	–
Lesotho	Moderate son	–	–	–
Senegal	NA	NA	–	–
Sudan (North)	Moderate son	–	–	–
Jordan	Strong son	Strong son	–	–
Syria	Strong son	Strong son	–	–
Asia				
Bangladesh	Strong son	Strong son	–	–
Nepal	Strong son	Strong son	–	Moderate son
Pakistan	Strong son	Strong son	–	Moderate son
Sri Lanka	Moderate son	Strong balance/son	Weak balance	–
Fiji	Moderate son	Strong balance/son	Weak son	Weak son
Indonesia	–	Strong balance	–	–
Korea	Strong son	Strong son	Very strong son	Very strong son
Malaysia	Moderate son	Strong balance/son	Strong son	Strong son
Philippines	–	Strong balance	Moderate son	Weak son
Thailand	Moderate son	Moderate balance/son	–	–
Americas				
Colombia	–	–	–	–
Paraguay	–	–	–	Weak son
Peru	–	–	–	–
Venezuela	Daughter	Moderate balance	–	–
Costa Rica	–	–	–	Balance
Dominican Republic	Moderate son	–	Weak son	–
Mexico	Moderate son	Strong balance/son	Moderate son	Weak son
Panama	–	Moderate balance	–	–
Guyana	–	Moderate balance	–	–
Haiti	–	–	–	Weak daughter
Jamaica	Daughter	–	–	Weak daughter
Trinidad and Tobago	–	Strong balance/son	–	Weak son

stronger even than in Korea. Though in the present study different countries were examined, the attitudinal data on the preferred sex of the next child and on the desire to limit family size also provided evidence of a very strong preference for sons in the Arab region. Despite this, little or no effect of family composition on contraception or on fertility was observed for either Jordan or Syria. Admittedly, fertility is still very high in these two countries and it is possible that contraception is used more for spacing than for limitation. Nevertheless the pattern suggests at least the possibility that the pro-son sentiments of Arab wives are misleading, in the sense that they do not exert any influence on reproductive behaviour. It will be interesting to examine in due course the results of WFS surveys in Tunisia, Morocco and Egypt to check whether this tentative conclusion is valid for the entire Arab region.

In Asia, the most important finding is that a lack of sons in Nepal and Pakistan engenders a positive fertility response. This is a remarkable result and contradicts the common assertion that a preference for sons is only likely to affect fertility in countries where the overall level of fertility is moderate and birth control widespread. Nevertheless, together with the attitudinal evidence, we may conclude that a preference for sons is an important determinant of behaviour in both Nepal and Pakistan. So far, the effect on fertility is modest but as birth control becomes more common, it will almost certainly increase. The Korean data indicate the very great effect that a desire for at least two sons can have on marital fertility and it is possible that such countries as Pakistan and Nepal will follow the same path as Korea.

For the remaining WFS country of the Indian subcontinent, Bangladesh, the results are less clear cut. The attitudinal data portray a strong preference for sons, a finding consistent with other research (Ahmed 1981). However, the relationships between composition and contraception or fertility, though in the expected direction, were not statistically significant.

Another interesting finding to emerge from the Asian region concerns such countries as Philippines, Indonesia and Sri Lanka. In these countries, a strong and essentially symmetrical effect of family composition on self-declared desire to limit family size was observed. However, the effect of composition on behaviour was either very minor or took the form of an implied preference for sons in addition to a desire for balance. The explanation for this inconsistency between the attitudinal and behavioural results may lie in the influence of husbands or other family members, about whose views we know nothing. It also seems possible that the desire for a balanced family composition, though prevalent in many countries, is not a sufficiently compelling goal to affect reproductive behaviour. One of the most striking features of table 7 is the lack of statistically significant composition effects of a symmetrical nature on contraception or fertility.

In conclusion, this analysis has shown that a stated preference for sons is far from universal in developing countries and, even where it exists, it is tempered by the desire for at least one daughter. More importantly, appreciable effects of family composition on reproductive behaviour have been discerned in only a few of the 28 countries. These general conclusions are consistent with the findings of other cross-national analyses (Repetto 1972; Freedman and Coombs 1974). Only in Korea, and to a lesser extent Malaysia, is there evidence that a desire for sons sustains an appreciably higher level of fertility than would otherwise be the case, though in Nepal and Pakistan this desire may impede future declines in fertility.

These statements should immediately be placed in a wider context. The two most populous countries of the world, China and India, are not represented in this study. There is evidence in both cases of a strong son preference and thus the importance of this topic in global terms may be much greater than suggested above. Though these two countries are excluded from the study, Malaysia has sizeable Chinese and Indian minorities while Fiji, Guyana and Trinidad and Tobago contain large proportions of the population whose predecessors came from the Indian subcontinent. Though not presented in this report, separate analysis of these ethnic groups has been done. It reveals clearly that the son preference inferred for Malaysia can be almost entirely attributed to the population of Chinese descent. Whereas highly significant effects of composition on both contraception and fertility were found for this community ($p < 0.003$), effects for the Malays and Indians were not significant ($p > 0.1$). As similar results have been reported recently for Taiwan (Chang *et al* 1981), we may conclude that a son preference persists among Chinese communities, even in the face of major economic and educational transformations. The possible implications for the one-child family policy in the Republic of China are obvious. A completely contrary conclusion may be drawn from the results for the four Indian expatriate populations. In only one instance (the fertility of Indians in Fiji) is a statistically significant effect of composition on contraception or fertility found.

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Appendix A – Detailed Tables

Table A1 Of currently married, fecund women who want another child, the percentage who want another boy, a girl or are undecided, by number and sex composition of living children

Composition	Preference	Number of living Children 2	3	4	
KENYA					
All boys	Boy	5	1	0*	
	Girl	47	54	61*	
	Undecided	48	45	39*	5
					54
All but one boys	Boy		8	6	41
	Girl	-	32	52	
	Undecided		60	42	
Balance	Boy	21		14	
	Girl	19	-	18	
	Undecided	60		68	
All but one girls	Boy		37	42	
	Girl	-	6	2	
	Undecided		57	56	44
					2
All girls	Boy	55	69	(52)	54
	Girl	3	2	(0)	
	Undecided	42	29	(48)	
SUDAN (NORTH)					
All boys	Boy	11	(9)	8*	
	Girl	59	(73)	69*	
	Undecided	30	(18)	23*	20
					47
All but one boys	Boy		31	23	33
	Girl	-	36	42	
	Undecided		33	35	
Balance	Boy	47		39	
	Girl	14	-	13	
	Undecided	39		48	
All but one girls	Boy		63	60	
	Girl	-	7	2	
	Undecided		30	38	67
					1
All girls	Boy	75	(78)	85*	32
	Girl	0	(0)	0*	
	Undecided	25	(22)	15*	
SYRIA					
All boys	Boy	21	(20)	17*	
	Girl	46	(54)	50*	
	Undecided	33	(26)	33*	27
					27
All but one boys	Boy		42	(31)	46
	Girl	-	14	(18)	
	Undecided		44	(51)	
Balance	Boy	47		38	
	Girl	2	-	1	
	Undecided	51		61	
All but one girls	Boy		74	79	
	Girl	-	2	0	
	Undecided		24	21	80
					0
All girls	Boy	80	(89)	82*	20
	Girl	0	(0)	0*	
	Undecided	20	(11)	18*	

Composition	Preference	Number of living Children 2	3	4	
LESOTHO					
All boys	Boy	7	(5)	0*	
	Girl	73	(82)	100*	
	Undecided	20	(13)	0*	5
					84
All but one boys	Boy		22	(7)	11
	Girl	-	62	(78)	
	Undecided		16	(15)	
Balance	Boy	56		46	
	Girl	18	-	23	
	Undecided	26		31	
All but one girls	Boy		79	(77)	
	Girl	-	5	(4)	
	Undecided		16	(19)	80
					3
All girls	Boy	86	(89)	92*	17
	Girl	3	(2)	0*	
	Undecided	11	(9)	8*	
JORDAN					
All boys	Boy	11	(16)	6*	
	Girl	61	(52)	69*	
	Undecided	28	(32)	25*	14
					30
All but one boys	Boy		25	(16)	56
	Girl	-	18	(16)	
	Undecided		57	(68)	
Balance	Boy	32		41	
	Girl	4	-	3	
	Undecided	64		56	
All but one girls	Boy		55	73	
	Girl	-	1	0	
	Undecided		44	27	76
					0
All girls	Boy	69	(79)	93*	24
	Girl	1	(0)	0*	
	Undecided	30	(21)	7*	
BANGLADESH					
All boys	Boy	21	4*	17*	
	Girl	46	74*	50*	
	Undecided	33	22*	33*	23*
					23*
All but one boys	Boy		45	29*	54*
	Girl	-	10	0*	
	Undecided		45	71*	
Balance	Boy	63		50*	
	Girl	1	-	4*	
	Undecided	36		46*	
All but one girls	Boy		63	74*	
	Girl	-	0	0*	
	Undecided		37	26*	(83)
					(0)
All girls	Boy	88	(98)	100*	(17)
	Girl	0	(0)	0*	
	Undecided	12	(2)	0*	

Notes to table A1 appear on p35.

Table A1 *(cont)*

Composition	Preference	Number of living Children 2	3	4	
NEPAL					
All boys	Boy	23	7	0*	
	Girl	48	69	88*	
	Undecided	29	24	12*	(26)
					(41)
All but one boys	Boy		44	37*	(33)
	Girl	-	16	21*	
	Undecided		40	42*	
Balance	Boy	68		(63)	
	Girl	2	-	(5)	
	Undecided	30		(32)	
All but one girls	Boy		87	(86)	
	Girl	-	0	(2)	
	Undecided		13	(12)	92
					1
All girls	Boy	91	99	(100)	7
	Girl	1	0	(0)	
	Undecided	8	1	(0)	
SRI LANKA					
All boys	Boy	1	(3)	0*	
	Girl	92	(91)	100*	
	Undecided	7	(6)	0*	0*
					83*
All but one boys	Boy		(26)	0*	17*
	Girl	-	(34)	67*	
	Undecided		(40)	33*	
Balance	Boy	55		50*	
	Girl	10	-	0*	
	Undecided	35		50*	
All but one girls	Boy		80	81*	
	Girl	-	2	0*	
	Undecided		18	19*	(90)
					(0)
All girls	Boy	97	(92)	100*	(10)
	Girl	2	(0)	0*	
	Undecided	1	(8)	0*	
INDONESIA					
All boys	Boy	1	3	0*	
	Girl	83	85	91*	
	Undecided	16	12	9*	
					1
All but one boys	Boy		8	2	73
	Girl	-	55	64	26
	Undecided		37	34	
Balance	Boy	28		15	
	Girl	18	-	23	
	Undecided	54		62	
All but one girls	Boy		57	56	
	Girl	-	8	7	
	Undecided		35	37	65
					6
All girls	Boy	81	80	(86)	29
	Girl	0	4	(3)	
	Undecided	19	16	(11)	

Composition	Preference	Number of living Children 2	3	4	
PAKISTAN					
All boys	Boy	35	14*	25*	
	Girl	31	54*	42*	
	Undecided	34	32*	33*	(45)
					(19)
All but one boys	Boy		52	58*	(36)
	Girl	-	4	5*	
	Undecided		44	37*	
Balance	Boy	74		(59)	
	Girl	1	-	(0)	
	Undecided	25		(41)	
All but one girls	Boy		88	93	
	Girl	-	0	0	
	Undecided		12	7	95
					0
All girls	Boy	98	(100)	100*	5
	Girl	0	(0)	0*	
	Undecided	2	(0)	0*	
FIJI					
All boys	Boy	3	3	0*	
	Girl	89	95	100*	
Undecided		8	2	0*	(5)
					(88)
All but one boys	Boy		14	(7)	(7)
	Girl	-	61	(82)	
	Undecided		25	(11)	
Balance	Boy	39		(31)	
	Girl	17	-	(28)	
	Undecided	44		(41)	
All but one girls	Boy		70	(81)	
	Girl	-	4	(2)	
	Undecided		26	(17)	85
					2
All girls	Boy	91	(98)	100*	13
	Girl	3	(0)	0*	
	Undecided	6	(2)	0*	
KOREA					
All boys	Boy	2	12*	0*	
	Girl	91	88*	0*	
	Undecided	7	0*	0*	50*
					50*
All but one boys	Boy		23*	50*	0*
	Girl	-	31*	50*	
	Undecided		46*	0*	
Balance	Boy	81		71*	
	Girl	1	-	0*	
	Undecided	18		29*	
All but one girls	Boy		(100)	(100)	
	Girl	-	(0)	(0)	
	Undecided		(0)	(0)	(100)
					(0)
All girls	Boy	99	(100)	100*	(0)
	Girl	0	(0)	0*	
	Undecided	1	(0)	0*	

Table A1 *(cont)*

Composition	Preference	Number of living Children 2	3	4	
MALAYSIA					
All boys	Boy	2	0	0*	
	Girl	82	88	82*	
	Undecided	16	12	18*	4
					74
All but one boys	Boy		11	6	22
	Girl	-	54	71	
	Undecided		35	23	
Balance	Boy	35		32	
	Girl	16	-	21	
	Undecided	49		47	
All but one girls	Boy		66	77	
	Girl	-	4	2	
	Undecided		30	21	77
					2
All girls	Boy	81	86	(77)	21
	Girl	0	0	(0)	
	Undecided	19	14	(23)	
THAILAND					
All boys	Boy	1	0*	0*	
	Girl	94	95*	100*	
	Undecided	5	5*	0*	0*
					86*
All but one boys	Boy		(21)	0*	14*
	Girl	-	(67)	78*	
	Undecided		(12)	22*	
Balance	Boy	53		42*	
	Girl	17	-	29*	
	Undecided	30		29*	
All but one girls	Boy		71	91*	
	Girl	-	8	0*	
	Undecided		21	9*	93*
					0*
All girls	Boy	98	100*	100*	7*
	Girl	0	0*	0*	
	Undecided	2	0*	0*	
PARAGUAY					
All boys	Boy	8	(4)	0*	
	Girl	82	(88)	100*	
	Undecided	10	(8)	0*	(5)
					(83)
All but one boys	Boy		8	(6)	(12)
	Girl	-	60	(80)	
	Undecided		32	(14)	
Balance	Boy	20		(31)	
	Girl	33	-	(17)	
	Undecided	47		(52)	
All but one girls	Boy		59	(78)	
	Girl	-	11	(7)	
	Undecided		30	(15)	(78)
					(6)
All girls	Boy	86	94*	80*	(16)
	Girl	6	0*	0*	
	Undecided	8	6*	20*	

Composition	Preference	Number of living Children 2	3	4	
PHILIPPINES					
All boys	Boy	1	0	(0)	
	Girl	89	95	(96)	
	Undecided	10	5	(4)	2
					75
All but one boys	Boy		5	3	23
	Girl	-	65	66	
	Undecided		30	31	
Balance	Boy	25		32	
	Girl	30	-	30	
	Undecided	45		38	
All but one girls	Boy		71	62	
	Girl	-	4	4	
	Undecided		25	34	71
					3
All girls	Boy	84	93	100*	26
	Girl	1	0	0*	
	Undecided	15	7	0*	
COLOMBIA					
All boys	Boy	2	0*	0*	
	Girl	91	94*	100*	
	Undecided	7	6*	0*	17*
					61*
All but one boys	Boy		(18)	21*	22*
	Girl	-	(75)	53*	
	Undecided		(7)	26*	
Balance	Boy	38		25*	
	Girl	42	-	50*	
	Undecided	20		25*	
All but one girls	Boy		(80)	90*	
	Girl	-	(8)	0*	
	Undecided		(12)	10*	83*
					0*
All girls	Boy	87	94*	50*	17*
	Girl	7	0*	0*	
	Undecided	6	6*	50*	
PERU					
All boys	Boy	7	(10)	0*	
	Girl	81	(68)	100*	
	Undecided	12	(22)	0*	(3)
					(86)
All but one boys	Boy		9	(4)	(11)
	Girl	-	74	(82)	
	Undecided		17	(14)	
Balance	Boy	37		(45)	
	Girl	25	-	(14)	
	Undecided	38		(41)	
All but one girls	Boy		70	(39)	
	Girl	-	10	(0)	
	Undecided		20	(61)	(42)
					(2)
All girls	Boy	87	(82)	50*	(56)
	Girl	1	(4)	10*	
	Undecided	12	(14)	40*	

Table A1 *(cont)*

Composition	Preference	Number of living Children 2	3	4	
VENEZUELA					
All boys	Boy	4	0*	0*	
	Girl	90	90*	83*	
	Undecided	6	10*	17*	0*
					89*
All but one boys	Boy		(3)	0*	11*
	Girl	-	(75)	92*	
	Undecided		(22)	8*	
Balance	Boy	22		22*	
	Girl	42	-	45*	
	Undecided	36		33*	
All but one girls	Boy		(60)	56*	
	Girl	-	(14)	22*	
	Undecided		(26)	22*	(67)
					(17)
All girls	Boy	81	82*	100*	(16)
	Girl	8	0*	0*	
	Undecided	11	18*	0*	
DOMINICAN REPUBLIC					
All boys	Boy	(10)	0*	0*	
	Girl	(85)	71*	100*	
	Undecided	(5)	29*	0*	5*
					78*
All but one boys	Boy		(15)	6*	17*
	Girl	-	(82)	76*	
	Undecided		(3)	18*	
Balance	Boy	27		42*	
	Girl	56	-	33*	
	Undecided	17		25*	
All but one girls	Boy		(68)	71*	
	Girl	-	(20)	29*	
	Undecided		(12)	0*	70*
					20*
All girls	Boy	(87)	90*	67*	10*
	Girl	(6)	0*	0*	
	Undecided	(7)	10*	33*	
PANAMA					
All boys	Boy	3	0*	0*	
	Girl	93	100*	75*	
	Undecided	4	0*	25*	0*
					81*
All but one boys	Boy		(23)	0*	19*
	Girl	-	(61)	83*	
	Undecided		(16)	17*	
Balance	Boy	28		38*	
	Girl	44	-	37*	
	Undecided	28		25*	
All but one girls	Boy		(70)	80*	
	Girl	-	(13)	5*	
	Undecided		(17)	15*	(85)
					(4)
All girls	Boy	(85)	88*	100*	(11)
	Girl	(4)	0*	0*	
	Undecided	(11)	12*	0*	

Composition	Preference	Number of living Children 2	3	4	
COSTA RICA					
All boys	Boy	5	5*	14*	
	Girl	78	79*	72*	
	Undecided	17	16*	14*	12*
					63*
All but one boys	Boy		10	12*	25*
	Girl	-	58	59*	
	Undecided		32	29*	
Balance	Boy	20		(16)	
	Girl	19	-	(19)	
	Undecided	61		(65)	
All but one girls	Boy		57	75*	
	Girl	-	9	0*	
	Undecided		34	25*	76*
					5*
All girls	Boy	81	95*	80*	19*
	Girl	7	5*	20*	
	Undecided	12	0*	0*	
MEXICO					
All boys	Boy	8	(5)	8*	
	Girl	80	(86)	69*	
	Undecided	12	(9)	23*	7
					57
All but one boys	Boy		13	(7)	36
	Girl	-	58	(53)	
	Undecided		29	(40)	
Balance	Boy	33		37	
	Girl	18	-	15	
	Undecided	49		48	
All but one girls	Boy		66	71	
	Girl	-	7	4	
	Undecided		27	25	75
					4
All girls	Boy	73	(70)	92*	21
	Girl	4	(8)	8*	
	Undecided	23	(22)	0*	
GUYANA					
All boys	Boy	2	(0)	0*	
	Girl	84	(92)	100*	
	Undecided	14	(8)	0*	4*
					96*
All but one boys	Boy		(17)	7*	0*
	Girl	-	(63)	93*	
	Undecided		(20)	0*	
Balance	Boy	33		(29)	
	Girl	22	-	(37)	
	Undecided	45		(34)	
All but one girls	Boy		(71)	76*	
	Girl	-	(13)	5*	
	Undecided		(16)	19*	79*
					4*
All girls	Boy	(87)	85*	100*	17*
	Girl	(2)	5*	0*	
	Undecided	(11)	10*	0*	

Table A1 *(cont)*

Composition	Preference	Number of living Children 2	3	4	
HAITI					
All boys	Boy	(0)	0*	0*	
	Girl	(86)	100*	100*	
	Undecided	(14)	0*	0*	0*
					67*
All but one boys	Boy		(0)	0*	33*
	Girl	-	(32)	60*	
	Undecided		(68)	40*	
Balance	Boy	26		0*	
	Girl	16	-	10*	
	Undecided	58		90*	
All but one girls	Boy		35*	13*	
	Girl	-	4*	0*	
	Undecided		61*	87*	22*
					0*
All girls	Boy	(81)	50*	100*	78*
	Girl	(0)	0*	0*	
	Undecided	(19)	50*	0*	
TRINIDAD & TOBAGO					
All boys	Boy	5	0*	11*	
	Girl	88	90*	89*	
	Undecided	7	10*	0*	12*
					88*
All but one boys	Boy		(14)	13*	0*
	Girl	-	(67)	87*	
	Undecided		(19)	0*	
Balance	Boy	25		28*	
	Girl	29	-	50*	
	Undecided	46		22*	
All but one girls	Boy		(87)	100*	
	Girl	-	(9)	0*	
	Undecided		(4)	0*	90*
					5*
All girls	Boy	93	94*	60*	5*
	Girl	1	0*	20*	
	Undecided	6	6*	20*	

Composition	Preference	Number of living Children 2	3	4	
JAMAICA					
All boys	Boy	(2)	0*	17*	
	Girl	(92)	100*	83*	
	Undecided	(6)	0*	0*	12*
					75*
All but one boys	Boy		(14)	11*	13*
	Girl	-	(70)	72*	
	Undecided		(16)	17*	
Balance	Boy	21		35*	
	Girl	61	-	50*	
	Undecided	18		15*	
All but one girls	Boy		(76)	50*	
	Girl	-	(12)	33*	
	Undecided		(12)	17*	50*
					33*
All girls	Boy	(69)	100*	0*	17*
	Girl	(7)	0*	0*	
	Undecided	(24)	0*	0*	

Figures in brackets, n = 50 or less
Figures with asterisks, n = 25 or less

Table A2 The percentage of currently married, fecund, non-pregnant women who want no more children,[a] by number and sex composition of living children

Composition	Number of living children			
	2	3	4	
KENYA				
All boys	17	14	(23)	36
All but one boys	-	20	38	
Balance	12	-	33	
All but one girls	-	21	25	26
All girls	11	14	(31)	
TOTAL	13	19	32	
SUDAN (NORTH)				
All boys	13	(13)	15*	24
All but one boys	-	19	26	
Balance	14	-	21	
All but one girls	-	12	21	16
All girls	14	(17)	0*	
TOTAL	14	15	21	
SYRIA				
All boys	20	35	(44)	53
All but one boys	-	43	55	
Balance	20	-	60	
All but one girls	-	27	48	45
All girls	9	17*	31*	
TOTAL	18	34	54	
NEPAL				
All boys	42	50	(73)	84
All but one boys	-	66	86	
Balance	38	-	81	
All but one girls	-	53	62	51
All girls	14	16	(9)	
TOTAL	34	53	73	
SRI LANKA				
All boys	45	68	(73)	89
All but one boys	-	87	93	
Balance	69	-	94	
All but one girls	-	78	90	84
All girls	40	49	(59)	
TOTAL	56	76	89	

Composition	Number of living children			
	2	3	4	
LESOTHO				
All boys	9	(18)	20*	23
All but one boys	-	16	24	
Balance	10	-	25	
All but one girls	-	14	30	29
All girls	5	(13)	27*	
TOTAL	8	15	26	
JORDAN				
All boys	22	(40)	50*	52
All but one boys	-	36	53	
Balance	23	-	43	
All but one girls	-	18	28	28
All girls	8	(26)	25*	
TOTAL	19	29	42	
BANGLADESH				
All boys	75	78	(85)	95
All but one boys	-	88	97	
Balance	78	-	90	
All but one girls	-	79	88	85
All girls	59	59	(67)	
TOTAL	73	80	90	
PAKISTAN				
All boys	39	61	(75)	81
All but one boys	-	65	84	
Balance	32	-	73	
All but one girls	-	27	42	39
All girls	6	(6)	21*	
TOTAL	29	45	66	
FIJI				
All boys	35	40	(65)	71
All but one boys	-	62	73	
Balance	43	-	84	
All but one girls	-	56	72	68
All girls	26	32	43*	
TOTAL	38	53	75	

a The category "want no more children" includes those women who are sterilized

Notes to table A2 appear on p38.

Table A2 (*cont*)

Composition	Number of living children			
	2	3	4	
INDONESIA				
All boys	28	44	(55)	70
All but one boys	-	64	75	
Balance	44	-	83	
All but one girls	-	65	72	68
All girls	36	47	56	
TOTAL	38	60	74	
MALAYSIA				
All boys	17	28	(41)	56
All but one boys	-	44	59	
Balance	26	-	68	
All but one girls	-	31	44	39
All girls	18	15	8*	
TOTAL	22	34	56	
THAILAND				
All boys	53	(59)	78*	89
All but one boys	-	81	92	
Balance	58	-	86	
All but one girls	-	70	88	88
All girls	41	(65)	88*	
TOTAL	53	72	88	
PARAGUAY				
All boys	22	(29)	65*	45
All but one boys	-	38	39	
Balance	25	-	49	
All but one girls	-	37	(45)	50
All girls	25	(38)	70*	
TOTAL	24	37	48	
VENEZUELA				
All boys	39	(53)	76*	78
All but one boys	-	74	78	
Balance	52	-	80	
All but one girls	-	63	86	85
All girls	34	(64)	77*	
TOTAL	44	67	81	

Composition	Number of living children			
	2	3	4	
KOREA				
All boys	77	93	(100)	99
All but one boys	-	97	99	
Balance	72	-	97	
All but one girls	-	83	82	79
All girls	38	48	(58)	
TOTAL	68	89	93	
PHILIPPINES				
All boys	33	51	62	74
All but one boys	-	71	76	
Balance	52	-	85	
All but one girls	-	65	82	78
All girls	31	46	(56)	
TOTAL	42	64	79	
COLOMBIA				
All boys	50	(58)	73*	74
All but one boys	-	71	75	
Balance	55	-	82	
All but one girls	-	65	82	83
All girls	47	(55)	85*	
TOTAL	52	66	80	
PERU				
All boys	49	59	(77)	77
All but one boys	-	71	77	
Balance	55	-	79	
All but one girls	-	68	77	76
All girls	47	63	(75)	
TOTAL	52	67	77	
COSTA RICA				
All boys	32	(57)	71*	73
All but one boys	-	61	74	
Balance	40	-	67	
All but one girls	-	61	77	75
All girls	40	(50)	67*	
TOTAL	38	59	72	

Table A2 (*cont*)

Composition	Number of living children			
	2	3	4	
DOMINICAN REPUBLIC				
All boys	40	73*	90*	73
All but one boys	-	64	69	
Balance	30	-	78	
All but one girls	-	70	(83)	80
All girls	46	47*	70*	
TOTAL	37	66	77	
PANAMA				
All boys	38	71	80*	84
All but one boys	-	79	85	
Balance	51	-	87	
All but one girls	-	71	74	75
All girls	38	(59)	(77)	
TOTAL	45	73	82	
HAITI				
All boys	52	(68)	86*	(88)
All but one boys	-	66	(88)	
Balance	50	-	(77)	
All but one girls	-	74	(83)	85
All girls	47	79*	90*	
TOTAL	50	70	83	
TRINIDAD AND TOBAGO				
All boys	48	(57)	(68)	77
All but one boys	-	75	(82)	
Balance	52	-	84	
All but one girls	-	61	80	76
All girls	40	(52)	55*	
TOTAL	49	65	80	

Composition	Number of living children			
	2	3	4	
MEXICO				
All boys	37	48	(55)	65
All but one boys	-	61	68	
Balance	41	-	74	
All but one girls	-	47	64	62
All girls	32	47	(56)	
TOTAL	38	53	68	
GUYANA				
All boys	40	56	63*	70
All but one boys	-	71	74	
Balance	55	-	73	
All but one girls	-	72	74	75
All girls	51	(39)	80*	
TOTAL	50	66	73	
JAMAICA				
All boys	48	57*	60*	65
All but one boys	-	60	66	
Balance	46	-	68	
All but one girls	-	71	(66)	(72)
All girls	57	(61)	100*	
TOTAL	49	64	68	

Figures in brackets, n = 50 or less
Figures with asterisks, n = 25 or less

Table A3 The percentage of currently married, fecund women who are currently using any method of contraception, by number and sex composition of living children

Composition	Number of living children			
	2	3	4	
KENYA				
All boys	11	12	(13)	10
All but one boys	–	10	9	
Balance	5	–	8	
All but one girls	–	8	6	6
All girls	7	10	(6)	
TOTAL	7	10	8	
SENEGAL				
All boys	5	6	0*	4
All but one boys	–	5	5	
Balance	4	–	5	
All but one girls	–	3	1	1
All girls	5	3	(0)	
TOTAL	5	4	3	
JORDAN				
All boys	33	(33)	(21)	25
All but one boys	–	28	27	
Balance	22	–	29	
All but one girls	–	25	23	23
All girls	26	(22)	24*	
TOTAL	26	27	26	
BANGLADESH				
All boys	10	8	(13)	15
All but one boys	–	13	16	
Balance	9	–	13	
All but one girls	–	11	10	9
All girls	6	11	(6)	
TOTAL	9	11	13	
PAKISTAN				
All boys	4	7	(12)	10
All but one boys	–	9	10	
Balance	5	–	8	
All but one girls	–	6	9	8
All girls	4	(2)	(4)	
TOTAL	4	7	9	

Composition	Number of living children			
	2	3	4	
LESOTHO				
All boys	8	(15)	10*	8
All but one boys	–	8	7	
Balance	6	–	13	
All but one girls	–	10	11	11
All girls	6	8	11*	
TOTAL	6	10	11	
SUDAN (NORTH)				
All boys	8	9	6*	5
All but one boys	–	10	5	
Balance	8	–	9	
All but one girls	–	9	6	5
All girls	2	(6)	5*	
TOTAL	7	9	7	
SYRIA				
All boys	25	21	(33)	28
All but one boys	–	29	26	
Balance	21	–	31	
All but one girls	–	25	27	24
All girls	17	(17)	6*	
TOTAL	22	25	28	
NEPAL				
All boys	3	4	(3)	5
All but one boys	–	4	6	
Balance	2	–	5	
All but one girls	–	1	3	2
All girls	1	2	(0)	
TOTAL	2	3	4	
SRI LANKA				
All boys	30	33	(39)	43
All but one boys	–	46	44	
Balance	36	–	51	
All but one girls	–	43	39	41
All girls	31	37	(49)	
TOTAL	33	42	45	

Notes to table A3 appear on p41.

Table A3 *(cont)*

Composition	Number of living children			
	2	3	4	
FIJI				
All boys	37	59	(62)	61
All but one boys	-	43	61	
Balance	44	-	56	
All but one girls	-	43	55	53
All girls	38	40	(44)	
TOTAL	41	45	56	
KOREA				
All boys	58	63	(59)	62
All but one boys	-	57	62	
Balance	40	-	60	
All but one girls	-	38	42	39
All girls	16	31	(21)	
TOTAL	41	50	54	
PHILIPPINES				
All boys	48	51	43	49
All but one boys	-	52	51	
Balance	48	-	55	
All but one girls	-	47	51	50
All girls	38	49	45	
TOTAL	46	50	52	
COLOMBIA				
All boys	53	(45)	50*	55
All but one boys	-	56	56	
Balance	49	-	55	
All but one girls	-	47	55	53
All girls	56	(52)	47*	
TOTAL	52	51	54	
PERU				
All boys	35	42	(50)	38
All but one boys	-	41	35	
Balance	45	-	39	
All but one girls	-	40	34	35
All girls	39	41	(39)	
TOTAL	41	41	37	

Composition	Number of living children			
	2	3	4	
INDONESIA				
All boys	36	48	46	42
All but one boys	-	44	41	
Balance	37	-	46	
All but one girls	-	44	47	45
All girls	38	37	38	
TOTAL	37	44	44	
MALAYSIA				
All boys	40	40	(31)	45
All but one boys	-	47	48	
Balance	38	-	47	
All but one girls	-	35	37	37
All girls	33	37	(38)	
TOTAL	37	41	43	
THAILAND				
All boys	46	54	(44)	47
All but one boys	-	55	48	
Balance	42	-	59	
All but one girls	-	44	47	50
All girls	43	(48)	67*	
TOTAL	43	50	52	
PARAGUAY				
All boys	51	(54)	37*	43
All but one boys	-	55	45	
Balance	56	-	37	
All but one girls	-	49	58	59
All girls	43	(63)	62*	
TOTAL	52	53	45	
VENEZUELA				
All boys	56	(63)	65*	64
All but one boys	-	62	64	
Balance	64	-	61	
All but one girls	-	51	70	68
All girls	57	(73)	57*	
TOTAL	60	60	64	

Table A3 *(cont)*

Composition	Number of living children			
	2	3	4	
COSTA RICA				
All boys	70	(76)	71*	77
All but one boys	-	75	79	
Balance	81	-	70	
All but one girls	-	81	74	76
All girls	74	(79)	86*	
TOTAL	77	78	74	
MEXICO				
All boys	38	48	(34)	39
All but one boys	-	44	41	
Balance	46	-	41	
All but one girls	-	38	41	42
All girls	38	26	(48)	
TOTAL	42	41	41	
GUYANA				
All boys	26	41	(42)	36
All but one boys	-	30	33	
Balance	36	-	33	
All but one girls	-	38	41	38
All girls	31	(38)	25*	
TOTAL	32	35	35	
JAMAICA				
All boys	40	(26)	59*	49
All but one boys	-	37	47	
Balance	51	-	51	
All but one girls	-	47	(40)	44
All girls	42	(44)	63*	
TOTAL	46	40	48	

Composition	Number of living children			
	2	3	4	
DOMINICAN REPUBLIC				
All boys	44	(44)	67*	46
All but one boys	-	50	42	
Balance	34	-	52	
All but one girls	-	47	(33)	33
All girls	31	26*	36*	
TOTAL	36	46	44	
PANAMA				
All boys	63	69	(60)	66
All but one boys	-	65	67	
Balance	65	-	67	
All but one girls	-	68	57	59
All girls	61	(53)	(66)	
TOTAL	63	66	64	
HAITI				
All boys	25	(24)	43*	36
All but one boys	-	19	(35)	
Balance	26	-	26	
All but one girls	-	34	24	26
All girls	19	22*	40*	
TOTAL	24	26	29	
TRINIDAD AND TOBAGO				
All boys	68	(68)	(64)	64
All but one boys	-	57	64	
Balance	62	-	62	
All but one girls	-	63	72	70
All girls	65	(46)	57*	
TOTAL	64	60	65	

Figures in brackets, n = 50 or less
Figures with asterisks, n = 25 or less

Table A4 Marital fertility rates per 1000 women years of exposure, averaged for five years preceding survey by number and sex composition of living children five years previously

Composition		Number of living children 2	3	4		
KENYA						
All boys	Rate	354	304	309		
	Woman years	910	360	151	267	
All but one boys	Rate	-	335	259		1011
	Woman years	-	1259	860		
Balance	Rate	352	-	305		
	Woman years	2001	-	1149		
All but one girls	Rate	-	327	332		
	Woman years	-	1289	713	314	
All girls	Rate	331	335	250		920
	Woman years	866	306	207		
TOTAL	Rate	348	328	295		
	Woman years	3777	3214	3080		
LESOTHO						
All boys	Rate	232	213	269		
	Woman years	496	271	102	188	
All but one boys	Rate	-	209	164		450
	Woman years	-	683	348		
Balance	Rate	199	-	174		
	Woman years	1256	-	485		
All but one girls	Rate	-	213	233		
	Woman years	-	747	348	217	
All girls	Rate	242	240	158		446
	Woman years	671	196	98		
TOTAL	Rate	218	214	192		
	Woman years	2423	1897	1381		
SENEGAL						
All boys	Rate	308	281	291		
	Woman years	532	231	103	286	
All but one boys	Rate	-	280	285		541
	Woman years	-	649	438		
Balance	Rate	307	-	264		
	Woman years	917	-	511		
All but one girls	Rate	-	261	251		
	Woman years	-	683	395	259	
All girls	Rate	296	291	288		513
	Woman years	564	265	118		
TOTAL	Rate	304	275	270		
	Woman years	2013	1828	1565		
SUDAN (NORTH)						
All boys	Rate	279	263	257		
	Woman years	450	219	116	284	
All but one boys	Rate	-	278	295		413
	Woman years	-	649	297		
Balance	Rate	293	-	274		
	Woman years	950	-	634		
All but one girls	Rate	-	284	287		
	Woman years	-	611	303	282	
All girls	Rate	275	293	266		403
	Woman years	557	169	100		
TOTAL	Rate	285	280	279		
	Woman years	1957	1648	1450		
JORDAN						
All boys	Rate	357	333	328		
	Woman years	434	204	89	316	
All but one boys	Rate	-	347	313		549
	Woman years	-	604	460		
Balance	Rate	397	-	343		
	Woman years	818	-	613		
All but one girls	Rate	-	395	356		
	Woman years	-	620	352	357	
All girls	Rate	374	407	360		432
	Woman years	421	221	80		
TOTAL	Rate	381	371	337		
	Woman years	1673	1649	1594		
SYRIA						
All boys	Rate	348	376	203		
	Woman years	595	202	148	284	
All but one boys	Rate	-	319	303		772
	Woman years	-	787	624		
Balance	Rate	375	-	294		
	Woman years	1028	-	772		
All but one girls	Rate	-	348	280		
	Woman years	-	865	457	284	
All girls	Rate	424	349	304		536
	Woman years	467	206	79		
TOTAL	Rate	378	340	288		
	Woman years	2090	2060	2080		

Table A4 *(cont)*

Composition		Number of living children 2	3	4	
BANGLADESH					
All boys	Rate	256	246	200	175
	Woman years	1081	509	186	1025
All but one boys	Rate	-	218	170	
	Woman years	-	1341	839	
Balance	Rate	242	-	203	
	Woman years	1931	-	1214	
All but one girls	Rate	-	236	189	198
	Woman years	-	1269	741	849
All girls	Rate	256	238	257	
	Woman years	933	380	108	
TOTAL	Rate	249	231	192	
	Woman years	3945	3499	3088	
NEPAL					
All boys	Rate	235	207	107	185
	Woman years	994	515	126	633
All but One boys	Rate	-	198	205	
	Woman years	-	1242	507	
Balance	Rate	241	-	202	
	Woman years	2077	-	767	
All but one girls	Rate	-	243	184	186
	Woman years	-	1009	555	647
All girls	Rate	261	257	198	
	Woman years	1016	348	92	
TOTAL	Rate	245	221	192	
	Woman years	4087	3114	2047	
PAKISTAN					
All boys	Rate	262	200	257	230
	Woman years	856	372	176	811
All but one boys	Rate	-	229	223	
	Woman years	-	969	635	
Balance	Rate	306	-	236	
	Woman years	1617	-	971	
All but one girls	Rate	-	292	245	244
	Woman years	-	985	550	632
All girls	Rate	309	281	237	
	Woman years	580	300	82	
TOTAL	Rate	294	254	236	
	Woman years	3053	2626	2414	
SRI LANKA					
All boys	Rate	195	134	169	152
	Woman years	1110	539	195	1018
All but one boys	Rate	-	155	148	
	Woman years	-	1447	823	
Balance	Rate	190	-	140	
	Woman years	2108	-	1257	
All but one girls	Rate	-	168	143	137
	Woman years	-	1351	780	967
All girls	Rate	195	193	112	
	Woman years	1075	478	187	
TOTAL	Rate	193	161	143	
	Woman years	4293	3815	3242	
FIJI					
All boys	Rate	197	182	186	175
	Woman years	695	374	177	738
All but one boys	Rate	-	179	171	
	Woman years	-	924	561	
Balance	Rate	196	-	146	
	Woman years	1427	-	752	
All but one girls	Rate	-	170	160	158
	Woman years	-	993	536	644
All girls	Rate	252	265	148	
	Woman years	702	275	108	
TOTAL	Rate	210	185	160	
	Woman years	2824	2566	2134	
INDONESIA					
All boys	Rate	188	199	181	164
	Woman years	1552	612	237	1289
All but one boys	Rate	-	166	161	
	Woman years	-	1842	1052	
Balance	Rate	177	-	153	
	Woman years	3106	-	1604	
All but one girls	Rate	-	164	156	161
	Woman years	-	1843	1071	1351
All girls	Rate	193	188	178	
	Woman years	1544	655	280	
TOTAL	Rate	184	172	159	
	Woman years	6202	4952	4244	

Table A4 (*cont*)

Composition		Number of living children 2	3	4		
KOREA						
All boys	Rate	186	110	91		
	Woman years	973	502	231	71	
All but one boys	Rate	-	115	66	1170	
	Woman years	-	1672	939		
Balance	Rate	203	-	71		
	Woman years	1711	-	1431		
All but one girls	Rate	-	183	138		
	Woman years	-	1214	846	158	
All girls	Rate	278	258	245	1038	
	Woman years	753	364	192		
TOTAL	Rate	215	150	96		
	Woman years	3437	3752	3639		
PHILIPPINES						
All boys	Rate	269	215	296		
	Woman years	1513	606	344	204	
All but one boys	Rate	-	245	180	1665	
	Woman years	-	2184	1321		
Balance	Rate	263	-	194		
	Woman years	2720	-	1733		
All but one girls	Rate	-	232	201		
	Woman years	-	2051	1051	208	
All girls	Rate	255	299	242	1271	
	Woman years	1249	474	220		
TOTAL	Rate	263	241	201		
	Woman years	5482	5315	4669		
COLOMBIA						
All boys	Rate	225	144	203		
	Woman years	511	167	59	150	
All but one boys	Rate	-	189	140	388	
	Woman years	-	772	329		
Balance	Rate	185	-	171		
	Woman years	933	-	497		
All but one girls	Rate	-	167	139		
	Woman years	-	624	295	140	
All girls	Rate	226	168	143	379	
	Woman years	473	197	84		
TOTAL	Rate	206	175	155		
	Woman years	1917	1760	1264		

Composition		Number of living children 2	3	4		
MALAYSIA						
All boys	Rate	222	153	124		
	Woman years	1091	393	177	159	
All but one boys	Rate	-	163	167	944	
	Woman years	-	1367	767		
Balance	Rate	191	-	153		
	Woman years	1952	-	1278		
All but one girls	Rate	-	186	196		
	Woman years	-	1347	855	199	
All girls	Rate	226	215	216	1003	
	Woman years	846	349	148		
TOTAL	Rate	207	176	169		
	Woman years	3889	3456	3225		
THAILAND						
All boys	Rate	208	203	186		
	Woman years	656	310	137	156	
All but one boys	Rate	-	160	147	589	
	Woman years	-	930	452		
Balance	Rate	199	-	141		
	Woman years	1282	-	669		
All but one girls	Rate	-	162	160		
	Woman years	-	762	463	160	
All girls	Rate	191	226	160	572	
	Woman years	603	260	109		
TOTAL	Rate	199	174	152		
	Woman years	2541	2262	1830		
PARAGUAY						
All boys	Rate	159	147	102		
	Woman years	498	197	59	192	
All but one boys	Rate	-	165	212	333	
	Woman years	-	594	274		
Balance	Rate	203	-	187		
	Woman years	945	-	423		
All but one girls	Rate	-	182	175		
	Woman years	-	506	177	219	
All girls	Rate	240	148	316	256	
	Woman years	375	128	79		
TOTAL	Rate	199	167	197		
	Woman years	1818	1425	1012		

Table A4 (*cont*)

Composition		Number of living children 2	3	4	
PERU					
All boys	Rate	243	212	193	
	Woman years	881	485	212	201
All but one boys	Rate	-	211	203	909
	Woman years	-	1315	697	
Balance	Rate	249	-	242	
	Woman years	1934	-	986	
All but one girls	Rate	-	231	204	
	Woman years	-	1389	638	205
All girls	Rate	285	244	209	827
	Woman years	956	465	189	
TOTAL	Rate	257	223	217	
	Woman years	3771	3654	2722	
COSTA RICA					
All boys	Rate	164	183	102	
	Woman years	506	218	108	130
All but one boys	Rate	-	119	141	406
	Woman years	-	619	298	
Balance	Rate	151	-	91	
	Woman years	1058	-	506	
All but one girls	Rate	-	125	163	
	Woman years	-	585	374	158
All girls	Rate	155	118	114	418
	Woman years	393	187	44	
TOTAL	Rate	155	130	124	
	Woman years	1957	1609	1330	
MEXICO					
All boys	Rate	274	268	327	
	Woman years	934	447	162	240
All but one boys	Rate	-	239	221	895
	Woman years	-	1299	733	
Balance	Rate	274	-	230	
	Woman years	1874	-	1008	
All but one girls	Rate	-	286	232	
	Woman years	-	1116	777	218
All girls	Rate	323	263	135	910
	Woman years	743	482	133	
TOTAL	Rate	284	262	229	
	Woman years	3551	3344	2813	

Composition		Number of living children 2	3	4	
VENEZUELA					
All boys	Rate	210	210	163	
	Woman years	418	152	49	181
All but one boys	Rate	-	193	184	354
	Woman years	-	543	305	
Balance	Rate	209	-	171	
	Woman years	867	-	369	
All but one girls	Rate	-	184	193	
	Woman years	-	408	275	201
All girls	Rate	214	245	250	319
	Woman years	434	188	44	
TOTAL	Rate	211	200	184	
	Woman years	1719	1291	1042	
DOMINICAN REPUBLIC					
All boys	Rate	256	237	130	
	Woman years	211	152	69	150
All but one boys	Rate	-	206	156	300
	Woman years	-	384	231	
Balance	Rate	230	-	258	
	Woman years	482	-	329	
All but one girls	Rate	-	252	232	
	Woman years	-	369	310	216
All girls	Rate	258	232	149	384
	Woman years	295	138	74	
TOTAL	Rate	244	230	210	
	Woman years	988	1043	1013	
PANAMA					
All boys	Rate	221	115	168	
	Woman years	542	321	131	144
All but one boys	Rate	-	149	137	519
	Woman years	-	797	388	
Balance	Rate	194	-	162	
	Woman years	1098	-	616	
All but one girls	Rate	-	146	137	
	Woman years	-	737	364	140
All girls	Rate	171	146	148	472
	Woman years	491	253	108	
TOTAL	Rate	196	142	150	
	Woman years	2131	2108	1607	

Table A4 *(cont)*

Composition		Number of living children 2	3	4	
GUYANA					
All boys	Rate	251	182	136	176
	Woman years	374	187	118	
All but one boys	Rate	-	178	189	467
	Woman years	-	605	349	
Balance	Rate	244	-	143	
	Woman years	796	-	482	
All but one girls	Rate	-	185	162	167
	Woman years	-	531	339	
All girls	Rate	249	230	184	437
	Woman years	433	187	98	
TOTAL	Rate	247	187	162	
	Woman years	1603	1510	1386	
JAMAICA					
All boys	Rate	180	232	126	127
	Woman years	500	138	103	
All but one boys	Rate	-	173	127	354
	Woman years	-	571	251	
Balance	Rate	192	-	182	
	Woman years	749	-	428	
All but one girls	Rate	-	191	231	214
	Woman years	-	413	251	
All girls	Rate	162	124	103	290
	Woman years	413	105	39	
TOTAL	Rate	181	182	172	
	Woman years	1662	1227	1072	

Composition		Number of living children 2	3	4	
HAITI					
All boys	Rate	267	277	364	251
	Woman years	258	128	44	
All but one boys	Rate	-	217	223	223
	Woman years	-	391	179	
Balance	Rate	213	-	263	
	Woman years	649	-	310	
All but one girls	Rate	-	199	151	174
	Woman years	-	435	179	
All girls	Rate	214	226	282	218
	Woman years	332	157	39	
TOTAL	Rate	225	218	234	
	Woman years	1239	1111	751	
TRINIDAD & TOBAGO					
All boys	Rate	156	109	80	83
	Woman years	477	196	99	
All but one boys	Rate	-	101	85	373
	Woman years	-	573	274	
Balance	Rate	120	-	87	
	Woman years	1100	-	559	
All but one girls	Rate	-	138	73	81
	Woman years	-	510	341	
All girls	Rate	187	139	114	428
	Woman years	424	152	87	
TOTAL	Rate	143	119	84	
	Woman years	2001	1431	1360	