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A PROFILE OF COLLEGE STUDENTS' INFORMATION SOURCES, KNOWLEDGE AND ATTITUDES ON REPRODUCTION AND CONTRACEPTION IN CEBU, CENTRAL PHILIPPINES

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1

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Attitudinal change in favor of the population program can be better accomplished when the attitudes of college students towards population issues are known. College students usually have strong views about current issues, including the population problem. Whether these views are favorable or unfavorable, and what are the specific issues, are the questions we would like to answer through this study.

The goal of changing college students' attitudes to favor the population program will be facilitated if program managers know the types of information channels through which most of these students can be reached. In the Philippines, family planning communication efforts aimed at information, education and motivation have so far encountered problems in the distribution, form and content of family planning materials (Bautista, 1976). If the postulation that information sources influence the formation of favorable or unfavorable attitudes towards the population program is true, identifying the students' information sources and their attitudes towards family planning can provide valuable input in designing future family planning communication programs.

College students in the Philippines number over half a million, placing the country third in Asia (excluding China) in college enrolment. In the Philippine social context, college students and graduates hold an important status in their respective hometowns. To the common folks, they are often informal opinion leaders on important issues like family planning. It is, therefore, imperative to study the students' communication behavior, knowledge and attitudes on family planning in order to effectively communicate with this major target group for a successful family planning program.

TABLE OF CONTENTS

INTRODUCTION

Involvement of young people in family planning programs is necessary for three main reasons. First, it is the future reproductive behavior of young people that will determine tomorrow's population growth. Second, it is the future quality of life of the young that will be felt by the number of people the society will be able to support in the next few decades. Third, young people can play significant roles in family planning programs areas -- in information and motivation, in family planning services and in other related activities. It is therefore important to examine how we can tap young people for family planning communication.

In the Philippines, the utilization of young people as harbingers of the population program to reach a wider audience has not been fully recognized as a nation-wide policy. Not until August, 1978 did the President of the Philippines proclaim through the local media the involvement of young people in the Philippine Population Program. However, baseline information, specifically data on current knowledge of and attitude towards population-related issues by young people is needed to plan the implementation of this policy.

This report attempts to provide information on college students in relation to family planning in terms of their: (1) sources, (2) knowledge and (3) attitudes.

These data can serve as baseline information for policy-makers and implementors of the region (Central Visayas of the Philippines) and of the country in (a) preparing college youth for their involvement in the Philippine Population Program, (b) expanding the program further to go beyond family planning, i.e., attitudinal change at the university and college levels, and (c) tapping the communication sources most frequently used by these youth in obtaining information on reproduction and contraception.

DESCRIPTION OF THE PROBLEM

Objectives of the Study:

The main objective of this study is to describe the communication networks of Cebu university students, and to find out how these networks are related to their adequacy of knowledge obtained and attitudes acquired towards human reproduction and contraception. The specific objectives are:

1. To obtain a baseline profile of the students':
   a. common sources of information on,
   b. extent of knowledge of, and
   c. attitudes towards;
   reproduction and contraception.

2. To find out the relationships between:
   a. the respondents' types of information sources, knowledge, attitudes and socioeconomic background;
   b. their types of information sources, knowledge, and attitudes controlling for socioeconomic background, and
   c. their types of information sources and attitudes, controlling for knowledge and socioeconomic background of college students.

3. To recommend to program administrators an effective media mix to reach the student segment of the family planning audience.

Past Studies:

People holding different attitudes towards change (i.e. with varying degrees of innovativeness) tend to turn to different sources of communication. Rogers and Shoemaker generalized from previous research on innovation diffusion that early adopters (innovators) who are more favorable towards change are more interconnected by interpersonal communication and they have greater exposure to both mass media and interpersonal communication channels than late adopters (1971).

However, there are few studies on audiences' communication networks in relation to their knowledge and attitudes towards family planning. Of more than 270 entries of family planning

communication researches in the latest bibliography on population studies, only 32 dealt with communication networks, channels and sources of information on family planning (Rosario, 1973). Of these, only two discussed communication networks and attitude in the acceptors' decision-making processes (Ellingsworth & Rosario, 1973; Fisek, 1966).

In the Philippines, studies have shown that mass media exposure of youths was directly related to their sexual attitudes. Africa (1974) found that first and second year college students' exposure to print media was directly related to their attitude towards going steady at an early age and towards early marriage. He found that the higher the print media exposure, the more favorable the attitude towards early marriage and going steady at an early age.

Yalung (1974) also found that among out-of-school teenagers, actual exposure to comics was directly related to the respondents' favorable attitude towards early marriage.

Castillo's study (1973) on mass media exposure and sexual attitude and behavior of college students in Greater Manila showed that "bomba" (sex) literature exposure was significantly related to dating attitude, intimacy permissiveness and sexual behavior. Newspaper exposure was significantly related to sexual behavior.

Studies on media exposure and family planning attitude also found similar relationships. Enriquez's study (1974) on high school students found that the majority of the respondents were highly exposed to radio and television and had a generally favorable attitude towards family planning. Roxas's study on 100 male college students showed similar results: they have high media exposure and a majority (54 percent) of them believe family planning is an important means of controlling population growth.

More conclusive results were found in Rarela's study
(1972) on mass media and KAP towards family planning. She
found that in her sample of married couples, the extent of
exposure to newspapers and movies was followed by the couples'
subsequent awareness of family planning. Likewise, those who
were exposed to the mass media had more favorable attitudes
towards family planning.

However, there has been no comprehensive study so far
on the Filipino college students' (a very important target
group in family planning programs) information sources and their
knowledge and attitude towards family planning. The closest to
such a study was Eshleman's nation-wide study (1971) of Filipino
students' reaction to fertility control. The study found that
two-thirds of the respondents perceive a population problem in
the Philippines; and 48 percent of the females and 44 percent of
the males suggest birth control and family planning as a solution
to the problem. This study, however, did not show any conclusive
relationships between the students' knowledge and attitude towards
family planning. As the college students will be prospective
acceptors and motivators of family planning, studies on this
population are definitely needed for input in planning future
family planning programs.

DESCRIPTION OF THE METHODOLOGY

Hypothesis:

Although our purpose is more of providing baseline data
to population program planners than exploring a theory of
causal sequence about the key variables, i.e., communication
networks, knowledge, background characteristics and attitude,
we formulate one composite hypothesis to guide the compiling,
organizing and examining of the data. The major hypothesis is
that sources of information on reproduction and contraception of
college students are significantly related to their attitude
towards the subject through their knowledge of the subject and
their background characteristics. This hypothesis serves
primarily as an illustrative theoretical model for analysis.
We hope that the preliminary analysis will point to more specific
hypotheses which can be tested with the same data.

Sampling:

As sampling had to be done before the list of enrolled
students can be released by the school, the original scheme of
choosing 500 students through a systematic stratified sampling
procedure (i.e., by p.p.s.) was changed to a simple random sampling
of regular undergraduate classes, taking all students enrolled in
the sampled classes without replication. To compensate for the
necessary change which probably weakened the representativeness of
the sample, the sample size was increased to 1000 students. This
decision was also made to ensure high returns of the self-administered
questionnaire.

FINDINGS

Findings From the Marginals

Before examining the findings to test our hypothesis, it is important to describe the respondents in terms of their background characteristics and their communication pattern, knowledge and attitude towards family planning.

A. Background Characteristics of Respondents:

Of the 700 students who returned the self-administered questionnaire, 656 had answered all the questions completely. Highlights of the background characteristics of the respondents are as follows:

1. Most of the respondents were females (74.0 percent).

2. Their mean age at survey was about 18.5 years (S.D.=2.4 yrs), 71.2 percent of them were teenagers.

3. Most of them (95.7 percent) had no regular dates at time of survey. Among them, only 28.8 percent stated that they had never experienced any regular dating relationships; 66.9 percent reported having no regular dates at survey time, and about 4.3 percent said they had been married.

4. Over half (58.7 percent) are commerce students, 15.0 percent engineering, 14.0 percent chemistry/pharmacy, and the rest were liberal arts and nursing students.

5. More than 50 percent had parents with some college education, with their fathers slightly more educated than their mothers.

6. Most of them have never out-migrated from the place where they were born (65.3 percent). About 54.6 percent of the respondents were city dwellers.

7. Most of them started primary schooling in the public elementary schools, but transferred to private schools when they reached secondary level. For 57.9 percent of the respondents, elementary schooling was done in the government-run school system. However, 83.4 percent attended high school in the private sector.

8. At the time of the survey, respondents were living with their own parents or close relatives (67.6 percent) in the city, on whom about 86.0 percent depended their financial support in school.

9. Work experience was minimal -- about 85.0 percent had never worked for money, and at the time of the survey, attended school as full-time students.

10. About 45.9 percent considered their religious convictions to be strong, and about an equal number (48.8 percent) thought theirs were moderate.

From the above highlights, this study profiles a single, urban teenager who is enrolled in the university, dependent primarily on family support, and who appears to have few regular dating activities.

Of the 13 background variables we have included in the questionnaire, we chose five for the construction of two indices for the correlation analysis. They are School Location Index (SLI) and School Type Index (STI). The composition of these indices and their construction are illustrated in Appendix B. SLI defines the respondent's usual place of residence and schooling (whether the location is mainly urban or provincial); while STI defines the main type of schools the respondents attended, their primary and secondary schooling (whether the two schools were mainly public or mainly private). Table 1 presents the percent distribution of the respondents by the two school indices. The data strongly suggest that respondents had their primary and secondary education mainly in the private schools in urban areas.

We chose these two indices on background characteristics because of the background variables; the ones composing SLI and STI are mutable (i.e. can be changed by policy). SLI and STI define the milieu of socialization among Filipino students. They help identify the target place of future population education programs, and can help the government initiate development of attitudes and values on population.

TABLE 1

Percent of Respondents, By School Location Index and
School Type Index: Cebu City, Philippines, 1979.

SELECTED INDICATOR OF BACKGROUND CHARACTERISTICS	PERCENT
School Location Index:	
1. Mainly provincial	9.8
2. Mainly urban	56.2
3. Combination	34.0
	100.0

School Type Index:	
1. Mainly public	15.8
2. Mainly private	40.8
3. Combination	43.4
	100.0

B. **Common Sources of Information on Reproduction and Contraception:**

A majority of the students have received explanations on human reproduction and contraception. About 80.3 percent answered "yes" on human reproduction and 64.6 percent on contraception. Only 8.2 percent of the students claimed they have not received any explanations on human reproduction, but 23.0 percent of the students answered "no" on contraception. The fact that three times as many respondents denied having received any explanation on contraception as on human reproduction indicates that contraception is a relatively unfamiliar subject. This is probably due to the recency of the Philippine Population campaign. Similarly, about 60.5 percent of the respondents had a correct understanding of human reproduction, but only 16.9 percent had chosen a correct meaning of contraception.

TABLE 2

Percent of Respondents Who Received Explanation on Human Reproduction and Contraception and Their Understanding of the Two Subjects: Cebu City, Philippines, 1979.

SELECTED INDICATOR	Human Reproduction	Contraception
1. **Ever Received Explanation:**		
Yes	80.3	64.6
No	8.2	23.0
Not Sure	11.5	12.4
	100.0	100.0
2. **Understanding of:**		
Correct*	60.5	16.9
Partly Correct	31.9	75.3
Not Correct	1.9	0.2
Not Sure	5.7	7.6
	100.0	100.0

*The more "correct" meaning is indicated by the "all of the above" answer, category no.4 in the question.

1. <u>Sources of Information Within the Family</u>. Within the
family, the initial provider of information on human reproduction
and contraception is often the most significant source of the
information as well. The mother is most often reported as the
initial provider of information on human reproduction among
family members, and she is also the most significant provider of
such information (cf. Table 3). The initial provider of informa-
tion on contraception among family members, however, was reported
to be "other relatives". Yet this seems to be an ambiguous choice
since the mother is still reported as the most significant provider
of contraceptive information. The choice of mothers as the initial
and most significant provider of information within the family can
perhaps be expected considering the fact that 74.0 percent of the
respondents who returned the questionnaires were females.

TABLE 3

Percent of Respondents, By the Initial and the Most Significant
Source of Information Within the Family and By Type of Information:
1979

SOURCE OF INFORMATION IN FAMILY	INITIAL SOURCE		MOST SIGNIFICANT SOURCE	
	Human Reproduction	Contra-Ception	Human Reproduction	Contra-Ception
Father	13.7	8.6	9.9	6.8
Mother	21.0	16.1	26.2	22.7
Brother(s)	4.3	5.0	4.2	4.4
Sister (s)	8.7	10.3	10.0	9.9
Other Relatives	18.0	20.6	16.3	19.8
All of the Above	6.0	5.8	4.3	3.2
None of the Above	28.3	33.6	29.1	33.2
	100.0	100.0	100.0	100.0

A closer look at Table 3 shows that the answers to the question of the initial and significant provider of information are not unequivocal. The category "none of the above" gathered the highest percentage of responses in both questions, especially the one on contraceptive information. This could be attributed to two important reasons. The family is not always the first, nor the most significant source of information on reproduction, and much less, on contraception; and there are other more important sources of such information outside the family circle. Another reason is that sex and contraception are not subjects open for discussion in Filipino culture.

2. Interpersonal Sources of Information Outside the Family.

Outside the family, the initial provider of the information was one's peers (friends who are older and those of the same age) and the school personnel, particularly school teachers and counselors. The more significant providers of the information, however, revolve around school teachers and medical persons, with school teachers reported as the most significant source of information on human reproduction and the medical persons on contraception. The data already suggest that although peer groups may be one of the initial providers of information outside the family context, the more formal sources of information like the school and medical personnel tend to be more important.

If we compare Table 3 with Table 4, the comparison would show that the initial and most significant providers of information on reproduction and contraception are not from inside but outside the respondent's family circle. These types of information seemed to be primarily obtained from school teachers and one's friends. This is not really a surprising revelation. According to an ESCAP (Economic & Social Commission for Asia and the Pacific) study finding, sex information (which included information on reproduction and contraception) in Asian cultures was acquired predominantly

TABLE 4

Percent of Respondents, By the Initial and the Most Significant
Source of Information Outside the Family and By Type of
Information: 1979

SOURCE OF INFORMATION OUTSIDE FAMILY	INITIAL SOURCE		MOST SIGNIFICANT SOURCE	
	Human Reproduction	Contra-Ception	Human Reproduction	Contra-Ception
Younger Friends	2.0	2.3	1.1	1.2
Older Friends	29.0	28.0	15.1	12.7
Friends of Same Age	23.7	20.3	11.7	8.7
Regular Dates*	1.6	1.3	3.2	2.3
Clergy/Priest	1.5	2.2	3.6	2.8
Medical Person	8.3	17.4	24.8	39.1
School Teachers	33.7	28.0	39.7	32.4
Others	0.2	0.5	0.8	0.8
	100.0	100.0	100.0	100.0

*Includes boyfriends, girlfriends and spouses.

from outside the immediate childhood family (1974:195-197).
Parents in these cultures do not generally provide their children
or siblings with education on reproduction and contraception.

3. Sources of Information Among the Media. Of the media,
textbooks/manuals and newspapers/magazines are the major initial
providers of information on reproduction and contraception (Table
5). However, to many of the students, textbooks/manuals are the
most significant sources for both types of information.

If we examine the three types of information sources (i.e.,
within the family, outside the family and among the media)
together and rank the different sources, we can have a general

idea of the initial and most significant sources of information
which the student-community use. Table 6 presents this ranking.
Within the family circle, mother-sister often is the initial
as well as the most significant source of information. This is
probably due to the preponderance of females in the sample.
That is, daughters would tend to ask their mothers and sisters
such information. "Other relatives" as the next most important
source seems to reflect once more the fact that in Filipino
society, topics related to reproduction and contraception are
not readily accepted, and quite often, they are taboo in open
discussions among family members. However, outside the family
circle, the school and the medical sectors formalize their
discussion and conduct information campaigns through textbooks
and manuals, newspapers and magazines, radio broadcasts, films
and pamphlets. It is therefore understandable that of all types
of information sources, these media are still the most important
sources, both as the initial and most significant providers on
human reproduction and more particularly on contraception. Peer
groups, particularly older friends, also play an important but
secondary role as initial providers of the said information.

On the basis of the observations made of Table 6, the
variable, the "most significant" source of information, seemed to
be the better indicator of the proximate sources that influence
current perceptions on the two subjects than the variable the
"initial source". For this reason, re-coding of the two variables
was made for the correlation analysis presented later. The results
are shown in Table 7.

The overall picture of reproduction and contraception
education revealed by the respondents is that young people learn
about these subjects from peers and adults outside the immediate
household. A substantial number of college students probably had
their first exposure to this information only in school, from

TABLE 6

The First Three Common Sources of Information of Respondents, By Type of Source, Initial and Most Significant Source of Information on Reproduction and Contraception: 1979

TYPE OF INFORMATION SOURCE	HUMAN REPRODUCTION		CONTRACEPTION	
	Initial Source	Most Significant source	Initial Source	Most Significant source
1. Within the Family	Mother (21)	Mother (26)	Others (21)[a]	Mother (23)
	Others (18)[a]	Others (16)[a]	Mother (16)	Others (20)[a]
	Father (14)	Sister (10)	Sister (10)	Sister (10)
2. Outside the Family	School (34)	School (40)	School (28)	Medical(34)
	Friends(29)[b]	Medical(25)	Friends(28)[b]	School (32)
	Friends(24)[c]	Friends(15)[b]	Friends(20)[c]	Friends(13)[b]
3. Of the Media	Textbks(22)[d]	Textbks(45)[d]	Textbks(30)[d]	Textbks(53)[d]
	News/mag(21)	News/mag(18)	News/mag(29)	News/mag(26)
	Radio (17)	Booklet(13)	Radio (16)	Movies (6)
ALL TYPES	School (34)	Textbks(45)[d]	Textbks(30)[d]	Textbks(53)[d]
	Friends(29)[b]	School (40)	News/mag(29)	Medical(39)
	Friends(24)[c]	Mother (26)	School/ (28)[b] friends	School (22)

Compiled from Tables 2,3 and 4. Figures in ( ) are percent of total respondents.

a - Other relatives; b - Older friends; c - Friends of same age; d - Textbooks and manuals.

books, magazines or movies. This finding supports an ESCAP study conclusion that "it definitely appears to be a cultural trait among (Asian) parents not to provide parental sex education and to avoid discussion of sex with children" (1974: 195-197).

TABLE 7

Percent of Students, By the Type of the Most Significant Source of Information and Type of Information: 1979

MOST SIGNIFICANT SOURCE OF INFORMATION	HUMAN REPRODUCTION	CONTRACEPTION
1. Within One's Childhood Family		
Parents	36.1	29.5
Siblings	14.2	14.3
Relatives	20.6	23.0
None	29.1	33.2
	100.0	100.0
2. Interpersonal Sources Outside One's Childhood Family		
Peers	31.9	25.7
Professional persons	68.1	74.3
	100.0	100.0
3. Mass Media		
Video	14.5	16.1
Textbooks and Manuals	44.6	52.9
Other Printed Media	40.9	31.0
	100.0	100.0

4. **How the Information was Obtained.** Information on reproduction as well as contraception was "given" to students without them "actively seeking" it: 29 percent on reproduction and 36 percent on contraception respectively. 53 percent of the students reported that information on human reproduction, and 46 percent said information on contraception, are required in schools at the elementary, high school and college levels. Table 8 shows the distribution of students by their manner of obtaining this information.

TABLE 8

Percent of Students, By the Manner in which Information was Obtained and Type of Information: 1979

HOW INFORMATION WAS OBTAINED	TYPE OF INFORMATION	
	Human Reproduction	Contra-Ception
1. Actively Sought the Information	17.6	7.4
2. Information was given w/o seeking	29.1	36.4
3. Required in Elementary school	4.6	1.2
4. Required in High School	29.6	25.6
5. Required in College	19.1	19.4
	100.0	100.0

C. Extent of Knowledge on Reproduction and Contraception:

Table 9 presents some data on the extent of students'
knowledge on reproduction and contraception. When asked about
two questions directly related to woman's childbearing
functions, namely (1) when is a woman most likely to get
pregnant and (2) when is a woman not likely to get pregnant
anymore, only about one-third could answer correctly; the rest
either didn't know or answered incorrectly. This is surprising
for several reasons: (1) about 80.3 percent of the respondents
claimed they have received explanations on human reproduction,
and (2) 74 percent of the respondents were females and presumably
they would be knowledgeable about their own reproductive
capacities. Apparently, as Table 9 shows, college students have
not been exposed to information which focuses primarily on
reproduction as much as they are to information on contraception.
This may be because of the present contraceptive focus of the IEC
campaigns of the family planning program. The tendency of females
to know more about female-related aspects of contraception is
reflected in the data -- the respondents seem to know more about
what is done in ligation than in vasectomy and what methods to
prevent pregnancy are used by the woman than those by the man.

On the whole, the average picture on students' knowledge
of these two subjects as shown in Table 9 is not comforting --
about 50 percent of the students on the average do not know much
about important topics of human reproduction and contraception.

When we compare Table 9 with Table 10 which presents data
on the respondents' self rating of their own knowledge of
reproduction/contraception, some inconsistencies seem to be present.
On the average, about 60 percent of the sample revealed incomplete
knowledge of human reproduction, yet about 65 percent of the
sample rated themselves as having "adequate" to "very adequate"
knowledge of this subject. For contraception, these figures were

TABLE 9

Students' Extent of Knowledge on Selected Topics on Human Reproduction and Contraception: 1979

TOPICS	Extent of Knowledge		
	Correct	Don't Know	Incorrect
Human Reproduction			
- When woman's likely to get pregnant	37.8	22.2	40.0
- How fertilization occurs	55.3	14.0	30.7
- Menopausal age	30.4	13.3	56.3
Contraception			
- Man's contraceptive methods	55.7	30.6	13.7
- Woman's contraceptive methods	64.6	30.8	4.6
- More effective method	42.0	27.2	30.8
- Methods with more side effects	45.1	33.2	21.7
- Vasectomy	36.0	27.9	36.1
- Ligation	51.2	28.0	20.8

similar: 50 percent and 56 percent of the sample respectively. These show that the students seemed to overrate their knowledge of the subjects, especially that of human reproduction. This observation is further confirmed by the overwhelming "yes" (85 percent of the sample) answers to the question whether the respondents felt there was a need to acquire more information on the two subjects (lower panel of Table 10).

The same type of inconsistency also exists in the students' exposure to and knowledge of the two subjects. While there is a larger number of students who have heard about human reproduction (80.3 percent) than those who have heard about contraception (64.6 percent),

TABLE 10

Percent of Respondents, By their Adequacy of and Need for More
Knowledge on Reproduction and Contraception: 1979

SELECTED INDICATOR	TYPE OF INFORMATION	
	Human Rep.	Contraception
Respondents' Own Rating of Their Knowledge on...		
Very adequate	6.9	5.2
Adequate	58.2	50.8
Inadequate	24.6	35.2
Don't Know	10.3	8.8
Need for More Information on...		
Yes	85.1	85.3
No	7.9	7.2
Don't Know	7.0	7.4
	100.0	100.0

the respondents seem to know more about contraception than reproduction.
This seems to indicate that "having heard" (awareness of) the topic
does not necessarily mean knowledge of the topic.

The issue on which topic the students are more knowledgeable
can be resolved by combining the various indicators into several indices.

To summarize the students' extent of knowledge of the topics,
three indices were constructed, namely, (a) an index on the extent of
knowledge on reproduction, the Adequacy of Reproduction Knowledge Index
(ARKI), (b) an index on the extent of knowledge on contraception, the

Adequacy of Contraception Knowledge Index (ACKI), and (c) a Total
Knowledge Adequacy Index (TKAI). The composition of these indices
are illustrated in Appendix B. These indices range in meaning from
"inadequate" to "adequate" to "very adequate" knowledge of the
topic. Table 11 presents the distribution of the students by the
three knowledge indices. The data clearly show that on the whole,
only 2.2 percent of the students are "very adequate" in their
knowledge of the two topics, and that about one-fourth of them have
"inadequate" knowledge of the necessary topics related to child-
bearing and limiting family size. Table 11 clearly shows that the
students know more about reproduction than contraception.

TABLE 11

Percent of Respondents, By Their Extent of Knowledge on Reproduction
and Contraception: 1979

INDEX	Human Reproduction	Contra-Ception	All Topics
Adequacy of Reproduction Knowledge Index (ARKI)			
Inadequate	7.4		
Adequate	80.3		
Very Adequate	12.3		
	100.0		
Adequacy of Contraception Knowledge Index (ACKI)			
Inadequate		21.8	
Adequate		70.7	
Very Adequate		7.5	
		100.0	
Total Knowledge Adequacy Index (TKAI)			
Inadequate			22.6
Adequate			75.2
Very Adequate			2.2
			100.0

Table 12 presents the subject matters on which the respondents felt they needed to acquire further information. The three most frequently mentioned reproduction subjects according to importance are: (1) marriage, (2) childbearing and discipline and (3) sexual intercourse. The subjects are relevant to the students as these seem to be of their immediate concerns, being at an age eligible for courtship and marriage. Of contraception, the three most frequently mentioned subjects are: (1) side effects of contraceptives, (2) safe period of woman, and (3) human sexuality. Although the local population program is contraception-oriented, the subjects human sexuality, sexual intercourse and the side effects of contraceptives are probably least discussed and hence least understood.

D. Attitudes Towards Reproduction and Contraception:

1. Selected Topics of Human Reproduction:

a. Best Age to Marry. According to the respondents, the average best age for a girl to marry nowadays is 24.2 years old (S.D.=2.0) and the boy at 3.2 years older, i.e., at age 27.4 years old (S.D.=2.4). This finding corresponds with the findings of a 1970 study on UP freshman woman students' attitude towards sex. This study found that a majority of the respondents (58 percent) consider the ages between 24-26 as ideal for marriage regardless of sex. However, according to the 1977 AFS (Area Fertility Surveys) findings, the mean age of first marriage of five AFS regions is 20.5 years. There is probably a tendency that young people prefer later age at marriage than those who are already married.

b. Sex Relations. Respondents' attitude towards pre-marital sex relations seems to be ambivalent. The data presented in Table 13 show that the number of respondents who thought the person they would marry should be a virgin was the same as those

TABLE 12

Percent of Respondents, By Their Information Needs on Human
Reproduction and Contraception: 1979

SUBJECT MATTER	Percentage
Human Reproduction	
Marriage	22.4
Childbearing & Discipline	18.4
Sexual intercourse	14.2
Courtship & Dating	12.9
Reproductive anatomy	10.8
Impotence & Frigidity	5.7
Sex Hygiene	5.4
Venereal Disease	4.4
Masturbation	3.2
Homosexuality	2.5
Others	0.3
Contraception	
Side effects of contraceptives	24.7
Safe period of woman	19.9
Human sexuality	13.8
Abortion & menstrual regulation	8.4
All/any contraception	7.8
Pre-marital sex	7.0
Sex anatomy	6.7
Sterility	4.5
Impotence & Frigidity	4.5
Extra-marital sex	2.5
Others	0.1
	100.0

who thought it would not matter whether or not that person had
experienced pre-marital sex, i.e., 30.0 percent and 29.8 percent.
Their attitude towards sex relations after marriage, however, is
highly traditional. Once married, 77.5 percent of the sample
thought that sexual relations should be limited to husband and
wife only. Still, some ambivalence towards the issue of extra-
marital sex relations can be noted. To about 10 percent of the
sample, sex relations after marriage should be relatively open to
contacts outside of marriage, but these exceptions are for
husbands only. About 12 percent were undecided on the issue.

By matching the responses to the questions on sex
relations before and after marriage, an Orientation on Sexual
Relations Index (OSRI) is composed (cf. Appendix B). This index
has a five point scale with meanings ranging from a "very
conservative" to a "very liberal" orientation on sexual relations.
Table 13 shows that about 52 percent of the students were generally
conservative and only 7.4 percent were liberal towards sex
relations, while the rest were neutral.

TABLE 13

Percent of Respondents, By Their Orientation on Sexual Relations
Index (OSRI): 1979

INDEX MEANING	Percent of Respondents
Very Conservative	30.5
Moderately Conservative	21.8
Neutral	40.3
Moderately Liberal	3.5
Very Liberal	3.9
	100.0

c. <u>Pre-Marital Pregnancy</u>. About 73 percent of the respondents thought of marriage as the solution to premarital pregnancy, 2.1 percent chose abortion, 10.9 percent preferred the child be kept by either one of them or their families or by both of them out of wedlock, less than one percent chose giving the child up for adoption, and 14 percent would not know what to do. It is clearly shown by the distribution of the answers that abortion is not a popular solution in case the respondent or his partner got pregnant.

d. <u>Value of Children</u>. The questionnaire carried nine different questions directly and indirectly related to the students' dispositions and opinions with regards to having children. Table 14 presents the distribution of the answers to selected questions on the value of children.

Having children is considered by 76 percent of the respondents as "mostly a source of happiness in marriage". Only about 4.8 percent considered it as an assurance of economic benefit and security. This ties in with findings of the Value of Children study which showed that while Filipinos are in general more concerned with the economic benefits of having children, there are contrasts between rural and urban respondents. The rural respondents attach more importance to economic advantages of children which include financial assistance, old-age support and help around the house or farm. For urban respondents, happiness, family harmony, and other psychological rewards of children are more important (Bulatao, 1975:90-91).

That the family have at least one child is considered by about 60 percent of the respondents as very important and must be done if at all possible. However, childless marriage may become a popular concept in the future in urban areas considering the fact that 36 percent of the respondents find having at least

a child "desirable but not worth getting upset about if cannot bear a child", and that 4.1 percent do not consider childbearing important at all.

If the respondents considered children's main value as a source of happiness in marriage, and childbearing must be done if at all possible, the respondents may consequently consider that the best length of time between marriage and the birth of the first baby be within a year or as soon as marriage is certain. About 44.1 percent did answer as expected. However, an equal number, about 45 percent, replied that the best interval between marriage and birth of the first baby is after two or even three and more years. This indicates deferment of births to later years after marriage -- an urban characteristic.

The data clearly indicate that children are highly valued. As a summary, the overall Importance of Children Index (ICI) composed of four variables has the following distribution of students: 1.4 percent considered children "not important", 39.9 percent "desirable" and 58.7 percent "very important".

e. Family Size. On the average, the number of children the respondents plan to have if they get married was 3.33 children (S.D.=1.2). About 64 percent consider 2-4 children a small family size. The data seem to indicate that the respondents' concept of small family size is relative to the number of children they think most Filipino couples would want to have, which is on the average 5.3 (S.D.=2.4) children. This figure was considered by 58.6 percent of the students to be "just about right for the whole Filipino society", while 39 percent of the students found it to be "too many".

TABLE 14

Percent of Respondents, By the Selected Indicators on the Value of Children: 1979

SELECTED INDICATORS	Percent of Response
Whether R Considers Having Children Mostly...	
- A source of happiness in marriage	75.6
- An assurance of economic benefit and security	4.8
- A natural process	10.7
- A burden for family finance	2.0
- Undecided about the issue	5.3
How Important do you Think it is that a Family have at least One Child?	
- Very important, must be done if at all possible	59.9
- Desirable, but not worth getting upset about if cannot bear a child	36.0
- Not important at all	4.1
The Best Length of Time Between Marriage and the Birth of the First Baby	
- Within a year/as soon as marriage is certain	44.1
- After one or more years	34.8
- After two or more years	7.9
- After three or more years	2.6
- Don't know/not sure	10.6
	100.0

TABLE 15

Percent of Respondents, By Selected Indicators on Family Size: 1979

SELECTED INDICATORS	Percent of Response
Number of Children R Plans to Have if R Gets Married	
- None	0.2
- 1 Child	0.2
- 2 Children	23.9
- 3 Children	33.5
- 4 Children	33.6
- 5 Children	5.6
- 6 Children	2.0
- 7 or more children	1.0
(mean = 3.33 S.D.=1.2)	
Whether R Considers the Number of Children He/She Plans to Have ...	
- A large family size	11.1
- A small family size	64.1
- If the family can afford, it doesn't matter	19.9
- Not so large, not so small	4.9
If People were able to Choose, about How Many Children do you think most Filipino Couples would want to Have?	
- None	0.0
- 1 Child	0.6
- 2 Children	6.0
- 3 Children	16.4
- 4 Children	23.1
- 5 Children	16.9
- 6 Children	14.4
- 7 or more children	22.6
(mean = 5.27 S.D.=2.43)	
In your Opinion, do you think this Number is...	
- Too many	38.9
- Too few	2.5
- Just about right for the whole Filipino society	58.6
	100.0

When the students were asked a hypothetical question "whose attitude should prevail if husband and wife cannot agree on the total number of children they will have", the majority of the students (54.7 percent) still forced the issue carried in the question that it should be the attitude of both the husband and the wife that should prevail (Table 16). This answer, albeit inconsistent to the question asked, may mean that deciding the number of children is an instance in which husband and wife together should have equal responsibility. On the other hand, this may also mean that the students probably do not have a strong stand on the question and that they probably have not given a thought about it yet.

Between husband and wife, twice the number of respondents (18.7 percent) chose the former's decision as more important than the latter's (8.3 percent). This reflects the still prevailing husband dominance over his wife. The sex role stereotype in Asian cultures like the Philippines has men dominating the family size decision.

Among all possible significant others in making family size decision, the sample reported either the husband or the wife as first in importance (29.5 percent), followed by "it depends on God and fate" (20.6 percent), and the respondents' mothers (17.6 percent). The choice of "God and fate" as the second most significant others in forming the respondents' decision about the number of children they will have is interesting since the sample is mainly urban and mostly female. This may be explained by the fact that about 94 percent of the sample reported having "moderate" to "very strong" religious convictions. The data indicate that fatalism seems to go hand in hand with the more modern egalitarian attitude with regards to family formation and that the respondents probably feel no inner discord about them.

TABLE 16

Percent of Respondents, By Selected Indicators of Significant
Others in Family Size Decisions: 1979

INDICATORS	PERCENT OF RESPONDENTS
If Husband and Wife Cannot Agree on the Total Number of Children They Will Have, Whose Attitude Should Prevail?	
- Husband's	18.7
- Wife's	8.3
- Both	54.7
- None of the above	2.8
- Depends on their ability to support	11.6
- Depends on who is more sensible, practical, reasonable	1.6
- Others	2.3
Who Do you Think will be the People Most Significant in Forming Your Decision about the Number of Children you will have?	
- Husband/wife	39.5
- Depends on God and fate	20.6
- Mother	17.6
- Father	8.2
- School teachers/counselors	5.2
- Clergy/priests	4.2
- Close friends	3.0
- Sister	1.5
- Other relatives	1.3
- The government	1.3
- None of the above	1.0
- Brother	0.6
	100.0

2. Selected Topics of Contraception:

a. Contraceptive Responsibility. The egalitarian attitude of the sample is once more revealed by their answers on contraceptive responsibility. In relationships where sexual intercourse is involved, "both" partners should have the responsibility of using some form of contraception (50 percent of the sample). If not both, the female has more responsibility than the male (see upper panel of Table 17).

The distribution of the students by the Egalitarian Orientation Index, which summarizes the sex role orientation of the sample concerning childbearing decisions (family size and contraception), confirms further the above findings. According to the data, 21 percent of the students consider childbearing decisions mainly the male's responsibility, 2.6 percent as mainly the female's responsibility and 76.4 percent as mainly the responsibility of both.

b. What Students Think About Family Planning. The students do show unanimity in their attitude towards family planning in general, as shown in the lower pannel of Table 17. More than three-fourths of the students think that family planning should be compulsory -- 36 percent said it should be compulsory for everyone, 25 percent said it should be so for those who cannot afford to raise children, and 16 percent limit this view only to those couples with more than two children regardless of wealth. In contrast, only about one-fourth of the students thought that family planning should be optional for everyone. This finding indicates that college students do have a strong favorable view of family planning.

c. Opinions on Suggested Population Policies. Two "strong" population policies which had been proposed to be made into Philippine laws in 1978 were (1) a law requiring sterilization of either the man or woman as soon as they have borne four living children, and (2) a law requiring a fine (say ₱200.oo and above)

TABLE 17

Percent of Respondents, By Their Attitude on Contraceptive
Responsibility and on Family Planning: 1979

INDICATORS	PERCENT OF RESPONDENTS
Attitude on Contraceptive Responsibility	
- Male	12.8
- Female	18.1
- Both	49.7
- No one	4.1
- Undecided/Don't know	15.3
Attitude on Family Planning	
- FP should be compulsory for everyone	36.0
- FP should be compulsory for those who cannot afford children	24.6
- FP should be compulsory for those with more than two children regardless of their wealth	15.7
- FP should be optional for everyone	23.7
	100.0

from couples who have borne more than two living children. At
the time this study was made, discussions of the proposed bills
in the Batasang Pambansa (national legislative body) have ebbed
but the issues remained.

The students' opinions shown in Table 18 are generally
negative. More than half (57 percent) of the students said they
would not approve of a law imposing a fine on couples who bear
additional children after having borne two living ones; only 13
percent approve of the measure and 30 percent expressed no firm
opinion. In contrast to the number of students not approving the

proposed policy of imposing a fine after two living children, the number of students who would not approve of the policy on mandatory sterilization after four living children was only 42.0 percent; and the number who approved it was about twice (26.7 percent) as those who approve the other measure (13 percent). These findings seem to suggest that similar strong policies aimed at couples who have borne four or more children might find favorable support in the future.

TABLE 18

Percent of Respondents, By Their Views on Two Suggested Policies that Affect Family Size and Population Growth: 1979

GOVERNMENT POLICY	OPINION		
	Approve	Do Not Approve	No Opinion
- The government should pass a law that requires a fine (say ₱200 and up) from couples who have borne more than two living children	13.0	57.0	30.0
- The government should pass a law that requires sterilization of either man or woman as soon as they have borne four living children	26.7	42.0	31.3

A comparison of what students think of family planning (lower panel of Table 17) with their opinions on suggested population policies (Table 18) reveals somewhat inconsistent attitudes. The students displayed a strong favorable attitude towards family planning, yet when it comes to specific proposed population policies, they showed obvious disapproval. This seems

to mean that college students strongly approve of family
planning only in principle. The overall Family Planning
Orientation Index (FPOI) which summarized the above data on
family planning shows that only 10 percent approve of family
planning, 25 percent disapprove and 65 percent had no firm
stand. This finding (that about two-thirds had no strong
opinion about family planning) could be attributed to the
fact that family planning is a proposition for married or
marriageable couples only and that it is not yet one of the
immediate concerns of college students.

  d. <u>Abortion</u>. To the majority of the students, abortion
is strongly disapproved as a method to terminate pregnancy except
when the pregnancy endangers the woman's health (Table 19). The
data in the table indicate that the unanimity of the students
against abortion as a family planning method (81.9 percent) does
not preclude the use of abortion in rare cases, such as the
possibility that the child might be deformed or the woman has
been raped.

E. <u>Actual Experiences in Reproduction and Contraception</u>:

  Although the number of students with actual experience
in reproduction and contraception is small, a closer view of their
behavior would be interesting. Actual experiences in sexual
intercourse and pregnancy, particularly among college students,
are important socialization influences which determine later
attitudes towards contraceptive practice. Table 20 showed that
87.8 percent of the students never had sexual intercourse, and
therefore, had never been exposed to the actual practice of
contraception. Those who had experienced sexual intercourse
numbered about 12.2 percent of the respondents, only about half of
whom had tried contraception. Of this 12.2 percent of respondents,
only 2.0 percent had been pregnant or made someone pregnant, 6.2
percent answered "no" and 4.0 percent are "not sure".

TABLE 19

Percent of Respondents, By Their Opinions on Abortions: 1979

SELECTED QUESTIONS	RESPONSE		
	Alright	Not alright	Don't know
A Woman might Have an Abortion...			
- If the pregnancy seriously endangers the health of the woman	67.7	18.7	13.6
- If the woman was not married	9.9	81.0	9.1
- If the couple could not afford another child	14.2	73.9	11.9
- If the couple did not want any more children	12.1	78.6	9.0
- If the woman had good reasons to believe the child might be deformed	29.4	53.5	17.1
- If the woman had been raped	22.3	60.7	17.0
- Regardless of the conditions she should have the baby	39.5	37.5	23.0
- Abortion as one of the methods of family planning	9.6	81.9	8.5

TABLE 20

Percent of Respondents, By Their Actual Experience in Reproduction and Contraception: 1979

SELECTED QUESTIONS	Percent of Response
In Sexual Relationships, how do you Characterize your Experience?	
- I never had sexual intercourse	87.8
- I had sexual intercourse but I never tried contraceptive methods	5.7
- I had sexual intercourse and I had tried contraceptive methods	6.5
Ever Been Pregnant or Made someone Pregnant	
- Yes	2.0
- No	6.2
- Not Sure	4.0
- Never had sex before	87.8
	100.0

Table 21 presents a breakdown of the 80 students by
marital status and practice of contraception. All of the 28
married students had tried contraception. Among the 52 students
who engaged in premarital sex, nearly three-fourths (73.1 percent)
have never tried contraception and only one-third had tried.
The data suggest that premarital sex among college students is
characterized by non-use of contraception.

TABLE 21

Number of Students Who Had Sexual Intercourse, by Marital Status
and Practice of Contraception: 1979

CONTRACEPTIVE PRACTICE	MARITAL STATUS		Total
	Ever Married	Never Married	
Never Tried Contraception	0	38	38
Have Tried Contraception	28	14	42
ALL PRACTICES	28	52	80

Findings From the Correlations

In this section, we go beyond mere description of the
percentage distribution by examining the product-moment correlation
coefficients of two variables. To do this type of analysis, we
reduced the initial number of variables (about 100) to 25, mainly by
constructing 11 composite measures (indices) and by recoding 14
selected variables. For the computation of the correlations, we
transformed the 25 variables into ordinal forms of measurement.
The details of index construction and the list of the 25 variables
are presented in Appendix A and B.

A. <u>Type of Information Sources and Extent of Knowledge on Human</u>
   <u>Reproduction and Contraception</u>:

Although the correlations between types of information
sources and the extent of knowledge on reproduction (ARKI) are all
statistically significant (cf. Table 22), the highest positive
correlation is with the media (CO), followed by other sources
outside the family (C8) and sources within the family (C6), (i.e.,
0.204, 0.192 and 0.130 respectively). This pattern confirms our
earlier observation that the type of information sources tend to
fall in this order of importance -- the media, interpersonal sources
outside the family and family members. Likewise, this may indicate
that more adequate knowledge on reproduction is obtained from the
following specific sources in the same order of importance -- the
print media (specifically books and manuals), the professional
personnel in the hospitals, clinics and schools, and the non-immediate
members of the family. Again, this pattern implies that family
members can hardly be considered reliable informants on human
reproduction.

The correlations with the adequacy of contraceptive knowledge
index (ACKI) are statistically insignificant and surprisingly negative.
It seems to show that although the students may have heard a lot about
contraception, their actual knowledge of the subject is quite
inadequate.

The correlations with the TKAI (the total knowledge adequacy
index, composite of ARKI and ACKI) reflects once more the same
ranking of the information sources in terms of importance and
adequacy of information provided.

B. <u>Type of Information Sources and Attitude Towards Reproduction and</u>
   <u>Contraception</u>:

The correlations between the five attitude indices on
reproduction (i.e., OSRI, ICI, BAMI, NOC-R, NOC-FC) and the type of

TABLE 22

Product-Moment Correlations for Type of Information Sources and Extent of Knowledge: 1979

VARIABLE NAME	C6	C8	CO	G1	G3	G5
ARKI	.130*	.192*	.204*	.167*	.208*	.215*
ACKI	-.087	-.025	-.001	-.034	-.072	-.031
TKAI	.128*	.253*	.255*	.160*	.202*	.225*

* Significant at 0.05 level.

For the scoring plan of the following variables, confer Appendix B.

C6 - Within the family, most significant source on reproduction

C8 - Outside the family most significant source on reproduction

CO - Of the media, most significant source on reproduction

G1 - Within the family, most significant source on contraception

G3 - Outside the family, most significant source on contraception

G5 - Of the media, most significant source on contraception

ARKI - Adequacy of Knowledge on Reproduction Index

ACKI - Adequacy of Knowledge on Contraception Index

TKAI - Total Knowledge Adequacy Index

information sources (i.e., C6, C8 and CO) are positive and increase in magnitude as one departs from the family as source of information to sources outside the family (Table 23). A similar pattern can be observed from the correlations between the three attitude indices on contraception (i.e. FPOI, OAI and EOI) and the type of information sources.

One hypothesis which can be raised based on these and the preceding observations is that: although the family might have provided initial development of attitudes, the socialization milieu outside the family provides the proximate forces that result to present attitudes

towards sex, reproduction and contraception. For instance, the importance of children (ICI) and, subsequently, the number of children the respondent wants for herself and what she perceive most Filipino couples will have may be strongly determined by peer groups and by what they read in school or hear from the media, as shown by the high correlations. The same statement can be made with regards to their family planning orientation and their attitude towards abortion.

TABLE 23

Product-Moment Correlations for Type of Information Sources and
Attitudes Towards Reproduction and Contraception: 1979

VARIABLE NAME	C6	C8	CO	G1	G3	G5
OSRI	.070*	.123	.157	.159	.188	.146
ICI	.111	.273	.312	.148	.229	.239
BAMI	.062*	.142	.150	.135	.128	.143
NOC-R	.098*	.217	.181	.131	.178	.209
NOC-FC	.198	.236	.210	.130	.166	.126
FPOI	.168	.289	.287	.189	.252	.265
OAI	.181	.265	.289	.189	.211	.211
EOI	.171	.270	.317	.232	.315	.309

Significant at 0.05 level except those with asterisk

See also notes in Table 20.

OSRI - Orientation on Sexual Relations Index

ICI - Importance of Children Index

BAMI - Best Age at Marriage Index

NOC-R - Number of Children for Respondent

NOC-FC - Number of Children for Filipino Couples

FPOI - Family Planning Orientation Index

OAI - Orientation on Abortion Index

EOI - Egalitarian Orientation Index

C. Extent of Knowledge and Attitude Towards Reproduction and Contraception:

A general finding from past studies is that subjects (usually rural women of reproductive age) tend to display strong traditional and stereotyped attitudes on reproduction and contraception when they have inadequate knowledge of the topics. The sample in this study shows the opposite. Table 24 indicates that the students' extent of knowledge on sex and reproduction (ARKI) are positively related to their attitudes on these topics as well as on contraception. Students who have adequate knowledge of sex and reproduction tend to (1) have a liberal orientation towards sexual relations, (2) prefer late marriage, (3) consider having children important consequence of marriage, (4) desire to have three children for themselves, (5) approve of family planning as well as abortion, and (6) think that decisions regarding family size and particularly, contraception, are mainly their own responsibility. A similar observation can be made from the correlations of the total knowledge adequacy index (TKAI) with the attitude variables. Here, the correlations are somewhat higher than those with ARKI. However, the correlations of the students' extent of knowledge on contraception (ACKI) with the eight attitude indices are, as already noted, not significant and they display no clear pattern of association.

TABLE 24

Product Moment Correlations for Extent of Knowledge and Attitude Towards Reproduction and Contraception: 1979

VARIABLE NAME	OSRI	ICI	BAMI	NOC-R	NOC-FC	FPOI	OAI	EOI
ARKI	.385	.556	.304	.417	.253	.378	.312	.518
ACKI	,009*	.073*	-.126	.068*	-.009*	-.060*	-.049*	-.026*
TKAI	.397	.615	.243	.477	.304	.420	.348	.568

Significant at 0.05 level, except those with asterisk

See also notes in Tables 20 and 21.

D. **Selected Background Characteristics and Type of Information Sources on Reproduction and Contraception:**

The observation made earlier that the students know little about contraception in contrast to reproduction is further confirmed by Table 25. The type of information sources on reproduction (upper panel of the table) show relatively stronger associations -- compared with the same type of information sources on contraception (lower panel) -- with the background characteristics.

Table 25 also gives us an idea of the characteristics of the students who tend to seek information from the "professional" (i.e., non-familial and non-peer) sources. They are the ones who have had regular dates (including all those who were already married); those

TABLE 25

Product Moment Correlations for Background Characteristics of Respondents and Type of Information Sources on Reproduction and Contraception: 1979

VARIABLE NAME	A8	A9	B8	C2	SLI	STI
C6	.085*	.140	.206	.114	.103	.181
C8	.227	.244	.286	.200	.227	.269
C0	.243	.178	.273	.166	.244	.253
G1	.118	.111	.212	.087*	.133	.201
G3	.162	.161	.174	.126	.169	.184
G5	.137	.154	.198	.146	.173	.212

Significant at 0.05 level, except those with *asterisk

See also notes in Table 20

A8 - Sex of student

A9 - Dating/Marital Status of student

B8 - Living arrangement of student

C2 - Religiosity of student

SLI - School Location Index

STI - School Type Index

who stayed away from parental living arrangements; those who claimed
moderate to strong religious convictions; those who attended primary
and secondary schools of the municipal poblaciones and cities run by
the private sector. These observations, excepting the factor on
religiousity, seem to suggest that factors associated with non-
traditional social arrangements may largely explain the tendency to
seek professional sources of information.

E. **Selected Background Characteristics and Extent of Knowledge on
Reproduction and Contraception:**

The higher correlations coefficients in Table 26, in contrast to
the previous ones, emphasize the importance of background characteris-
tics on the adequacy of knowledge on reproduction and contraception.
The positive correlations portrays once more the background profile of
those who have adequate knowledge on both reproduction and contracep-
tion. Those who tend to have sufficient knowledge of the topics are
those who displayed urban origins, some characteristics of which have
been discussed above.

TABLE 26

Product Moment Correlations for Background Characteristics of
Respondents and Extent of Knowledge on Reproduction and Contraception:
1979

VARIABLE NAME	A8	A9	B8	C2	SLI	STI
ARKI	.442	.235	.462	.323	.405	.457
ACKI	-.161	-.033*	-.103	-.026*	.020*	-.101
TKAI	.374	.276	.418	.334	.480	.409

Significant at 0.05 level, except those with *asterisk
See notes in Table 20 and 23.

F. __Background Characteristics and Attitude Towards Reproduction and__
   __Contraception:__

   Table 27 complements the preceding five tables and completes the
background profile of the students in terms of their attitudes. The
positive correlations in the table indicate that those who tend to be
(1) liberal in their orientation on sexual relations, (2) who prefer
late marriage, (3) desire only three children, (4) approve of family
planning and abortion, and (5) majority of whom are females who think
family size decisions and contraception are their responsibilities --
are basically those who have been exposed to the modern influences
found mostly in the urban setting. They are typified by the students
who obtained most of their previous formal education from private
schools located in the urban center.

TABLE 27

Product Moment Correlations for Background Characteristics of Respondents
and Attitude Towards Reproduction and Contraception: 1979

VARIABLE NAME	A8	A9	B8	C2	SLI	STI
OSRI	.309	.155	.243	.126	.219	.255
ICI	.418	.230	.353	.359	.414	.364
BAMI	.303	.187	.357	.236	.298	.346
NOC-R	.224	.252	.286	.266	.317	.311
NOC-FC	.239	.254	.250	.183	.191	.191
FPOI	.400	.340	.415	.346	.436	.395
OAI	.328	.250	.333	.316	.342	.355
EOI	.368	.319	.423	.367	.503	.432

All significant at 0.05 level
See notes in Table 21 and 23

SUMMARY

This study has indicated that information on reproduction and contraception was acquired mainly from outside the immediate childhood family. The type of information sources on these topics may be arranged in this order of importance -- first the printed media (specifically textbooks and manuals); second, academic and medical personnel (teachers and physicians); third, older and younger peers; and fourth, members of one's immediate childhood family. This order of importance was also closely related with the student's adequate knowledge of the topics, i.e., the more formal sources tend to provide more accurate information than the informal or family based ones.

The students sampled in this study have more adequate knowledge on reproduction than on contraception. However, they showed a relatively adequate knowledge of the two topics taken together.

The sufficiency of their knowledge appeared to be strongly related to their overall urban profile. Specifically, most of them had spent their primary and secondary education in the private schools located in the urban centers (cities and poblaciones). For these reasons, the samples displayed some urban attitudinal characteristics. They tend to consider sexual relations less conservatively. They prefer late marriage -- 24 years old for girls and 27 for boys. Although they consider having children rather important, they would want to have only three children. This number is about two children less the average family size of five, which they thought most Filipino couples would want to have. They approve of family planning methods as well as abortion to limit their family size. They also tend to think that it's their (mainly females') responsibility to decide their own family size and when and what to use for contraception.

One important finding which is relevant to policy is the fact that students who come from private schools tend to have adequate knowledge on reproduction and contraception. Presumably, students who

were from public primary and secondary schools tend to have insufficient knowledge of these topics. Although a host of other factors are involved with the adequacy of knowledge on the topics, this study points at the primary and secondary public schools located in places far from the cities as possible target areas to concentrate the population education programs.

Findings From the Partial Correlation Analysis of Selected Variables

The main purpose of the partial correlation analysis was to test the general hypothesis of this study: that sources of information on reproduction and contraception of college students are significantly related to their attitudes towards these subjects through their knowledge of the subjects and their background characteristics. For the analysis, we selected four indicators of information source (C8, CO, G3 and G5), three indices of attitude (ICI, FPOI, and OAI), and two indices as controls (STI and TKAI).

The preceding investigation has revealed a moderately strong positive correlation between the types of information sources and certain attitudes towards children, family planning and abortion. We suspected, however, that most of the relationships, if not all, were spurious. Given the larger magnitudes of correlations of the attitude variables with the total knowledge adequacy index (TKAI) and school type index (STI), we believe that the said relationships are due mostly to the fact that TKAI and STI strongly covary with attitudes (cf. upper panel of Table 28).

The question that we want to resolve in this section then is: Is the relationship between sources of information and attitude a function of the latter's relationship to both school type and extent of knowledge? Do the types of information sources have any effect on attitudes when the effects of knowledge and school type are removed?

The first-order partials between types of information source and attitudes, controlling for school (STI) indicate some substantial

reductions. These reductions are further diminished when total knowledge (TKAI) is controlled. The initial correlations are even more reduced when both the effects of STI and TKAI are removed.

Although the reductions are not substantial enough to make the initial correlations spurious, the relationships are now clarified considerably. Removing the effects of school type and extent of knowledge, the relationships between information source and attitude are still positive and significant; but knowledge has the greater (and probably the greatest) effect and is the major cause of the almost insignificant relationship. Among other things, this finding suggests that regardless of the type of school (private or public) the students had attended and the extent of knowledge (adequate or inadequate) the students have, the type of information source stands as significant factors in the formation of students' current attitudes towards child-bearing.

TABLE 28

Zero-Order and First-and Second-Order Partial Correlation Coefficients
of Selected Types of Information Source and Selected Attitude Indices:
1979

===

ORDER OF CORRELATIONS/VARIABLE NAME

Zero-Order Correlation Coefficients:

	ICI	FPOI	OAI	STI	TKAI
C8	.273	.289	.265	.269	.253
CO	.312	.287	.317	.253	.255
G3	.229	.252	.211	.184	.202
G5	.239	.265	.211	.212	.225
STI	.364	.395	.355	1.000	.409
TKAI	.615	.420	.348	.409	1.000

First-Order Partial Correlation Coefficients:

1. Controlling for STI				2. Controlling for TKAI		
	ICI	FPOI	OAI		ICI	FPOI	OAI
C8	.195	.207	.188	C8	.154	.208	.195
CO	.244	.210	.251	CO	.204	.205	.252
G3	.177	.199	.159	G3	.136	.188	.153
G5	.178	.202	.149	G5	.131	.193	.145

Second-Order Partial Correlation Coefficients:

	Controlling for STI and TKAI		
	ICI	FPOI	OAI
C8	.129	.167	.156
CO	.182	.168	.220
G3	.121	.165	.130
G5	.112	.164	.116

Note: For the variable names, confer Tables 22-26.

All coefficients are significant at 0.05 level.

SUMMARY AND RECOMMENDATIONS

1. Parents and siblings do not provide adequate information on child-
   bearing and family planning. Our recommendations in this connection
   are (a) further studies on the cultural obstacles of parents as
   initial and significant sources of information be encouraged, and
   (b) programs addressed to parents as socialization agents of their
   own children be created.

2. Interpersonal sources outside the family tend to focus on their
   peers as initial sources, and professionals like school and clinic
   personnels as significant sources of adequate information. In
   this regard, we suggest that physicians in colleges and universi-
   ties, as well as in the primary and secondary schools could contri-
   bute more adequate knowledge to students if they conduct periodic
   IEC campaigns. The IEC component of the Population Program of the
   country has not yet fully utilized the school medical personnel
   as change agents.

3. Of the media, textbooks and manuals tend to provide more adequate
   information than those provided by films, posters, newspapers and
   magazines and comics. Hence, the present Multi-Media approach in
   IEC programs may have to upgrade the quality of both film and
   print media, and should also include students at all school levels
   as target audience, not just focus on married women of reproductive
   age.

4. Pre-marital sex among college teenagers is characterized by non-use
   of contraception. Contraception should be encouraged among
   teenagers in school, though this may mean risking increased incidence
   of pre-marital sex.

5. Population socialization of students would be a more relevant topic
   for policies designed to involve the youth in the population
   program. Our study strongly indicates that the process of population
   socialization primarily takes place outside the immediate household

family and that adequate socialization involves the more formal sources of information presumably connected with continuous schooling and higher education. It would be interesting to conduct a similar study on teenagers who are not in school.

APPENDIX A

LIST OF RECODED VARIABLES AND INDEÇES

Variable No.	Name	Meaning	Score - Category
1	A2	Year of Student	1 - First year not completed
			2 - Second year not completed
			3 - Third year not completed
			4 - Fourth year not completed
2	A4	College of Student	1 - Commerce
			2 - Liberal Arts
			3 - Engineering
			4 - Nursing
			5 - Pharmacy
3	A8	Sex of Student	1 - Male
			2 - Female
4	A9	Marital Status	1 - Never had a date
			2 - Had irregular dates
			3 - Have regular dates
			4 - Ever married
5	B8	Living arrangement	1 - With parrents
			2 - Away from parents
6	C2	Religiosity	1 - Weak/none
			2 - Moderate
			3 - Strong
7	SLI	(cf. Appendix B)	
8	STI	(cf. Appendix B)	

9	C6	Within family most significant source on reproduction	1 - Parents 2 - Siblings 3 - Other relatives 4 - None
10	C8	Outside family most significant source on reproduction	1 - Peers 2 - Professional persons
11	CO	Media most significant source on reproduction	1 - Video and radio 2 - Printed matters not in No 3 3 - Textbooks and manuals
12	ARKI	(cf. Appendix B)	
13	OSRI	(cf. Appendix B)	
14	ICI	(cf. Appendix B)	
15	BAMI	(cf. Appendix B)	
16	E1	Number of children students desire	1 - Below average 2 - Average (of 3 children) 3 - Above average
17	E3	Number of children most Filipinos desire	1 - Below average 2 - Average (of 5 children) 3 - Above average
18	ACKI	(cf. Appendix B)	
19	G1	(cf. C6)	
20	G3	(cf. C8)	
21	G5	(cf. CO)	

22   FPOI   (cf. Appendix B)

23   OAI   (cf. Appendix B)

24   EOI   (cf. Appendix B)

25   TKAI   (cf. Appendix B)

APPENDIX B

INDEX CONSTRUCTION

-OPS/SEAPRAP Communication Project 1979

<u>General Rating Plan</u>:

Most of the composite indeces to be used in this study follow a
differential weighting system. The formula is the following.

$$\text{Index Score} = \sum_{i}^{n} (pw_i)(K_i)$$

where n = total no. of factors composing the
                    index

            i = ith factor

            pw_i = percentage weight of factor i

            K_i = scores points assigned for factor i
                    based on its response.

An example is given for the first index, SLI.

1. SLI - School Location Index

Scale	New Codes for SLI
1.0 - 1.5	1 - mainly provincial
1.6 - 2.5	2 - combination
2.6 - 3.0	3 - mainly urban

Rating Plan:

FACTORS, LOCATION (WEIGHTS)	SCORES (K) For the CODED Response		
	3 points	2 points	1 point
1) B3, 1/25 - usual Residence (.30)	1 - a city	2 - a poblacion 9 - NR*	3 - a barrio
2) B5, 1/27 - Elem. School Location (.30)	1 - a city	2 - a poblacion 9 - NR*	3 - a barrio
3) B7, 1/29 - High School Location (.40)	1 - a city	2 - a poblacion 9 - NR*	3 - a barrio

* When all factors are NR, exclude the case from index.

The School Location Index (SLI) is represented by the sum total of all the products obtained by multiplying the weight of a given factor by the points of its corresponding response.

For example, subject R has the following information with corresponding scores:

<div align="right">Score</div>

B3 Type of residence of R .... a poblacion   (code 2) ... 2 pt.

B5 Location of R's elem. school. (no response) (code 2).. 2 pt.

B7 Location of R's high school .. a city   (code 1) ... 1 pt.

Following the rating plan, multiply the score for each factor by its weight and sum the products:

B3 2 pts. x .30 = .60

B5 2 pts. x .30 = .60

B7 1 pt. x .30 = .30
<div align="center">1.50</div>

According to the scale above, subject R's school location was mainly provincial, code 1 of this index.

2. STI - School Type Index

Scale	New Codes for STI
0	1 - mainly public
1	2 - combination
2	3 - mainly private

Rating Plan:

FACTOR, LOCATION/ (WEIGHTS)	SCORE (K) For The Coded Response	
	1 point	0 point
1) B4, 1/26 - Class of Elem. School (1.0)	1 - a private	2 - a public 9 - NR*
2) B6, 1/28 - Class of High School (1.0)	1 - a private	2 - a public 9 - NR*

* When all factors are NR, Exclude the case from index.

3. ARKI - Adequacy of Reproduction Knowledge Index

Scale	New Code for ARKI
1.0 - 1.5	1 - Inadequate
1.6 - 2.5	2 - Adequate
2.6 - 3.0	3 - Very Adequate

Rating Plan:

FACTOR, LOCATION/ (WEIGHT)	SCORE (K) For The Coded Response		
	3 points	2 points	1 point
1) C4, 1/37 - Meaning of HR (.20)	4 - all of above	1 - sexl intercourse 2 - pregnancy 3 - childrearing	5 - DK 6 - None above 9 - NR*
2) D2, 1/45 - when women pregnant (.20)	3 - Midway period	2 - right after period	1 - During period 4 - Imm. before 5 - DK 9-NR*
3) D3, 1/46 - How Fertilization (.20)	2 - Sperm swims	1 - female egg moves 2 - both swim	4 - DK 9 - NR*

4) D4, 1/47 - Menopausal
   Age
   (.20)

1 - 40-44	3 - 50-54	5 - DK
2 - 45-49	4 - 55-59	9 - NR*

5) F1, 1/71 - Own Rating
   Know
   (.10)

		3 - Inadequate
1 - Very Adequate	2 - Adequate	4 - DK
		9 - NR*

6) F2, 1/72 - Need to
   acquire
   (.10)

		1 - Yes
2 - No	3 - DK	9 - NR*

* When all factors are NR, exclude the case from index.

4. OSRI - Orientation on Sexual Relations Index

   Scoring Plan:*

==

1) D7, 1/52 - Sex Before Marriage	2) D8, 1/53 - Sex After Marriage:		
	Be Open (2,3,4)	Undecided (5)	Husb/Wife (1)
(1,2) - Virgin/me only	3	2	1
(5,6) - Don't wish to know/undecided	4	3	2
(3,4) - W/ others/ Doesn't matter	5	4	3

Figures in ( ) are the codes of variables D7 & D8; Figures in the cells
of Table are the Scale.

Scale	New Code for OSRI
1	1 - Very Conservative
2	2 - Moderately Conservative
3	3 - Neutral
4	4 - Moderately Liberal
5	5 - Very Liberal

* Score 9 - Nr 3-pts; but when all factors are NR, exclude the case
  from index.

5   ICI - Importance of Children Index

Scale	New Code for ICI
1.0-1.5	1 - Not Important ...
1.6-2.5	2 - Desirable ...
2.6-3.0	3 - Very Important ...

Rating Plan:

FACTOR/LOCATION/ (WEIGHT)	SCORE (K) For Coded Response		
	3 points	2 points	1 point
1) E5, 1/62 Having Kids (.30)	1 - Happiness 2 - Econ Security	3 - Natural 6 - Undecided 9 - NR*	4 - Burden 5 - Strain
2) E6, 1/63 One Child (0.30)	1 - Very Import.	2 - Desirable 9 - NR*	3 - Not Import.
3) D9, 1/54 PreMarital Preg. (0.20)	1 - Get Married	3 - One keeps kid 4 - Fam. keeps kid 5 - Both keeps kid 9 - NR*	2 - Abortion 6 - Adoption 7 - DK
4) DO, 1/55 Best First BI (0.20)	1 - Sure Marriage 2 - W/in a year	3 - after one year 5 - after two years 9 - NR*	4 - DK 6 - After three

* When all factors are NR, exclude the case from Index.

6. BAMI - Best Age At Marriage Index.

Scale	New Code for BAMI
1.0 - 1.5	1 - Below average - early marriage
1.6 - 2.5	2 - Average
2.6 - 3.0	3 - Above average - late marriage

Rating Plan:

FACTOR, LOCATION/ (WEIGHT)	SCORE (K) for Coded Response		
	3 points	2 points	1 point
1) D5, 1/48-49 Girl - BAM (0.50)	Age 26 & Above	Age 24 & 25 99 - NR*	Age 23 & Below
2) D6, 1/50-51 Boy - BAM (0.50)	Age 29 & Above	Age 27 & 28 99 - NR*	Age 26 & Below

* When all factors are NR, exclude the case from Index.

7. ACKI - Adequacy of Contraceptive Knowledge Index.

Scale	New Code for ACKI
1.0 - 1.5	1 - Inadequate
1.6 - 2.5	2 - Adequate
2.6 - 3.0	3 - Very Adequate

Rating Plan:

FACTOR, LOCATION/ (WEIGHT)	SCORE (K) for Coded Response		
	3 points	2 points	1 point
1) F9, 2/7 Meaning Contra. (0.15)	4 - all above	1 - Spacing 2 - Abortion, MR 3 - FP	5 - None Above 6 - DK 9 - NR*
2) G7, 2/15-16 Man's Methods (0.05)	03 - Candom 04 - Vasectomy 18 - Combination	13 - W/drawal 14 - Abstinence 19 - Combination 20 - Others	00 - DK 01 - Pill 11 - Rhythm Cal. 12 - Rhythm Others 99 - NR*
3) G8, 2/17-18 Woman's Methods (0.05)	01 - Pill 02 - IUD 05 - Ligation 11 - Rhythm Cal. 12 - Rhythm Others 19 - Combination	06 - Sterilization 14 - Abstinence 20 - Others	00 - DK 03 - Condom 04 - Vasectomy 18 - Combination 99 - NR*
4) G9, 2/19 More Effective Me. (0.15)	3 - Vasectomy 2 - IUD		1 - Rhythm 4 - DK 9 - NR*
5) GO, 2/20 More side effects (0.10)	2 - IUD 3 - Ligation		1 - Rhythm 4 - DK 9 - NR*
6) H1, 2/21 Vasectomy is... (0.15)	2 - Vas deferens 4 - Testicles		1 - Fallopians 3 - Ovaries 5 - DK 9 - NR*
7) H2, 2/22 Ligation is... (0.15)	1 - Fallopians 3 - Ovaries		2 - Vas deferens 4 - Testicles 5 - DK 9 - NR*

8) I5, 2/35 Rating Own Know. (0.10)	1 - Very adequate	2 - adequate	3 - Inadequate 4 - DK 9 - NR*
9) I6, 2/36 Need more info. (0.10)	2 - NO	3 - DK	1 - Yes 9 - NR*

* When all factors are NR, exclude the case from Index.

8. FPOI - Family Planning Orientation Index

Scale	New Code for FPOI
1.0 - 1.5	1 - Disapprove
1.6 - 2.5	2 - No firm stand
2.6 - 3.0	3 - Approve

Rating Plan:

FACTOR, LOCATION/ (WEIGHT)	SCORE (K) For Coded Response		
	3 points	2 points	1 point
1) H4, 2/24 FP position (.40)	1 - For all	2 - Some 3 - Some 9 - NR*	4 - Optional
2) H5, 2/25 Govt Sterilize (.30)	1 - Approve	2 - No firm opi. 9 - NR*	3 - Don't appr.
3) H6, 2/26 Govt Fine (.30)	1 - Approve	2 - No firm opinion 9 - NR*	3 - Don't appr.

* When all factors are NR, exclude the case from index.

9. OAI - Orientation on Abortion Index

Scale	New Code for OAI
1.0 - 1.5	1 - Disapprove
1.6 - 2.5	2 - No firm stand
2.6 - 3.0	3 - Approve

Rating Plan:

FACTOR, LOCATION/ (WEIGHT)	SCORE (K) For Coded Response		
	3 points	2 points	1 point
1) H7, 2/27 Abortion-Health (0.125)	1-Yes, alright	3 - DK 9 - NR*	2 - not alright
2) H8, 2/28 Abortion-Unmarried (0.125)	1-Yes, alright	3 - DK 9 - NR*	2 - not alright
3) H9, 2/29 Abortion-Can't afford (0.125)	- same -	- same -	- same -
4) HO, 2/30 Abortion-Unwanted (0.125)	- same -	- same -	- same -
5) I1, 2/31 Abortion-deformed (0.125)	- same -	- same -	- same -
6) I2, 2/32 Abortion-raped (0.125)	- same -	- same -	- same -
7) I3, 2/33 Abortion-any cond. (0.125)	- same -	- same -	- same -
8) I4, 2/34 Abortion-one FP (0.125)	- same -	- same -	- same -

* When all factors are NR, exclude the case from Index.

10. EOI - Egalitarian Orientation Index (more of sex role)

Scale	New Code for EOI
1.0 - 1.5	1 - Mainly males responsibility
1.6 - 2.5	2 - Mainly both
2.6 - 3.0	3 - Mainly female's responsibility

Rating Plan:

FACTOR, LOCATION/ (WEIGHT)	SCORE (K) For Coded Response		
	3 points	2 points	1 point
1) E7, 1/64 Family Size Decision (.50)	2 - Wife	3 - Both 4 - none 5 - Depends 6 - Depends 7 - Others 9 - NR*	1 - Husband
2) H3, 2/23 Contra. Decision (.50)	2 - Female	3 - Both 4 - None 5 - DK 9 - NR*	1 - Male

* When all factors are NR, exclude the case from Index.

11. TKAI - Total Knowledge Adequacy Index

Scale	New Code for TAI
1.0 - 1.5	1 - Inadequate
1.6 - 2.5	2 - Adequate
2.6 - 3.0	3 - Very Adequate

Scoring Plan:

1) ARKI - Adequacy of Rep. Knowledge Index:	2) ACKI - Adequacy of Contra. Know.		
	Inadequate (1)	Adequate (2)	Very Adequate (3)
(1) Inadequate	1.0	1.5	2.0
(2) Adequate	1.5	2.0	2.5
(3) Very Adequate	2.0	2.5	3.0

Figures in ( ) are the codes of variables ARKI & ACKI

Figures in the cells of table are the Scale, which are also the scores.

Selected Bibliography

Africa, Socorro.   "Exposure to print media and the attitude of the
    first and second year college students of Greater Manila toward
    early marriages." Unpublished A.B. Thesis, UPIMC, 1974.

Bautista, Paulina, ed. Family Planning Communication in the Philippines:
    An Anthology. Quezon City: University of the Philippine Press,
    1976.

Bulatao, Rodolfo. The Value of Children, A Cross-National Study,
    Vol. 2 Philippines. Honolulu, Hawaii: East West Population Institute.

Castillo, Ma. Isabel. "Mass media exposure and sexual attitudes and
    behavior of college students in Greater Manila." Unpublished
    A.B. Thesis, UPIMC, 1973.

Ellingsworth, Huber and Florangel Z Rosario. "Communication and
    Decision Making Behavior of IEC Family Planning Administrators
    in the Philippines and Malaysia." East West Communication Institute
    Papers, 1973.

Enriquez, Elizabeth L. "Mass media exposure and the high school students'
    knowledge of and attitude towards family planning." Unpublished
    A.B. Thesis, UPIMC, 1974.

ESCAP.   "Husband-Wife Communication and Practice of Family Planning."
    Asian Population Studies Series No. 16.

Eshleman, J. Ross. "Filipino Student Reactions to Fertility Control."
    Paper prepared for the Association for Asian Studies Meeting,
    Washington, D.C., March 29-31, 1971.

Fisek, Nusret H. "Problems in Starting a Program," in Berelson (ed.)
    Family Planning and Population Programs. Chicago, 1966,
    pp. 297-304.

Rarela, Delia. "Mass media exposure and knowledge, attitude and
    behavior towards family planning." Unpublished A.B. Thesis,
    UPIMC, 1972.

Rogers, Everett & Floyd Shoemaker. Communication of Innovations.
    New York: The Free Press, 1971.

Rosario, Florangel Z. "A Researcher's Guide to Social-Psychological
    Communication Variables in Family Planning Research." East West
    Communication Institute Papers, 1973.

Roxas, Maria Lourdes, "Mass media exposure, the adoption continuum of
    family planning methods and the attitude towards family planning."
    Unpublished A.B. Thesis, UPIMC, 1974.

Yalung, Susan. "Komiks exposure and attitude toward early marriage."
    Unpublished A.B. Thesis, UPIMC, 1974.

*UPIMC, University of the Philippines Institute of Mass Communication.

SEAPRAP

THE SOUTHEAST ASIA POPULATION RESEARCH AWARDS PROGRAM

PROGRAM OBJECTIVES

* To strengthen the research capabilities of young Southeast Asian social scientists, and to provide them with technical support and guidance if required.

* To increase the quantity and quality of social science research on population problems in Southeast Asia.

* To facilitate the flow of information about population research developed in the program as well as its implications for policy and planning among researchers in the region, and between researchers, government planners and policy makers.

ILLUSTRATIVE RESEARCH AREAS

The range of the research areas include a wide variety of research problems relating to population, but excludes reproductive biology. The following are some examples of research areas that could fall within the general focus of the Program:

* Factors contributing to or related to fertility regulation and family planning programs; familial, psychological, social, political and economic effects of family planning and contraception.

* Antecedents, processes, and consequences (demographic, cultural, social, psychological, political, economic) of population structure, distribution, growth and change.

* Family structure, sexual behaviour and the relationship between child-bearing patterns and child development.

* Inter-relations between population variables and the process of social and economic development (housing, education, health, quality of the environment, etc).

* Population policy, including the interaction of population variables and economic policies, policy implications of population distribution and movement with reference to both urban and rural settings, and the interaction of population variables and law.

* Evaluation of on-going population education programs and/or development of knowledge-based population education program.

* Incentive schemes — infrastructures, opportunities; overall economic and social development programs.

SELECTION CRITERIA

Selection will be made by a Program Committee of distinguished Southeast Asian scholars in the social sciences and population. The following factors will be considered in evaluating research proposals:

1. relevance of the proposed research to current issues of population in the particular countries of Southeast Asia;

2. its potential contribution to policy formation, program implementation, and problem solving;

3. adequacy of research design, including problem definition, method of procedure, proposed mode of analysis, and knowledge of literature;

4. feasibility of the project, including time requirement; budget; and availability, accessibility, and reliability of data;

5. Applicant's potential for further development.

DURATION AND AMOUNT OF AWARDS

Research awards will be made for a period of up to one year. In exceptional cases, requests for limited extension may be considered. The amount of an award will depend on location, type and size of the project, but the maximum should not exceed US$7,500.

QUALIFICATIONS OF APPLICANTS

The Program is open to nationals of the following countries: Burma, Indonesia, Kampuchea, Laos, Malaysia, Philippines, Singapore, Thailand and Vietnam. Particular emphasis will be placed on attracting young social scientists in provincial areas.

Applications are invited from the following:

* Graduate students in thesis programs

* Faculty members

* Staff members in appropriate governmental and other organizations.

Full-time commitment is preferable but applicants must at least be able to devote a substantial part of their time to the research project. Advisers may be provided, depending on the needs of applicants.