

# **SIDE EFFECTS OF CONTRACEPTIVE METHODS IN THAILAND**

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## **ABSTRACT**

Contraceptive side effects are of particular concern to health officials because lingering side effects may cause discontinuation of contraception altogether or a switch to less effective methods. The sociodemographic correlates of self-reported side effects are considered here for Thailand, a country with an extremely successful family planning program. Distinct variations in the reporting of side effects were found by contraceptive method, but side effects were highest for the pill and injectables, regardless of duration of use, education of women, or source of contraception.

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## **SIDE EFFECTS OF CONTRACEPTIVE METHODS IN THAILAND**

Contraceptive side effects vary considerably from one method to another, from one woman to another, and are often the reason for discontinuation of a method. The medical literature is replete with studies attempting to link long-term medical conditions to specific contraceptives, but evidence is not conclusive for most contraceptives. For instance, cervical cancer has been linked to use of oral contraceptives (Ory et al., 1976; Peritz et al., 1977). However, Boyce et al. (1977) found that pill use was not more common among women who developed cervical cancer than among women who did not develop this disease. Another study (Stern et al., 1977) reported that women who already have cervical dysplasia may have an increased risk of cancer associated with pill use.<sup>1</sup> Furthermore, Vessey et al., (1982) report that women who have used oral contraceptives have no higher risk of developing breast cancer than women who have never taken them.

Another contraceptive whose use is controversial is the injectable contraceptive known as Depo-Provera (Depo Medroxyprogesterone Acetate). Although it has been approved for use in some 90 countries, it has not been approved by the Food and Drug Administration in the United States because of reports of higher incidence of breast cancer in beagles treated with Depo-Provera and evidence of congenital malformations among infants if accidentally exposed to the drug early in pregnancy (FDA Drug Bulletin, 1978). However, after a review of all known medical evidence, a 13-member panel recommended that the U.S. Agency for International Development (AID) should make Depo-Provera available to countries who request it (Gold and Willson, 1981). Also, the Toxicology Review Panel of the World Health Organization (WHO) concluded in 1979 that there are "no toxicological reasons" for discontinuing Depo-Provera in countries where it is being used (Gold and Willson, 1981; World Health Organization, 1979).

It is important to note that women may also experience contraceptive side effects that are not considered to be serious medical conditions such as weight loss or gain, or emotional problems. Contraceptive side effects are of particular concern to health officials in countries where family planning efforts are widespread and embraced by a large proportion of the population. An important issue facing family planning programs is not merely recruiting new acceptors, but maintaining existing ones (Stoeckel et al., 1986). Thailand is one such country where family planning efforts have been extremely successful (Khoo and Park, 1978; Knodel and Debavalya, 1978; Knodel and Chamratrithirong, forthcoming), particularly without concomitant increases in economic development.<sup>2</sup> New family planning acceptors rose from 130,219 in 1969 to 1,120,966 in 1980 (Ministry of Public Health, 1981 ) with a drop in the total fertility rate of 6.4 in 1964 to 3.5 in 1986 (Population Reference Bureau, 1987).

A recent study ( Chamratrithirong et al. , 1986 ) has shown that 65 percent of currently married Thai women aged 15-44 were using a contraceptive method as of 1984. The government - run National Family Planning Program has been instrumental in recruiting large number of contraceptors and supplying contraceptives to the majority of Thai couples. In 1984, government facilities were used by 79 percent of users of methods requiring a source.

A study of the incidence and correlates of side effect is important because discontinuation of contraception altogether or switching to less effective methods may be the result of lingering side effects. Also, it is possible to illuminate factors that may operate differentially within subpopulations of Thailand, and determine if groups such as highly educated women respond differently than less educated women when side effects are experienced. Thus, this paper examines factors--such as duration of contraceptive use, religion , and education--that may be correlated with medical or other side effects from specific contraceptives for various groups in Thailand.

## DATA AND METHODS

The data for this paper are from the third national Contraceptive Prevalence Survey (CPS3). The survey was conducted jointly by the Institute for Population and Social Research (IPSR) at Mahidol University and the Research Center of the National Institute of Development Administration (NIDA), in collaboration with the Family Health Division of the Ministry of Public Health. The field work was completed between April and July 1984 and included a total sample of 7,576 ever-married women aged 15-49 years (Chamratrithirong et al., 1986). The sample size was expanded from the two previous contraceptive prevalence surveys (CPS1 and CPS2 conducted in 1978/79 and 1981; respectively) in order to improve regional estimates by selecting approximately equal numbers of houses in each of the four major regions of Thailand and the Bangkok metropolitan area (Knodel et al., 1985). A supplementary sample of 317 Moslem women in the Southern provinces of Satun and Yala was included to provide for a more complete comparison of the Buddhist and Moslem populations of the Southern region (Institute for Population and Social Research et al., 1985).

The primary sample for this paper includes 4,117 currently married women aged 15-44 who are currently using contraceptives or they or their husbands are sterilized. This excludes women who for whatever reason were not using contraceptives. Postmarried women are not included because preliminary analysis indicates that their contraceptive behavior was quite different from that of currently married women, and the sample includes too few postmarried women to analyze them as a separate group. A sample of 1,268 women who are not currently using any method will be discussed in a later section regarding side effects of the last method used.

For the analysis of side effects of current method, side effects are classified into four broad categories. These are: 1) medical or health problems such as irregular menses; 2) headache or dizziness; 3) emotional problems or other problems such as nervousness or mental problems; and 4) no problem. It should be stressed that these side effects are reported by the respondent, not by medical personnel. As noted by Janowitz et al. (1986), women in developing countries may feel chronically ill. In such a setting, nausea and headaches may seem too common or trivial to report. Furthermore, side effects may only be reported if a respondent has knowledge that a specific side effect has been linked with the contraceptive she is using. Also, women may be reluctant to report a side effect unless a physician has verified the condition. On the other hand, we expect that it is the woman's perceptions of side effects that is important in her decisions about contraceptive continuation.

### **CONTRACEPTIVE USE AND SIDE EFFECTS BY DURATION OF USE**

In order to place side effects within a context, it is helpful to first examine contraceptive methods used by Thai couples. Table 1 presents the method used for six age groups of women. Overall, the most commonly used method in 1984 was female sterilization, which can be most clearly seen in ages 30-44. The pill is still widely used, particularly in the early reproductive ages. Depo-Provera, which was first introduced in Thailand in 1965 at the McCormick clinic and has been available throughout the country since 1975, is the third most commonly used method. Depo-Provera has been popular in Thailand, particularly in the rural areas where there is high respect for injections ever since the Yaws Eradication Campaign in the 1950s (Narkavonnakit et al., 1982).<sup>3</sup>

**Table 1. Percent of Currently Married Women in Thailand Aged 15-44 Practicing Contraception, by Method Used and Age Group: 1984**

Method Used	Age Group						Total
	15-19	20-24	25-29	30-34	35-39	40-44	
Total contraceptors	38.1 <sup>a</sup>	52.6	61.8	69.4	72.0	62.2	62.7
Pill	22.3	24.4	22.4	17.5	15.7	12.8	19.3
Female sterilization	.7	8.3	17.0	27.1	33.2	30.4	21.5
Male sterilization	.7	.8	2.4	6.4	7.2	5.6	4.2
IUD	.7	2.8	4.1	4.7	3.6	4.3	3.8
Injectables	7.6	11.1	9.6	6.7	6.3	5.2	8.0
Condom	1.4	2.3	2.9	2.5	2.2	.2	2.2
Other	4.7	2.9	3.4	4.6	3.9	3.7	3.8
N	278	1,193	1,655	1,544	1,091	843	6,604

There is an obvious age pattern of contraceptive use in Thailand, with younger women using the pill and Depo-Provera primarily for spacing births and older women using sterilization for terminating childbearing. Non-use declines across the age cohorts until the 40-44 year age group when women may discontinue contracepting as their fecundability decreases.

Related to the pattern of contraceptive use by age is length of using a particular contraceptive and contraceptive side effects. Women who have used a method for a long time would be expected to have the lowest incidence of side effects because if there had been a persistent problem, a woman would most likely switch to another form of contraception. In Table 2 length of using this contraceptive is categorized by 0-4 years, 5-9 years, and 10 or more years, and cross-classified by

<sup>a</sup> Columns may not add exactly to total owing to rounding.

method and side effect. Overall, women with the longest use time did have fewer problems, but there is surprisingly little variation across the three duration use groups. It is interesting to note that women who have used Depo-Provera for 10 or more years have significantly fewer problems than the other two duration of use groups. Although the percentage of women using injectables decreases with time used, the percentage experiencing side effects such as headaches and dizziness decreases.

**Table 2. Percent of Currently Married Women in Thailand Aged 15-44 Who Are Using Contraceptives and Report Side-Effects of Contraceptives, by Method Used: 1984**

Report Side Effects	Contraceptive Method							Total
	Pill	Female Sterilization	Male Sterilization	IUD	Injec- tables	Condom	Other	
None	60.8	66.1	78.6	74.2	60.2	93.0	95.5	67.8
Medical/health	20.8	19.7	8.7	20.6	31.8	0.0	1.2	19.1
Headache/dizzy	15.8	7.3	3.3	3.6	6.3	0.0	.4	8.6
Emotional	1.7	3.1	5.1	0.0	1.3	0.7	1.6	2.2
Other	.9	3.8	4.4	1.6	.4	6.3	1.2	2.3
Total	100.0 <sup>a</sup>	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	1,266	1,410	276	252	522	143	246	4,115

<sup>a</sup> Columns may not total exactly to 100.0 owing to rounding.

## **SOCIODEMOGRAPHIC CORRELATES OF CONTRACEPTIVE SIDE EFFECTS**

Approximately 95 percent of the Thai population is Buddhist, with Moslems accounting for 4 percent of the population (Knodel et al.,1982). Buddhism emphasizes individual karma or individualism and has no scriptural mandate regarding number of offspring or contraception. On the other hand, Islam has a pronatalist orientation that values marriage highly and stresses childbearing (Thomlinson, 1971). Differences in levels of contraceptive use have been shown to be greater for Buddhists (Chamrathirong and Stephen, forthcoming), and there are large differences in the overall percentage of women in this sample who report that spacing children is against their religion (38 percent of the Moslems versus 10 percent of the Buddhists) and limiting the number of children (84 percent of the Moslems versus 14 percent of the Buddhists). We can also expect differences to exist between the two religious groups in reporting of side effects. If a woman perceives that using contraception either to space or limit the number of children is against her religion but uses it anyway, she might be more likely to experience a side effect if she feels her behavior is in contradiction to her beliefs.

Table 3 shows the percentage of Moslems and Buddhists who have side effects by whether or not they perceive that their religion is against spacing or limiting the number of children. Clearly in all categories, Moslem women are less likely to report side effects than Buddhists. For instance, 27 percent of Moslem women who report that spacing is against their religion have side effects, as compared to 38 percent of the Buddhists in the same category. This pattern is replicated in all 4 comparisons of women who have experienced side effects with their current method. For both religious groups, a larger percentage of women whose religion is against limiting or spacing children report side effects. That is, 26 percent of the Moslems who report that limiting is against their religion have

side effects, compared with 21 percent of the Moslems who say that limiting is not against their religion. This pattern is replicated in all 4 comparisons within religious groups. From Table 3, we can conclude that: (1) a smaller percentage of Moslems report side effects, and (2) for both Moslems and Buddhists, a higher percentage of women whose religious beliefs are in conflict with using contraception report side effects. It appears that while the differences in the percentage of women reporting side effects within the two religious groups are not great, there are much larger differences between the two religious groups. Moslems who use contraceptives do so in spite of their religious beliefs and therefore may be very committed to using contraceptives and less willing to report side effects. This is a particularly interesting finding in a country such as Thailand where the Moslems are a small and distinct group.

**Table 3. Percent of Currently Married Women in Thailand Aged 15-44 Who Are Using Contraceptives and Report Side Effects, by Urban/Rural Residence: 1984**

Reported Side Effects	Place of Residence			
	Bangkok	Provincial Urban	Rural	Total
None	65.7	74.3	67.6	67.7
Medical/health	20.9	15.2	19.0	19.1
Headache/dizzy	6.8	6.5	9.4	8.7
Emotional	3.8	2.5	1.7	2.2
Other	2.8	1.6	2.3	2.3
Total	100.0 <sup>a</sup>	100.0	100.0	100.0
N	862	323	2,932	4,117

<sup>a</sup> Columns may not add exactly to 100.0 owing to rounding.

Although family planning efforts have been very successful in rural as well as urban areas in Thailand, it is likely that differences remain in contraception use and reported side effects between women living in rural and urban areas. Because electricity is such an important factor in development, it would be expected that women in the rural areas with electricity would be more similar to women in Bangkok.<sup>4</sup> In Table 4 reported side effects are cross-classified by method used and a three-way split of residence: Bangkok, rural area with electricity, and rural area without electricity. Overall, women in rural areas with electricity have only slightly fewer reports of side effects (1 percentage point). In comparisons of specific methods, there is not one pattern that holds for all methods. However, it is interesting to note that 27 percent of the women in Bangkok who use the pill report medical/health side effects, as compared to 20 percent of the women in rural areas with electricity, and 18 percent of the women in rural areas without electricity. This pattern is even stronger for Depo-Provera, with nearly twice as many women in Bangkok reporting medical/health side effects than women in either of the rural areas. A slightly higher percentage of Bangkok women who use the IUD also report medical/health side effects. Because of the availability and proximity of health care facilities in Bangkok, this is a somewhat surprising finding. On the other hand, it is supportive of Janowitz et al.'s finding that rural women may have so many medical problems that they do not associate any particular problem with the use of a contraceptive.

**Table 4. Percent of Currently Married Women in Thailand Aged 15-44 Who Are Using Contraceptives and Report Side Effects, by Region and Religion: 1984**

Reported Side Effects	Region/Religion						Total
	Southern Moslem	Bangkok/ Central Moslem	Southern Buddhist	Bangkok/ Central Buddhist	North-Eastern Buddhist	Northern Buddhist	
None	80.8	57.8	77.5	64.2	64.2	68.7	67.6
Medical/health	13.0	25.0	10.3	20.0	22.4	20.8	19.2
Headache/dizzy	4.8	12.5	6.8	10.1	8.7	7.9	8.7
Emotional	1.4	4.7	2.7	2.8	1.7	1.5	2.2
Other	0.0	0.0	2.7	3.0	2.9	1.2	2.3
Total	100.0 <sup>a</sup>	100.0	100.0	100.0	100.0	100.0	100.0
N	208	64	485	1,629	755	943	4,084

Another correlate of interest is education. In Thailand primary education comprises four years for the lower grades and three years for the upper grades. Until recently four years of education was compulsory, but this requirement has been extended to six years (Knodel et al., 1982). The women in CPS3 would have been educated at a time when four years of education was the compulsory limit. The cross-classification of side effects by method and education is shown in Table 5. Education is categorized here as less than four years of education, four years of education, and five or more years of education. This variable is clearly not evenly distributed, with nearly 70 percent of the women having four years of compulsory education.

<sup>a</sup> Columns may not add exactly to 100.0 owing to rounding.

**Table 5. Percent of Currently Married Women in Thailand Aged 15-44 Who Are Currently Using Contraceptives and Report Side Effects, by Education and Method Used: 1984**

Reported Side Effects	Contraceptive Method							Total
	Pill	Female Sterilization	Male Sterilization	IUD	Injec- tables	Condom	Other	
A. 0-3 YEARS OF EDUCATION								
No problem	57.5	61.6	63.0	76.9	56.1	100.0	90.9	62.8
Medical/health	22.1	21.9	22.2	15.4	36.6	0.0	9.1	22.1
Headache/dizziness	15.8	9.9	3.7	3.9	4.9	0.0	0.0	9.8
Emotional	3.9	3.3	7.4	0.0	2.4	0.0	0.0	3.3
Other	.8	3.3	3.7	3.9	0.0	0.0	0.0	2.0
Total	100.0 <sup>a</sup>	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	127	151	27	26	41	4	22	398
B. 4 YEARS OF EDUCATION								
No problem	61.6	64.6	78.1	73.8	62.6	95.4	96.5	67.2
Medical/health	19.4	20.3	9.1	20.8	29.8	0.0	.7	19.1
Headache/dizziness	16.3	8.0	4.3	4.4	6.0	0.0	0.0	9.3
Emotional	1.7	2.9	3.7	0.0	1.3	0.0	2.8	2.1
Other	1.0	4.2	4.8	1.1	.3	4.6	0.0	2.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	888	1,00	1187	183	382	65	141	2,847
C. 5 OR MORE YEARS OF EDUCATION								
No problem	59.8	74.4	87.1	74.4	52.5	90.5	95.2	72.0
Medical/health	25.1	16.3	1.6	23.3	37.4	0.0	0.0	17.6
Headache/dizziness	13.9	3.1	0.0	0.0	8.1	0.0	1.2	6.0
Emotional	.8	3.5	8.1	0.0	1.0	1.4	0.0	2.1
Other	.4	2.7	3.2	2.3	1.0	8.1	3.6	2.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	251	258	62	43	99	74	83	870

<sup>a</sup> Columns may not add exactly to 100.0 owing to rounding.

We would expect that women with more education would have more access to private health services, as well as public services, and to have more choices available to them because of better knowledge about the reproductive system and other contraceptives. In Table 5, overall, women in the highest education group have the fewest side effects, and the lowest incidence of medical/health and headache/dizzy side effects. The reasons for this are a bit more complex than might be expected. Women with the highest education have the highest incidence of side effects in the pill, IUD, and Depo-Provera categories. On the other hand, a larger percentage of contraceptive use is by the husbands of women with higher education. That is, 16 percent of the highly educated women report male sterilization or condom as the method of contraception, as compared to 9 percent of women with four years of education, and 8 percent of women in the lowest education category. Condoms, in particular, have very low incidence of side effects across all groups. Thus, the combination of a large number of male contraceptors and low incidence of side effects with those methods is the primary reason for the overall low reporting of side effects for higher-educated women.

It is not evident why women with high education report more medical/health side effects for the pill, IUD, and Depo-Provera than other women. Again, it is possible that these women have more access to medical facilities and have medical personnel confirm side effects. In Table 6, side effects are cross-classified by method and source--government or private--of most recent contraceptive. Looking at the total column of the two panels, women who went to private sources had the lowest incidence of side effects. Fewer women who went to private sources report side effects for all methods except male sterilization and injectables. Only for those using the pill, were medical/health side effects greater for private sources than for women going to a government source. Thus, it appears that accessibility to private sources of contraception is beneficial in terms of fewer reported side effects.

**Table 6. Percent of Currently Married Women in Thailand Aged 15-44 Who Are Currently Using Contraceptives and Report Side Effects, by Education and Source of Contraceptive: 1984**

Report	Years of Education			
Side Effects	0-3	4	5+	Total
A. GOVERNMENT				
None	61.2	64.9	69.6	65.4
Medical/health	22.1	20.4	19.7	20.4
Headache/dizzy	10.7	10.2	5.5	9.4
Emotional	3.8	2.0	2.7	2.3
Other	2.1	2.6	2.5	2.5
Total	100.0 <sup>a</sup>	100.0	100.0	100.0
N	289	2,146	513	2,948
B. PRIVATE				
None	62.1	70.6	72.2	70.3
Medical/health	25.3	17.5	16.6	17.9
Headache/dizzy	8.4	7.4	7.7	7.6
Emotional	2.1	2.8	1.3	2.2
Other	2.1	1.8	2.2	2.0
Total	100.0	100.0	100.0	100.0
N	95	618	313	1,026

<sup>a</sup> Columns may not add exactly to 100.0 owing to rounding.

## **DISCONTINUATION OF PREVIOUS METHOD OF CONTRACEPTION**

In Tables 2-6 we have examined sociodemographic variables such as method used, religion, place of residence, region, education, and source of contraceptives that may determine differentials in reported side effects of current contraceptive users. But also of concern to health officials are the reasons why women switch methods or discontinue use. Unfortunately CPS3 does not contain a full contraceptive history, but it does provide information on previous methods of contraception and reason for discontinuation. In Table 7 the major reason for discontinuing the previous methods is shown by methods used and by current contraceptive status. Several things should be noted about Table 7. Sterilization is not an option for a previous method, as it is a permanent choice. The categories of previous method then are: pill, Depo-Provera, IUD, condom, and all other methods. The residual category includes rhythm, vaginal methods, and withdrawal. The categories for discontinuation are: side effects, inconvenience, dislike, pregnancy, and all other. The pregnancy category includes women who become pregnant as well as those women who discontinued use because they desired pregnancy. The all other category includes women who discontinue use because they run out of supplies, forget to use, become sexually inactive or the couple is separated or divorced.

**Table 7. Percent of Currently Married Women in Thailand Aged 15-44 by Previous Contraceptive, Current Contraceptive Status, and Reason for Discontinuation: 1980**

Reason for Discontinuation	Previous Method					Total
	Pill	Condom	Injections	IUD	All Others	
A. NOT CURRENTLY USING A CONTRACEPTIVE						
Side effects	39.1	0.0	44.7	12.8	.6	30.8
Inconvenient	1.1	4.9	1.6	5.1	2.2	1.8
Dislike	1.1	6.9	.8	5.1	3.9	2.1
Pregnancy	37.0 <sup>a</sup>	49.0	27.6	46.2	55.6	39.0
All other	21.6	39.2	25.2	30.8	37.6	26.3
Total	100.0 <sup>b</sup>	100.0	100.0	100.0	100.0	100.0
N	703	102	24	639	178	1,268
B. CURRENTLY USING A CONTRACEPTIVE						
Side effects	44.2	.7	57.8	19.1	.8	33.8
Inconvenient	3.1	12.7	3.8	4.6	6.7	5.0
Dislike	11.1	32.4	8.0	14.4	36.4	16.7
Pregnancy	25.9	25.0	15.2	29.8	31.7	24.7
All other	15.7	29.2	15.2	32.1	24.4	19.7
Total	100.0	100.0	100.0	100.0	100.0	100.0
N	1,150	284	526	215	360	2,535

<sup>a</sup> Pregnancy category includes desire to get pregnant, as well as becoming pregnant.

<sup>b</sup> Columns may not add exactly to 100.0 owing to rounding.

Looking first at Panel A in Table 7 for women who are not currently using contraceptives, it is apparent that side effects were a major reason of discontinuation for women who used the pill and Depo-Provera. Interestingly, side effects were not very important for discontinuation of the IUD and nearly non-existent for users of condoms and other methods. Pregnancy accounted for a large proportion of discontinuation of the four methods listed.

Women who are currently using a contraceptive are shown in Panel B. In other words, these are women who have switched methods. For all methods used, a higher percentage of current contraceptors than non-contraceptors gave side effects as the reason for discontinuation. For instance, 58 percent of the current contraceptors who had used injectables report side effects as the reason for discontinuation, versus 45 percent of the women who discontinued use. Also, inconvenience and dislike of the method were much more important for current contraceptors than for women who discontinued use. Conversely, pregnancy is given as a reason for discontinuation much less frequently for current contraceptors.

From Table 7 we can conclude that Thai women who do experience side effects generally switch to a different contraceptive, hopefully one that is more suitable to their personal needs. Given the medical literature on the long-term problems associated with the pill and Depo-Provera, it is not surprising that women who have used them experience the greatest incidence of side effects and either discontinue use or switch methods. The contraceptive couple must always weigh effectiveness with other issues such as convenience and side effects. It is clear that many women choose the most effective method, such as pill, IUD, and injectables, but for some of these women, side effects are severe enough that less effective methods must be chosen or they must risk pregnancy.

## CONCLUSIONS

With the ever-increasing number of persons using contraceptives in Thailand, the importance of identifying and reducing side effects becomes more apparent. Female sterilization is currently the most commonly used contraceptive method in Thailand and the incidence of side effects is quite low for that method. However, sterilization is used to limit the number of births rather than for spacing. Younger persons or those who wish to delay a birth may be much more likely to use either the pill or injectables, both of which are found in this study to have a high incidence of side effects. The percentage of persons who have experienced side effects is lower for IUD users, and considerably lower for those who use condoms and other methods. Each couple must weigh the pros and cons of effectiveness, availability, side effects, and permanency of method before deciding on the appropriate method for them.

There are distinct variations in the reporting of side effects according to method. In general, medical/health side effects are reported most commonly by women living in Bangkok, Buddhists, and women with the lowest levels of education. The reasons for this may include such factors as women with more education having more information available to them and, thus, more choices available if one method is unsuitable. Also, they may be more likely to be in a marriage where the husband is willing to accept responsibility for contraception and use methods such as condoms and male sterilization, which have low incidence of side effects.

Again, of all methods, side effects of the pill and injectables were the highest regardless of duration of use, education of women, or source of contraception, and especially in Bangkok. The discontinuation and switching of contraceptive methods due to side effects is found to be highest among pill and Depo-Provera users.

Self-reporting of side effects is very beneficial for a study such as this, but it would also be valuable to have a medical evaluation of the side effects reported by women in this sample. It would be particularly interesting to examine what advice--such as discontinuation or switching to another method--was given by the medical personnel and whether or not that advice was heeded by the woman. It would also be useful to have more detail on the type of problem encountered and the duration of the occurrence. We might also look to social-psychological variables to provide more depth to this complex process of contraceptive choice and use. These and other pertinent research questions may be answered in the near future by additional health and contraceptive use surveys currently being undertaken in Thailand.

## FOOTNOTES

1. Cervical cancer develops in stages. Dysplasia is the condition in which tissues lose their normally differentiated cellular structure ("Prolonged Pill Use, Many Sex Partners May Lead to Cervical Cancer or Precursors, Studies Find," 1981).
2. Distribution of modern contraceptives in Thailand began as early as 1963 at the McCormick Hospital in Chiang Mai when the hospital began offering IUDs (Baldwin, 1978). The National Family Planning Program (NFPP) under the direction of the Family Health Division of the Department of Health was begun in 1970 to provide the majority of family planning services in Thailand, although other international organizations such as AID and UNFPA have given assistance (Rosenfield et al., 1982).
3. Because Depo-Provera has been used in Thailand for over 20 years, there have been a number of studies of users of injectables. One study (Pardthaisong et al., 1980) showed that there is some delay in the ability to conceive among Depo-Provera users as compared to IUD users, but by 24 months there is no significant difference between the two groups in the proportion who became pregnant. Another study in Thailand (Narkavanokit et al., 1982) found that termination owing to side effects was higher for Depo-Provera than the pill or IUD. They determined that at the end of 12 months, 25 percent of the women using Depo-Provera would terminate owing to side effects.
4. Women living in provincial urban areas are not included in this table. There were few of them to cross-classify by method. Preliminary analysis indicated that their pattern of side effects was different enough from women in Bangkok that it was not appropriate to group the two together.

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