The 'Unreached' in Family Planning : A Case Study of the Republic of Korea

Although the family planning programme has been quite successful, it has not been able to extend its services to all couples

By Kye-Choon Ahn, Kyung-Yong Rhee, Bong-Hwa Jung and Jung-Ja Kong*

The family planning programme of the Republic of Korea has been quite successful, yet it has not been able to extend its services to all couples of child-bearing age. For example, there still exists a group of couples who want no more children and yet are not currently using any contraceptive method. The

* The authors of this article are from the Institute of Population and Health Services Research, Yonsei University, Seoul, Republic of Korea.

word "*pong-eem*," which literally means "being neglected", i.e. untouched by the family planning programme, was coined to describe this group (Park et al.).

Pong-eem couples have comprised the first priority target group since the initiation of the family planning programme in 1962. They form a significant proportion of the population. National surveys have shown that the proportion of women of reproductive age in the *pong-eem* group was 30 per cent in 1976, 34 per cent in 1978 and 26 per cent in 1979 (see also Westoff and Pebley, 1982).

Although the *pong-eem* group was identified as a problem group in the family planning programme, few studies have focused on it specifically; in particular, the psycho-social characteristics of the *pong-eem* group had not been closely investigated.

The study on which this article is based was designed to overcome that shortcoming and provide family planning administrators and workers with the specific information they need in order to reduce the size of the *pong-eem* group. This information is also designed for the use of policy makers in formulating strategies aimed at providing those who are in the *pong-eem* group with family planning services, and to enable decision makers to allocate resources efficiently. Furthermore, it was designed to provide biomedical scientists with useful information related to the *pong-eem* group's knowledge of, and attitudes towards, specific contraceptive methods so as to improve existing methods and to develop more acceptable ones in the future.

Past studies have shown that members of the *pong-eem* group tend to have more than the average number of children compared with couples practising contraception. Those studies have revealed that the mean age of those in the *pong-eem* group is 36 years, which means they need to be protected from the risk of pregnancy for about 10 years on average. Previous studies have also shown that women in the *pong-eem* group generally have been less frequently exposed to the mass media and contacts with family planning field workers than current users of contraception.

One study (Westoff and Pebley, 1982) identified problem groups that specified a wide range of possible impediments to the family planning programme, ranging from attitudinal constraints such as the persistence of son preference to matters such as not knowing where to obtain government contraceptive supplies. That study showed that unmet need for contraception tended to be higher among women in the age group 30-44 years, those with three or more children, those living in rural areas, those working for wages and those who were among the less well educated of the population.

While conceptualizing the study, we made the following assumptions regarding the background and psychosocial characteristics of the people in the *pong-eem* group:

- Women in the *pong-eem* group are likely to be under less demographic pressure than the current users of contraception;
- They are likely to have less knowledge and information about contraceptive methods and family planning services than current users;
- They are likely to have weak motivation to practise family planning compared with current users;
- They are likely to get less social support for family planning than current users;
- They are more likely to have experiences of negative reinforcement with respect to contraceptive methods than the current users;
- Family planning services (in terms of both the actual services and perceptions of them) are likely to be less easily available and less accessible than for current users;
- Since family planning services have been made available and are accessible almost everywhere in the country owing to the scope of the national programme, psychosocial characteristics would comprise more important factors with regard to couples being in the *pong-eem* group; and
- Other things being equal, the *pang-eem* group of women are more likely to rely on alternative meansures to contraception for limiting the size of their family.

Methodology and data

The study was restricted to married women under 45 years of age. Women who were married but not currently living with their husbands were excluded from the *pong-eem* group as were those not at risk of pregnancy.

Since the objective of the study was to determine the effects of psychosocial characteristics on family planning practice rather than to estimate parameters for the entire population, it was not necessary to draw from a national representative sample which would have required much more effort and expense. Rather, cluster samples were chosen from both urban and rural areas using the list of 1980 census enumeration districts of the National Bureau of Statistics/Economic Planning Board. One typical subregion each from Seoul City and Choong Nam province (Sudaemun-ku and Chungyang-kun counties) were sampled. The number of *pong-eem* women interviewed was 93 and 183 in

the urban and rural areas, respectively. The proportions of women in the *pong-eem* group among currently married women under 45 years of age were estimated to be 3.8 per cent and 8.2 per cent for the urban and rural areas, respectively, the average being 6 per cent for the total population under study.

To determine whether or not respondents wanted to have more chidren, two questions were asked in sequence:

(a) "Do you want to have a child now"?

If the woman answered "no" to that question, she was asked:

(b) "Then do you want to have a child sometime in the future"?

If a respondent answered "no" to both of these questions, she was judged to want no more children. To determine their practice of family planning, respondents were asked whether they were currently using any contraceptive methods, without any distinction being made to determine whether the methods were effective or ineffective.

Background characteristics of respondents

In analysing the data, an attempt was made to compare the basic demographic and socio-economic characteristics of the respondents to determine if there were any differences in characteristics between those living in the rural and urban areas.

The preliminary analysis showed that, as expected, the age composition of the respondents was older than that of a standard sampling of currently married women from the rural and urban areas. The majority of the respondents were 30 or more years of age; they had been married 10 years or more, having two or more children, with a birth interval of more than one year.

In comparing the demographic characteristics of the rural and urban respondents, however, considerable differences were revealed: on average, rural respondents were almost two years older, had been married longer and generally had one child more per couple than the urban respondents. Also, the rural women tended to have a longer open birth interval than the urban women. However, this phenomenon could have been be a reflection of the composition of the rural population, which has been getting older because of the out-migration of young people to urban areas.

When the socio-economic characteristics of the two groups were compared, the differences between the rural and urban respondents were much

more striking. As expected, the levels of educational attainment and family income were much higher in the urban area. With regard to husbands' occupation, there was quite a difference between the two groups: in the rural areas, three fourths of the husbands were farmers, while in the urban area, most of them were white- and blue-collar workers. The majority of the female respondents in both the rural and urban areas did not work for wages. The proportion of nuclear families among the *pang-eem* group was remarkably higher than that of extended families in both the rural and urban areas, but much more so in the urban area. Religious affiliation was somewhat different: in the rural areas, Buddhism was predominant while in the urban area, Protestantism was predominant.

Because the two groups of respondents were so different from each other in terms of demographic and socio-economic characteristics, they were treated separately.

Family planning status of the *pong-eem* group

Although the study was focused on the *pong-eem* group, the major dependent variable was the family planning status of the respondents, i.e. whether or not the individual respondent was currently using any contraceptive method. Therefore, the respondents were divided into two groups:the *pong-eem* group and the current users group,

The *pong-eem* group was further divided into two distinct subgroups: "disadopters" and non-adopters. The term disadopters refers to those who discontinued the use of contraceptive methods, whereas the term non-adopters refers to those who had never used any contraceptive method. The proportion of disadopters was 50.5 per cent in the urban area and 59.8 per cent in the rural areas. The rate of disadoption was somewhat higher in the rural areas than in the urban area, perhaps because of differences with regard to the contraceptive methods people were currently using as shown below:

	Urban (%)	Rural (%)
IUD	9.3	18.6
Oral pill	9.3	13.6
Vasectomy	17.5	4.5
Female sterilization	44.3	26.6
Condom	9.3	12.1
Other, traditional methods	10.3	24.6

Table 1: Background characteristics of (a) respondents, by area, and (b) disadopters and non-adopters

Background characteristics	Rural		Urban		Dis-adopters (No.=151)	Non-adopters (No.=151)
	Number	%	Number	%		
Total	377	100.0	187	100.0	(per cent)	
Age of respondents						
Under 30 years	49	13.5	33	17.6	16.6	23.5
30 -34 -	88	25.5	52	27.8	24.0	30.4
35 - 39	109	27.8	53	28.3	14.7	20.9
40 or more	131	33.2	49	26.2	44.7	25.2
Duration of marriage						
Under 7 years	61	15.2	57	28.5	21.3	33.0
7 - 12 years	138	34.5	63	31.5	23.3	34.0
13 years or more	201	50.3	80	40.0	55.4	33.0
Number of living children						
1	4	1.1	18	9.5	5.1	5.2
2	77	20.4	76	40.6	26.0	38.3
3	124	32.9	64	34.2	32.7	24.3
4 or more	172	45.6	29	15.5	36.0	32.2
Open birth interval						
1 year or less	61	20.0	32	22.0	18.7	38.1
1-4 years	107	27.2	60	30.0	28.0	29.6
5 years or more	209	52.8	95	48.0	53.3	31.3
Educational attainment						
No formal education	81	21.5	13	1.0	18.0	14.8
Primary school	239	63.4	34	18.2	51.3	42.6
Middle school	42	11.1	68	36.4	19.3	26.1

High school or more	15	4.0	12	38.5	11.3	16.5
Husband's occupation						
No occupation	5	1.3	7	3.1	1.3	4.4
Farmer	289	76.7	-	-	55.6	42.6
Service, sales or production worker	39	10.3	107	51.2	25.2	30.4
Professional, managerial, skilled or clerical worker	44	11.7	13	39.0	11.9	22.6
Respondent's occupation						
No occupation	321	85.8	157	84.5	81.4	90.4
Farmer	15	3.7	1	0.5	6.0	1.1
Service, sales or production worker	38	9.5	22	11.0	11.3	7.0
Professional, managerial, skilled or clerical worker	4	1.0	8	4.0	1.3	0.9
Family income (in 1,000 won per month)						
Less than 200	272	72.1	35	18.7	51.0	54.8
200 - 500	100	26.5	118	63.1	44.4	39.1
500 or more	5	1.3	34	18.2	4.6	6.1
Family type						
Nuclear family	146	38.7	125	66.8	66.9	66.1
Extended family	231	61.3	62	33.2	33.1	33.9
Religion of respondents						
Buddhism	124	32.9	30	16.0	28.5	24.3
Protestantism	45	11.9	50	26.1	13.9	14.8
Catholicism	2	0.5	16	8.6	2.0	6.1
No religion*	206	54.6	91	48.7	55.6	54.8

* *Note:* Six respondents (1 urban and 5 rural) who practised other religions were included in this category.

The national family planning programme emphasises the first five methods of contraception. Of them, female and male sterilization were particularly popular in the urban area, whereas the other methods were almost evenly-distributed in the rural areas, a trend which is similar to the national average. Women in rural areas tend to use temporary and ineffective traditional methods such as rhythm and withdrawal more than urban women, and, therefore, they are more likely to discontinue contraceptive use. This may also explain in part the higher incidence of *pong-eem* women in rural areas.

Disadopters in the *pong-eem* group gave the following reasons for discontinuing contraceptive use:

	Urban (%)	**Rural (%)**
Not too long after birth	15.0	9.8
Uncertain of the effects of methods	5.0	6.9
Due to side-effects of methods	27.5	52.0
Inconvenient to use	20.0	11.8
Other reasons	32.5	19.6

In both the urban and rural areas, the most important reasons for disadoption were related to the nature of the contraceptive methods. It was also noted that the proportion of unspecified "other reasons" was relatively high in the urban and rural areas, which indicates a need to explore the psychosocial reasons for being a *pong-eem.* Non-adopters among the *pang-eem* gave the following reasons for never having used any contraceptive method:

	Urban (%)	**Rural (%)**
Wanted to have a child	57.1	50.0
Think contraception morally unacceptable	4.8	–
Cannot believe the effects of contraception	2.4	1.4
Afraid of side -effects	14.3	18.6
Inconvenient to use	9.5	4.3
Near menopause	9.5	21.4
Other reasons	2.4	4.3

Surprisingly, in both the urban and rural areas, the most important reason for non-adoption was that the couples wanted to have a child. More than half of the non-adopters said that they had never used contraceptives because

they wanted to have a child, even though they had said at the time of the survey that they wanted no more children.

If the two statements "wanted to have a child" and "want no more children" are regarded as equally valid, the results may be interpreted in several ways. The first possibility is that the couple may have had the child they wanted some time before the survey, subsequently stating at the time of the survey that they "want no more children". If this was the case, they would likely be preparing to use contraceptive methods in the near future.

The second possibility is that these two statements could reveal indecision or ambivalence with respect to having a child. If this was the case, it would not have really mattered to them whether or not they would have another child, even though they had said previously they wanted no more children.

The third possibility is that the statement "want no more children" could have been regarded as a reflection of the social desirability of family planning. If this was the case, the respondents who said that they wanted no more children would not really belong to the *pang-eem* group in the strict sense because they wanted to have more children. However, since there is no clear evidence to support this interpretation, we included these respondents in the pang-eem group. The first possibility seems to be the most likely one, but the second and the third cannot be excluded entirely.

Another major reason for non-adoption is also related to the nature of contraceptive methods. In both the urban and rural areas, about 20 per cent of the non-adopters did not practise contraception because they were afraid of possible side-effects and because they thought it would be inconvenient to use contraceptive methods.

Furthermore, a considerable number of non-adopters said that they were approaching menopause. However, since they said they were fecund, we did not exclude them from the *pang-eem* group. Although these non-adopters thought they were fecund, their chances of getting pregnant were small. Nonetheless, their verbally stated reasons for non-adoption must be taken into account in interpreting the relationship between psychosocial characteristics and family planning status.

In comparing demographic characteristics between disadopters and non-adopters, there were differences such as the age of respondents, duration of marriage and birth interval. Non-adopters were evenly distributed among all age groups, but the proportion of disadopters was the highest among those 40 or more years of age. A similar pattern was noted with regard to the duration of marriage; 55.4 per cent of the disadopters had been married 13 years or more. However, the disadopters and non-adopters were different with re-

Table 2: Per cent distriiution of family planning status, by age of respondents and by area

Status	Urban				Rural			
	Under 30 years old	30-34	35-39	40 or more	Under 30 years old	30-34	35-39	40 or more
Pang-eem	54.5	55.8	22.6	61.2	69.4	50.0	31.2	49.6
Current user	45.5	44.2	11.4	38.8	30.6	50.0	68.8	50.4

gard to open birth interval. Disadopters tended to have longer open birth intervals compared with non-adopters. Also, the proportion of disadopters was much higher among women with an open birth interval of five years or more, while the distribution was even among non-adopters. As for other demographic characteristics, there were no major differences between disadopters and non-adopters.

Background characteristics

Table 2 shows a statistically significant relationship between the age of respondents and their family planning status in both the urban and rural areas. The proportion in the *pong-eem* group was higher among respondents under 30 years of age; it decreased drastically up to age 40, but abruptly increased after 40 years of age.

We speculated about the reasons for these phenomena. Although all the respondents stated verbally that they did not want any more children, younger women seemed more likely to remain in the *pong-eem* group because they were not fully determined to have no more children. They simply may have hesitated about using certain contraceptive methods or they may not have made a decision regarding contraception. By contrast, women 40 or more years of age were more likely to remain in the *pong-eem* group because there was less risk of their getting pregnant, even though they thought they were fecund.

Similar patterns were found with regard to the duration of marriage and family planning status.

The relationship between the number of living children and family planning status is examined in table 3. The proportion in the *pong-eem* group was higher than expected for those women having two or fewer children but was lower for women with three children. (It may be noted that the goals of the "stop at two" campaign of the national family planning programme had not yet

Table 3: Per cent distribution of family planning status, by the number of living children and by area

Status	Urban			Rural		
	2 or fewer	3	4 or more	2 or fewer	3	4 or more
Pong-eem	50.0	40.6	55.2	61.7	41.1	44.2
Current user	50.0	59.4	44.8	38.3	58.9	55.8

been realized, particularly in rural areas.) The proportion of women in the *pong-eem* group having four or more children was higher in the urban area than in the rural areas despite the older age composition of the rural population. This may have been due to the ease with which induced abortion could be obtained in the urban area.

In both the urban and rural areas, the proportion of women in the *pong-eem* group was highest for those who had no sons, whereas it was the lowest for those women who had at least two sons (**table 4**).

Despite the fact that all of the respondents said that they did not want any more children, the respondents who had no sons were quite likely to remain in the *pong-eem* group whether they were from the rural or urban areas.

Son preference influences family planning status; *pong-eem* women who had no sons probably wanted to have at least one son, even though they openly claimed, in front of the interviewers, that they did not want any more children. However, it should be remembered that the number of women who had no sons was very small, i.e. 3 per cent of the respondents in the rural areas and 10 per cent of those in the urban area.

Table 4: Per cent distribution of family planning status, by the number of sons and by area

Status	Urban			Rural		
	0	1	2 or more	0	1	2 or more
Pong- eem	72.2	46.6	43.2	80.0	61.8	39.3
Current user	27.8	53.4	56.8	20.0	38.2	60.7

Table 5: Per cent distribution of family planning status, by open birth interval and by area

Status	Urban			Rural		
	1year or less	1-4 years	5 Years or more	1 year or less	1-4 years	5 Years or more
Pong- eem	81.3	38.3	42.1	78.7	52.3	34.9
Current user	18.8	61.7	57.9	21.3	47.7	65.1

The open birth interval may be the defined as the interval between the last live birth and the time of the survey. However, those women with an open birth interval of three months or less were excluded from the survey. The proportion of women in the *pong-eem* group tends to be inversely correlated with the open birth interval (table 5). Although the open birth interval may also be determined by family planning status, it is noteworthy that the proportion of women in the *pong-eem* group was much higher among women from both the urban and rural areas who had an open birth interval of one year or less. Some of those women may have still been in postpartum amenorrhea although they said they were fecund; also many of them may have wanted to remain in *pong-eem* status for psychosocial reasons.

In assessing the socio-economic characteristics of the respondents, it was found that only two variables, the educational level and occupation of respondents, were worth discussing. The proportion of women in the *pong-eem* group in the urban area tended to be inversely correlated with their educational level, whereas in the rural area, it tended to be high among those women who attained higher education. Generally, it may be expected that educated women are less likely to remain in the *pong-eem* group, as actually observed in the rural areas.

Table 6: Per cent distribution of family planning status, by the educational level of respondents and by area

Status	Urban			Rural		
	Primary school orless	Middle school	High school or more	Primary school orless	Middle school	High school or more
Pong- eem	55.3	52.9	37.5	45.0	57.1	60.0
Current user	44.7	47.1	62.5	55.0	42.9	40.0

Because it would be meaningless to classify respondents by occupation owing to the small number of working women in both the rural and urban areas, we simply dichotomized the working status of respondents and examined that relationship with their family planning status (**table 6**).The proportion of women in the *pang-eem* group was considerably higher for urban working women than for those who were not working for wages, whereas for rural women, the reverse was true. Thus the relationship in the urban area was contrary to our expectation that working women would be less likely to remain in the *pong-eem* group. Although the reason for this is not clear, the age of the respondents and the kinds of work they performed may have been confounding factors. Other socio-economic characteristics were not statistically significant.

Psychosocial characteristics and family planning status

Among the factors affecting the family planning decisions of couples is demographic pressure, which may be defined operationally as the degree to which the respondents felt pressure with respect to the number of living children they had.

Demographic pressure was measured first by asking respondents directly whether they felt any burden in rearing, educating and training their living children, and second by combining their responses. However, there was no statistically significant relationship between demographic pressure and family planning status.

With regard to the couples' knowledge about contraception, two measures were used: knowledge of contraceptive methods and knowledge about where to obtain family planning services and specific contraceptives. The level of knowledge was generally high in both the rural and urban areas. As expected, the higher the respondents' level of knowledge was, the lower was their proportion in the *pong-eem* group.

In a country such as the Republic of Korea where the national family planning programme has been implemented for a long time, attitudes towards family planning are generally favourable and usually have no significant effect on contraceptive practice. Thus we attempted to measure attitudes more specifically by asking respondents whether or not they approved of various family planning incentives and disincentives adopted by the Government. In both the urban and rural areas, the proportion of women in the *pong-eem* group was higher among those who disapproved of the Government's population policies, although the proportion was not statistically significant in the rural areas.

Motivation to practise family planning was measured by a composite index obtained from responses to the following questions:

- What would you do if your husband wants you to have more children?
- What would you do if your parents-in-law want you to have more children?
- What would you do if your close relatives want you to have more children?

Although the relationship between motivation to limit family size and family planning status was not significant in either the urban or rural areas, the proportion of women in the *pang-eem* group was much higher among those who were least motivated.

Social support for family planning refers to the degree to which individual respondents get support from others, such as husbands, family members, relatives, neighbours, close friends and medical personnel, to practise contraception. It was measured, first, by asking respondents how much they talked about contraception with others and, second, by asking them whether such people approved of their use of contraceptive methods.

It was found that the relationship between family planning status and the degree of communication with others was statistically significant in both the urban and rural areas.

As was expected, the lower the level of social support for family planning, the higher was the proportion of women in the *pong-eem* group in both the urban and rural areas.

Among the psychosocial characteristics, social support for family planning was the most closely related to the family planning status of couples no matter what measure of social support was used.

The last psychosocial characteristic in our conceptual framework was negative reinforcement concerning contraception which refers to the degree to which respondents were exposed to negative information or had any negative experience with respect to contraception. Disadopters and current users were asked whether or not they had experienced any side-effects with any contraceptive method; **table 7** shows that the proportion of women in the *pong-eem* group was higher among those who had experienced side-effects, although it was not statistically significant.

Next we examined the relationship between family planning status and the degree of exposure to negative information regarding contraception or contraceptive methods. Negative reinforcement was measured by asking

Table 7: Per cent distribution of family planning status, by respondents' working status and by area

Status	Urban		Rural	
	Not working	Working	Not working	Working
Pong-eem	45.9	56.7	48.3	39.3
Current user	54.1	43.3	51.7	60.7

respondents whether they had read or heard about any negative aspects (mainly side-effects) concerning various contraceptive methods.

More than half of the disadopters had discontinued their practice of contraception because of method-related reasons; nearly one fourth of the non-adopters did not practise contraception because of method-related reasons such as doubts about the effectiveness of contraceptives, side-effects and inconvenience. Such reasons were likely to have negatively reinforced women's decisions regarding family planning. Contrary to our expectation, however, negative reinforcement regarding family planning did not make any significant difference in the proportion of women in the *pong-eem* group in both urban and rural areas. A certain level of negative reinforcement seems to be inevitable both for the current users and the *pong-eem* group; however, it does not seem to matter very much in this country because several alternatives are readily provided by the national family planning programme.

Family planning services and family planning status

Factors related to family planning services comprise another group of independent variables in the conceptual framework. The Republic of Korea's family planning services are provided through two separate channels: the Government's national family planning programme and the private or commercial sector. The family planning services of the national programme are provided mostly by family planning field-workers, designated physicians, health centres and authorized hospitals, whereas those of the private sector are provided by pharmacies, private clinics and hospitals.

The availability of family planning services was measured by asking whether there were any such channels which provided family planning services in the community. The responses showed that, because family planning services have been available almost everywhere in the country since the initiation of the national programme in 1962, the availability of services does

not seem to make any significant difference with regard to family planning practice. Furthermore, the distance to such centres where family planning services are available and the time needed to get to them either on foot or by bus was measured, but this factor was found to be statistically insignificant.

This finding was the opposite of what had been expected. Although we have no plausible explanation for this finding, it could be that respondents were reluctant to visit nearby clinics for fear of a loss of privacy. Also, it could be that the variations in distance to the service points in both the urban and rural areas are not great enough to make a significant difference in the practice of family planning. Public transport is relatively well developed in both the rural and urban areas; most respondents could easily reach service points within a half hour, or an hour at most.

Finally, contact with family planning field-workers was assessed since they are the educators about family planning and the providers of services at the grass-roots level. While family planning field-workers are located almost everywhere in the Republic of Korea, accessibility to them varies from one area to another. The worker-to-population ratio is generally higher in rural areas than in urban areas. Contact with family planning workers may be regarded as a consequence of accessibility, availability and the worker's activity.

Table 8 shows that, although the proportion of those who had contact with family planning workers was higher in the rural areas than in the urban area, contact with the workers was statistically significant only in the urban area.

Because family planning services are available almost everywhere throughout the country, we could not conclude that the availability and accessibility of family planning services are not important factors to the individual practice of contraception.

Table 8: Contact with family planning workers and family planning status, by area

Status	Urban		Rural	
	No	Yes	No	Yes
Pong- eem	56.6	37.5	55.6	44.3
Current user	43.4	62.5	44.4	55.7

Multivariate analysis

The manner in which each of the background characteristics, psychosocial characteristics and family planning services variables was related to the dependent variable, i.e. family planning status, was examined. Since some of those variables may have been related to each other, multivariate analysis, using the multiple classification analysis (MCA) available on the Statistical Package for the Social Sciences, was carried out. It made possible an evaluation of the independent and relative effects on the dependent variable of each variable in the analytical framework. It also enabled us to evaluate the relative and the total effects of each group of variables and finally the total effects upon the family planning status of all variables included in the conceptual framework.

Based on the results of the bivariate tabular analysis, five background characteristics were selected for entry in the MCA: age of respondents, number of sons, open birth interval, educational attainment and working status of the respondents.

The age of the respondents and the open birth interval were found to be significantly related to family planning status in the urban area, with the open birth interval being the most powerful of the two predictors.

Nonetheless the explanatory power of the number of sons and educational level was considerable. The five background characteristics together explained 22.1 per cent of the variance in the proportion of women in the *pong-eem* group.

In the rural areas, the open birth interval and the age of respondents were also powerful predictors of family planning status. In contrast with the urban area, however, the number of sons was significantly related to the proportion of rural women in the *pong-eem* group, which may have been due to the stronger preference for sons in the rural area. The explanatory power of the educational level and working status was reduced considerably in the rural areas, mainly because most of the rural female respondents had completed only primary school or a lower level of education and did not work for wages but were engaged in farm work. They may have felt, therefore, that there was less of a need for them to practise family planning.

Two groups of independent variables were also entered separately into the MCA. First, the effects of the five psychosocial characteristics, namely knowledge of contraceptive methods, attitudes towards family planning, motivation for family planning, social support for family planning and exposure to negative information about contraception, were analyzed.

In the rural areas, knowledge of contraceptive methods and social support for family planning were significantly related to family planning status; however, the explanatory power of these two variables was not sufficiently high. In particular, the effect of negative reinforcement was negligible despite the fact that the most frequently stated reason for disadoption and non-adoption was related to the negative aspects concerning contraceptive methods. Most of the respondents had been exposed to some degree of negative information regarding contraceptive methods, but this did not seem to make much difference to their practice of family planning. In the rural areas, on the whole, all of the psychosocial characteristics explained only 6 per cent of the variance in the dependent variable.

As for family planning services, two alternative measures, i.e. the availability and accessibility of those services and contact with family planning workers, were entered into the MCA. In the urban area, three of the service variables were shown to be closely related to family planning status, namely availability measured by whether or not respondents had ever met the family planning worker or had ever gone to a health centre for family planning services, accessibility measured by the actual distance to service points, and contact with a family planning worker during the previous year. Although the measures of availability and contact to some extent conceptually overlap, they had remarkable independent effects on the dependent variable, even when the effects of the other variables were taken into account.

While the family planning worker-to-population ratio was much lower in the urban area, contact with a worker was the most powerful predictor of family planning status. The availability of family planning service points in the community and accessibility measured by the time required to reach the service points had very weak explanatory power, because family planning services points, private and public, are available in most urban communities and, in most cases, can be easily reached within about half an hour. On the whole, the five family planning service variables explained only 11 per cent of variance in the dependent variable.

In the rural area, contact with a family planning worker was the most powerful predictor, although its explanatory power became weak. Unlike in the urban area, the availability of service points and accessibility measured by time do matter in the rural areas. On the whole, the variance explained by the family planning service variables was only 3 per cent.

The amount of variance explained by psychosocial characteristics was larger than that of family planning service variables in both the urban and rural areas, owing to the fact that more emphasis has been put on services since the initiation of the national family planning programme. Family plan-

ning services have been made more standardized throughout the country so that little variation exists from one county to another.

To examine the total effects of the two groups of independent variables, we entered the five psychosocial characteristics into the MCA using the five service variables as covariates; the total amount of variance explained by them was 19 per cent and 8 per cent in the urban and rural areas, respectively. Without taking into account the interaction between them, it may be said that background characteristics proved to be more powerful predictors of family planning status than the two groups of independent variables. However, the effect of background characteristics on family planning status was likely to have been mediated by the two groups of independent variables in our conceptual framework.

To examine the total effects of all variables on the dependent variable in our conceptual framework, we selected five background characteristics as covariates and five independent variables that were strongly related to family planning status (three psychosocial characteristics and two service variables) and put them into the MCA. The total amount of variance explained by the five independent variables together with the five background characteristics was 27 per cent and 19 per cent in the urban and rural areas, respectivley, which is not very impressive, particularly in the rural areas. The urban-rural differences in the amount of explained variance seem to reflect the differences in the execution of the national family planning programme. At any rate, the amount of variance in the dependent variable not explained by background characteristics and independent variables still remains remarkable in both the urban and rural areas. This seems to be due partly to the fact that the *pong-eem* group under study consisted of two distinct subgroups, disadopters and non-adopters.

Induced abortion, family planning status and future behavioural intentions

An important factor in the analysis was induced abortion. Despite the fact that induced abortion for the purpose of controlling family size is prohibited by law, it is widely practised by women who want to limit the number of their children. Thus, the women who rely on induced abortion are not likely to practise contraception.

When asked if they approved of induced abortion to limit family size, the majority of respondents said that they did.

Attitudes towards induced abortion, however, did not make any significant difference with regard to family planning status, probably because the

women knew that they could easily have an abortion whenever they wanted, regardless of their attitude towards the practice. About 40 per cent of the respondents in both the rural and urban areas had experienced one or more induced abortions.

Experience of induced abortion was related to family planning status, although the relationship was not significant in the urban area. Unexpectedly, in the urban and rural areas, the proportion of women in the *pong-eem* group was lower among those who had experienced an induced abortion. It may be that *pong-eem* women are more likely to rely on induced abortion as an alternative to contraception. One explanation for this contradiction would be that Korean women seem to regard induced abortion as an alternate, rather than an alternative, method to control family size.

To the question:"Now that you said you want no more children, what would you do if you become pregnant accidentally in the future?", about 80 per cent of the respondents in both the urban and rural areas said that they would get an induced abortion. In both areas, however, the proportion of women who would get an abortion was considerably higher for the current users of contraception than for the *pong-eem* group.

As previously mentioned, one of the important reasons for being in the *pong-eem* group is related to the perceived side-effects of contraceptives. Thus we attempted to determine if the experience of any side-effects negatively affected the respondents' intention to use contraceptives. Contrary to expectations, more than 80 per cent of the respondents in both the rural and urban areas said that they would continue to practise contraception. More specifically, the current users would continue to practise contraception in the future, while the disadopters in the *pong-eem* group would discontinue.

With regard to the future behavioural intentions of the *pang-eem* group, about half of the women in the group said they would use contraception in the near future and the remaining *pong-eem* women said that they either would not use contraception or did not know what they would do. Nearly half of the *pang-eem* women in both the urban and rural areas who would not practise family planning in the future seemed to rely on their ability to have an induced abortion if they were to get pregnant.

Policy implications

In spite of the long history of the Republic of Korea's national family planning programme, there still exists a considerably large number of women in the *pang-eem* group in both urban and rural areas, although their proportion in the population has been reduced greatly in recent years.

The findings of this study about the *pong-eem* group have some policy implications that may be of interest to administrators and researchers who want to reduce the size of the *pong-eem* group, particularly in rural areas. However, it should be pointed out that the fmdings of the study cannot be generalized for developing countries where the family planning programme has had only a short history. The following are the major policy implications:

- Considering the composition of the *pong-eem* group, efforts should be made both to increase the continued use of contraceptive methods and to recruit new adopters of contraception. It would seem desirable to make male and female sterilization more widely available also in urban areas.

- Dissatisfaction with contraceptive methods seemed to be a salient point among both the *pang-eem* group and the current users. Considering the fact that the major reasons for disadoption and for non-adoption are method-related, the need for the further development of contraceptive technology cannot be over-emphasized. Administrators should attempt to identify improved contraceptive methods and make them easily available and accessible.

- Greater efforts should be made in recruiting new adopters among women under 35 years of age who do not want any more children. Efforts should also be made to enable older women to continue their practice of contraception, even though they are less fertile.

- Primary efforts should be directed towards those women with an open birth interval of less than one year, encouraging them to adopt contraception or to resume their use of contraceptive methods. Some kind of post-partum programme is highly recommended for this group.

- It would seem to be appropriate to consider some shift in the allocation of resources in the family planning programme. Considering the fact that psychosocial characteristics explained more variance in the family planning status than service variables, more resources should be allocated to IEC (information, education and communication) activities in order to reduce the proportion of women in the *pong-eem* group.

- With regard to IEC activities, emphasis should be placed on creating a social atmosphere favourable towards family planning. This would involve promoting changes in the values and norms regarding having children and changes in motivation and attitudes towards family planning. Strategies to reduce the level of son preference should be considered, particularly in rural areas. The IEC programme should

provide necessary information regarding contraceptive methods and services. The problem of disadoption should also be handled with IEC activities.

- The finding that contact with family planning workers made a significant difference in family planning status, particularly in the urban area, would make it desirable to increase the currently low family planning worker-to-population ratio in the urban area. Accessibility to service points should be enhanced in rural areas by establishing more service points in each community.

- The illegality of induced abortion should be reviewed, particularly in the case of accidental pregnancy owing to contraceptive failure.

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