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Family Sex Composition Preferences and Contraceptive Use in Thailand : A Relative Risk Analysis

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Introduction

Thailand is one of the developing countries which experienced a rapid and widespread decline in fertility between the late 1960s and 1980s (Knodel et al., 1982; Population Report 1985). It is recognized that the fertility decline in Thailand is due to the impact of contraceptive use among married women (Knodel et al., 1983; Leoprapai et al., 1985) and that socio-economic factors are strongly related to fertility control behaviour and changes in fertility rates (Kamnuansilpa and Chamratrithirong 1982, 1985; IPSR 1983).

Factors such as sex preference and the number of living children play an important role in the fertility behaviour of couples. The general opinion is that couples who have a higher number of living children are more likely to use contraceptives than couples with fewer living children. In many societies, fertility is high because of sex preference; although couples may have achieved their desired family size, they do not have the desired number of sons or daughters. Socio-economic factors such as religious beliefs and observances, the inheritance system, lineage, bridewealth and psychological needs also play a significant role in family composition preferences.

For example, researchers have found evidence that sex preference leads to high fertility in societies such as Bangladesh; China; Jordan and Syria; Korea and Taiwan; Egypt; Nepal; Pakistan; India (Ahmed, 1981; Arnold and Zhaoxiang, 1986; Bairagi and Longsten, 1986; Cleland et al., 1983; Chang et al., 1981; Freedman and Coombs, 1974; Gadalla et al., 1985; Karki, 1988; Khan and Sirageldin, 1977 Park, 1983). In

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each of these countries the evidence has shown a strong preference for sons over daughters. As for contraceptive prevalence, it was found that in Saudi Arabia, the use of contraceptives was significantly related to increasing parity and the educational level of the mother (Al-Sibai and Khwaja, 1986). Arnold (1987) however found that in 27 developing countries, the impact of sex preference of couples on contraceptive use was small, but in Asia, the effect of sex preference on contraceptive use is the strongest because fertility has fallen rapidly. In Africa, where fertility is the highest in the world, the sex preference is low. Also Freedman (1970) and Repetto (1972) maintain that the number of living children and son preference do not influence fertility be haviour in modern societies.

Most fertility studies in Thailand in the past mainly investigated the relationship between fertility and women's socio-economic background characteristics. Little attention has been paid to the relationship between contraceptive use and parity or to variation in the level of use of contraception at different parities, even though parity is an important factor.

However, Podhisita (1985) indicated that there is at least a moderate son preference in the Northeast. Some studies (Prachuabmoh et al., 1973; 1974; Cleland, 1981; Siripirom, 1982) found that fertility behaviour is not strongly influenced by son preference, while Blanchard (1958) and Hanks and Hanks (1963) reported a lack of strong preference for sons in Thai society and some even indicate a preference for daughters (Potter, 1976). But Knodel et al., (1987) reported that most of Thai couples who want only two children desire to have at least one son and one daughter. However couples who had no son were less likely to be sterilized than those who had at least one son, even though they already had two children. This was true for both urban and rural areas. It was also suggested that women with three children already, even if they are all the same sex, would wish to use permanent contraceptive methods. It is therefore the purpose of this study to apply *the Relative Risk Technique* to analyse the effect of differences in socio-economic characteristics on the relationship between contraceptive use, parity and sex preference among currently married women in Thailand.

Source of Data

The secondary data were obtained from the study on the Third National Contraceptive Prevalence Survey in Thailand 1984. This survey was conducted by the Research Center of National Institute of Development Administration (NIDA) and the Institute for Population and Social Research (IPSR), Mahidol University in collaboration with the Family Health Division of the Ministry of Public Health. The sample size covered 7576 ever married women in the reproductive age.

Method

In order to analyse the effect of differences in the socio-economic characteristics on parity and sex preferences,the Relative Risk (odds ratio) is calculated.

The Relative Risk is calculated by dividing the number of women who are currently using contraception and have at least one living son or at least one living daughter by the number of women who do not currently use contraception and have at least one living son or at least one living daughter. The formula is as follows :-

The Relative Risk (RR) = ad/bc

Where a, b, c, d are the number of women as :

Characteristics	Women who had at least one living son or at least one living daughter	Women who (had) no living son or had no living daughter
Women using contraceptives	a	b
Women not using contraceptives	c	d

Results

Table 1 shows the percentage distribution of currently married women by age and number of living sons. The proportion of women with one living son was higher (39.3 percent) than that of those with more than one living son across almost all age groups. The distribution was similar for women with no living son and women with two living sons.

Table 1. Percentage of currently married women by age and number of living sons

Age	Number of living sons				
	0	1	2	3	4+
15-19	45.3(86)	50.0(95)	4.7(9)	-	-
20-24	34.4(351)	51.9(530)	12.4(127)	1.2(12)	0.1(1)
25-29	28.7(445)	43.0(667)	21.8(339)	5.3(83)	1.2(19
30-34	19.1(283)	42.0(623)	26.0(386)	10.0(149)	2.9(43)
35-39	13.3(142)	35.0(374)	27.9(298)	14.4(154)	9.4(100)
40+	8.5(116)	24.7(336)	27.2(371)	19.9(271)	19.7(269)
Total	21.3(1,423)	39.3(2,625)	22.9(1,530)	10.0(669)	6.5(432)

Looking at the distribution of currently married women by age and number of living daughters in Table 2, the same pattern is seen as the distribution of number of living sons. The percentage of women with one living daughter was high (38.9 percent) and the percentage of women with no living daughter and with two living daughters was about the same.

Table 2. Percentage distribution of currently married women by age and number of living daughters

Age	Number of living sons				
	0	1	2	3	4+
15-19	51.6(98)	44.7(85)	3.2(6)	0.5(1)	-
20-24	39.1(399)	46.3(473)	12.7(130)	1.7(17)	0.2(2)
25-29	27.0(420)	47.3(734)	20.2(313)	4.4(68)	1.1(18)
30-34	20.5(304)	39.4(584)	26.3(390)	10.0(149)	3.8(57)
35-39	15.2(162)	33.4(357)	29.6(316)	14.4(154)	7.4(79)
40+	10.1(138)	26.6(363)	26.6(362)	18.4(251)	18.3(249)
Total	22.8(1521)	38.9(2596)	22.7(1517)	9.6(640)	6.1(405)

Table 3 shows the percentage of currently married women who currently use contraceptives by age, number of living sons and number of living daughters. With respect to the number of living sons, the women were more likely to use contraceptives if they had at least one living son than if they had no living son (66.4 and 57.6 percent respectively). Similarly, women with at least one living daughter were more likely to use contraceptives than if they had no living daughter. However, the difference in the percentage of women with no living son (only having one or more daughters) and women with at least one living son, i.e., 8.8 percent, was greater than the difference between women with no living daughter (only having one or more sons) and women with at least one living daughter, i.e., 5.2 percent.

Table 3. Percentage of currently married women who currently use contraceptives by age and number of living sons, number of living daughter

Age	Number of living sons		Number of living daughters	
	no son	at least one son	no daughter	at least one daughter
15-19	48.8	46.2	44.9	50.0
20-24	53.3	60.4	57.9	58.0
25-29	56.4	67.6	64.8	64.3
30-34	67.5	72.9	63.5	74.1
35-39	68.3	74.2	70.4	74.0
40+	44.8	58.0	47.8	57.8
Total	57.6	66.4	60.5	65.7

Table 4 shows the percentage of sterilized couples by sex composition preference and number of living children. It can be seen that being sterilized was associated with the number of living children. Overall, the percentage sterilized increased as the number of living children increased. Among the couples with one living child, there was no difference in practicing sterilization by sex composition, but among the couples with two or more living children, if the couples had at least one living son, they were more likely to be sterilized than if they were in the other sex composition categories. Nevertheless, if the couples had three children already, they are more likely to be sterilized even though they have only one living son or only one living daughter. However, the couples with three living children with at least one living son were more likely to be sterilized than those couples with the same number of living children but with no sons.

Table 4. Percentage sterilized of couples by sex composition preference and number of living children

Sex composition preference	Number of living children			
	1	2	3	4+
No living daughter (only living son)	1.7	28.5	40.8	31.0
No living son (only living daughter)	1.9	20.2	36.0	26.8
At least one living son	1.7	30.9	45.5	37.9
At least one living daughter	1.9	28.5	44.9	35.6

Table 5 shows the risk of contraceptive use among women who have at least one living son or at least one living daughter relative to those with no living son (only having one or more daughters) or with no living daughter (only having one or more sons) by socio-economic factors and parity (0-2, 3, 4+), separated by the presence of son or daughter. For example, if the relative risk with a living son of parity 3 is calculated to be 1.5, it is suggested that women who had borne 3 children were one and a half times as likely to use contraceptive if they had at least one living son than if they had no living son.

For the Whole Kingdom, there is no difference between the relative risk of contraception by sex composition of the family. However, there are significant differences by socioeconomic and regional categories.

By region, it can be seen that the relative risk of contraceptive use for those with a living son for the North region by parity was less than the relative risk of the other regions with the same parity. The relative risk with a living son for the South region of parity 0-2 was 1.7, indicating that women who had borne 0-2 children and

lived in the South region were 1.7 times as likely to use contraception if they had at least one living son than if they had no living son (only having one or more daughters). In addition, the relative risk decreased as parity increased for the Central, the South and the Northeast regions of the country for women who had at least one living son and the relative risk with a living son for the South by parity was higher than the relative risk with a live daughter at the same region and parity.

For residence, the relative risk of contraceptive use for those with a living son was much greater in provincial urban areas for all parities. This pattern was not found for those with at least one living daughter. The relative risk for those with a living son for provincial urban areas of parity 3 was 3.3, indicating that women who had borne 3 children and lived in provincial urban areas were 3.3 times as likely to use contraception if they had at least one living son than if they had no living son (only having three daughters). This suggests that among women with parity 3 and at least one living son, they were more preferences for son if they lived in provincial urban areas than if they lived in the other areas; if they lived in provincial urban areas at parity 3 with at least one living daughter, the relative risk was only 0.3.

For education, it can be seen that the relative risk of contraceptive use at parity 3 with a living son for those having less than 4 years of education was 3.6, which was higher than the relative risk for the other educational categories of the same parity. It was also higher than the relative risk with a living daughter for those with less than a year of education at the same parity.

Similar to previous findings on religious differences, the relative risk with a living son for Moslems of parity 3 and for Buddhists of parity 3 were not much different (1.3 and 1.6 respectively), but the relative risk with a living son for Moslems of parity 3 was highter than the relative risk with a living daughter of the same religious and parity (1.6 and 0.8 respectively).

The relative risk increased as parity increased for housewives but no clear trend was found among other occupational categories either for those with living sons or those with living daughters.

Table 5. Risk of contraceptive use among women who have at least one living sons, at least one living son, with no living daughter relative to those with no living son, with no living daughter by socio-economic characteristics and parity

Socio-economic Characteristics	Relative risk of living sons			Relative risk of living daughters		
	parity			parity		
	0-2	3	4+	0-2	3	4+
Region						
Central	1.7	1.2	0.7	1.5	2.0	0.9
North	1.2	0.4	0.5	1.3	1.0	1.1
Northeast	1.8	1.6	0.9	1.6	1.3	1.1
South	1.7	1.5	1.3	1.0	1.1	1.0
Residence						
Bangkok	1.5	1.3	1.6	1.3	1.2	0.6
Provincial Urban	2.1	3.3	3.0	1.0	0.3	0.4
Rural	1.4	1.2	0.8	1.3	1.3	1.0
Education						
Less than 4 years	1.3	3.6	0.8	1.6	1.9	0.8
4 years	1.6	1.0	1.1	1.3	1.1	0.9
5 years and more	1.5	2.2	1.0	1.2	0.9	1.3
Occupation						
Agriculture	1.4	1.5	0.7	1.4	1.0	1.0
Professional or Business	1.9	1.4	1.7	1.2	0.7	0.5
Skill of Semi-Skill	1.7	0.7*	0.0	1.1	6.4*	1.0*
Labour or Servant	1.9	0.5	0.7	1.2	1.7	0.8
Housewife	1.5	1.7	2.2	1.3	1.4	1.1
Religious						
Buddhists	1.5	1.3	1.0	1.3	1.3	0.9
Moslems	1.4	1.6	0.8	1.2	0.8	1.2
Whole Kingdom	1.5	1.3	1.0	1.3	1.2	0.9

Note : * less than 70 women in the category

Discussion and Conclusions

The purpose of this study is to analyse the effect of socio-economic differentials, parity and sex preference on contraceptive use. It was found that overall there is no strong sex preference in Thailand. But the data suggest sex preference is found if crucial demographic variables like parity, number of living children and use of contraceptives are taken into account. Thai couples were more likely to be using contraception if they had at least one living son. Particularly, if they had three living children already, they were more likely to be sterilized, although they had either at least one living son or at least one living daughter. The relative risk of contraceptive use by presence of a living son or a living daughter was calculated according to region, residence, education, occupation and religion. It was found that there was a difference in the relative risk by sex composition of living children by region, religion, residence and education.

By region, the relative risk of contraceptive use for women with a living son was higher among women in the South by parity than those with a living daughter at the same region and parity. For example, the relative risk of a living son at parity 0-2 was 1.7 as the relative risk of a living daughter the same parity was 1.0, meaning that women in the South with at least one living son at parity 0-2 were more likely to use contraceptive than those with at least one living daughter at the same parity.

In regards to religious differentials, it was found that the relative risk with a living son for Moslem with parity 3 was higher than the relative risk with a living daughter at the same parity.

One possible explanation for lower contraceptive use in the South and among Moslem is that cultural factors lead to higher son preference. Most families are extended, and fathers are the head of the household and the primary provider for the family, as male authority predominates both in regards to inheritance and especially to decision making. In the South the features of Buddhist and Moslem family may have these same cultural, psychological and traditional attitudes.

Comparing by residence type, the relative risk with a living son in provincial urban areas at parity 3 was higher than the relative risk with a living daughter at the same residence and parity. This means that women at parity 3 with at least one living son in provincial urban areas were more likely to use contraceptive and had more preference for a son than the women with at least one living daughter in provincial urban areas. Similarly, studies in India, Korea and Taiwan, found that there was a strong relationship between contraceptive use and the number living sons. (Das, 1987, Kim and Choi, 1981). Prachuabmob et al., (1974) reported that son preference was stronger among the Chinese minority than the Thais especially in urban Thailand. The effect of son preference on fertility attitudes and behaviour may be associated with social and cultural differences between the Thais and the Chinese. This is particularly true in regards to the difference in lineage and the general position of the sexes in social and economic status. These same traditional beliefs and attitudes are characterized in Korea and Taiwan (Chang et al., 1981, Cleland et al., 1983). It is most likely that parents exert more influence upon the couples regarding the sex preference for children. This is supported by the results postulated by Kanjanapan (1985) and Limanonda (1973) who reported that the urban Chinese prefer sons rather than daughters so that they can live with their son after he marries. It is suggested that one of the possible explanations for son preference is to carry on the family name and to maintain the family economically. However, Foster (1978) for example, showed different results in his studies. He found that in rural areas of Thailand it is common for the youngest daughter and her husband to live in her parental household permanently and to take care of her parents in their old age and eventually to inherit the house.

For education, the relative risk of contraceptive use for those with a living son was higher among women with less than 4 years of education at parity 3 than those with a living daughter at the same educational level and parity. It may be that lower educated women need to depend more on sons who will support the parents or family in the future.

In regards to occupation no difference was found in the relative risk of contraceptive use between those with a living son and those with a living daughter.

In conclusion, sex preference in Thai society does not strongly affect the relationship between contraceptive use and the choice of sex preferences. Evidence shown in this study based on the relative risk technique explain concisely both socio-economic and demographic profiles in understanding the family sex composition preference in the context of Thailand's demographic situation.

Notes

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1 Manual of Epidemiology Teaching. 1986/1987. England : Department of Epidemiology, London School of Hygiene and Tropical Medicine 1 : 23

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