

ATTITUDES TOWARD POPULATION CONTROL IN SANTIAGO, CHILE¹

M-Francoise Hall, M.D.²

This article describes a survey of Chilean attitudes toward national population growth. The results suggest that men in poorer socioeconomic groups know less about this subject than their better-off counterparts. Nevertheless, they more often feel that Chile has "too many" inhabitants, that recent population growth has been rapid, and that this rate of growth should be reduced.

Introduction

The decade of the 1960's saw the beginning of a new kind of survey in Latin America—the "KAP" type of survey seeking to measure people's knowledge, attitudes, and practices with regard to fertility and its control. Apart from the direct gain in knowledge about public behavior and attitudes concerning contraception, abortion, and desired family size, the surveys contributed to a number of significant trends. One of these was a growing public awareness of the family planning issue and its emergence as an unemotional, scientifically acceptable topic for discussion.

The present survey, done at the beginning of the 1970's, hopefully marks the start of another similar trend—with the subject for analysis changed from family planning on an individual scale to population planning on a national scale. To the author's knowledge, this study is the first KAP-type survey in Latin American focusing on national population con-

trol, providing sample coverage of all socioeconomic levels in a broad segment of the population, and dealing with males of an economically productive age rather than child-bearing females.

This study is exploratory. Its main purpose is to obtain evidence on the nature of differences between subgroups, and it is this general evidence, rather than minor variations in percentages, that is important. Though significance tests were done during the analysis, they are not mentioned in this report, as it was felt that they would misplace the desired emphasis. Moreover, they would create an impression that the figures obtained are accurate to within a small margin of error, when in fact this is not so. Hopefully, the experience gained in this study will lead to more comprehensive and more definitive studies in the near future, as the subject has tremendous implications for the well-being of mankind.

Demographic and sociopolitical considerations underlying this survey will not be reviewed here. Instead, the reader is referred to recent analyses by the author on this topic (1, 2) which indicate the issue's abstract character (a factor hindering study of public attitudes) as well as its political sensitivity.

¹Also appearing in Spanish in the *Boletín de la Oficina Sanitaria Panamericana*, October 1975.

²Assistant Professor, Department of International Health, Johns Hopkins University School of Hygiene, 615 N. Wolfe St., Baltimore, Maryland 21205.

Methodology

Sample Selection

A sample was designed and obtained specifically for purposes of this study by the School for Statistical Technicians of the Faculty of Economic Sciences at the University of Chile. Dr. Alfonso Rodriguez, Professor of Statistics at the school and a staff member of the university's Center for Mathematical Research (CEDEM), used this work as a practical exercise in his third-year course for statistical technicians.

Students participated at all stages of sample design and field work, under Dr. Rodriguez' supervision. This arrangement was mutually beneficial for both parties, giving needed "real" field experience to the students while providing the author with an excellent sample at an economical price.

The sample consisted of 1,410 men 20 to 54 years of age in urban Santiago, who were classified according to socioeconomic and educational levels as follows:

<i>Socioeconomic level</i>	<i>Educational level</i>	<i>Number of men</i>
High	University, 3 or more years	266
	Less than 3 years of University	266
Middle	University, 3 or more years	218
	Less than 3 years of University	220
Low	Schooling, 7 or more years	220
	Less than 7 years of schooling	220

The socioeconomic level of each participant was judged subjectively by the students when they made a house-to-house census during the first stage of sample preparation. This judgment was guided by written criteria which were thoroughly discussed during several group training sessions held before the census. Male educational levels and ages were also determined during this census by briefly interviewing an adult resident in each housing unit covered. The interview provided the information needed to list all residents by first name, age, sex, and

level of education. The sampling procedure used is described in detail in Appendix 1.

The Questionnaire

A questionnaire was made up that contained both multiple-choice and open-ended questions. These were designed to provide basic socio-demographic information and to indicate the participant's attitude toward the size of Chile's population, perceived changes in this size, and the perceived roles of the Government and the Church. Attitudes toward individual family size, a subject not discussed here, were also covered. The possible answers provided for the multiple-choice questions were arrived at after extensive and repeated field testing of the questionnaire. The coding procedure for the open-ended questions is described in Appendix 2.

Interviews

Thirty-six students at the University of Chile, most of them engineering or social science graduate students, were hired to do the interviews. All of them were males and all had some previous interviewing experience. Their training included a series of six classroom sessions, during which the questionnaire was analyzed in detail, and class exercises involving two practice interviews in the field, the results of which were discussed in class and individually. About half of the interviewers, as well as their direct supervisor, Dr. Rodriguez, had participated in a similar study done by the author about two years before. This experience proved very valuable in classroom discussions and in providing general guidance for the less experienced interviewers.

Interviewers were paid relatively well for each interview performed; but payment was withheld pending completion of all the interviewers' field work and verification of a 5 per cent sample of the interviews. The rule was that if this verification showed that reported interviews were not done or were done by someone other than the designated interviewer, then all

TABLE 1—*Sociodemographic characteristics of the men interviewed (Santiago, Chile, 1970).*

	Socioeconomic levels and educational groups					
	Upper level		Middle level		Lower level	
	University (≥ 3 years)	Other	University (≥ 3 years)	Other	School (≥ 7 years)	Other
Number of respondents (N)^a	167	178	159	180	169	177
Age:						
20-29 (%)	40	36	50	41	40	30
30-39 (%)	23	20	28	24	26	28
40-54 (%)	37	44	22	35	34	42
Marital status:						
In a marital union ^b (%)	67	72	58	69	73	78
Other (%)	33	28	42	31	27	22
Number of children (mean)	2.0	2.1	1.5	2.1	2.3	3.1
Birthplace:						
Santiago (%)	62	66	55	61	63	40
Other (%)	38	34	45	39	37	60
Religious affiliation:						
Yes (%)	74	84	59	83	88	75
No (%)	26	16	41	17	12	25
Insurance:						
Insured ^c (%)	70	68	85	72	65	58
Uninsured (%)	30	32	15	28	35	42
Membership in an association or group:^d						
Yes (%)	64	63	55	52	52	46
No (%)	36	37	45	48	48	54
Number of people supervised at work:^e						
15 or less (%)	74	78	88	91	92	99
16 or more (%)	26	22	12	9	8	1
Housing:						
"medium" to "good" (%)	100	100	90	75	54	25
"poor" (%)	0	0	10	25	46	75

^aThe numbers of answers missing were as follows: Age--2; marital status--3; number of children--21; birthplace--3; religion--10; social security--137; association or group membership--3; number of people supervised at work--130; housing quality--20.

^bLegal or consensual union.

^cThe question was "Do you have any type of insurance at the present time?"

^dThe question was "I would like to ask you if you are a member of some association or organized group such as a club, syndicate, political party, sports society, or any other type of association. Don't tell me the name of the association, just whether you are a member."

^eThe questions asked were "Do you have (if retired, did you have) people under your supervision in your work?" And if so, "About how many people?"

TABLE 2—*Occupation^a of subjects, by education and socioeconomic group.*

	Socioeconomic levels and educational groups					
	Upper level		Middle level		Lower level	
	University (≥ 3 years)	Other	University (≥ 3 years)	Other	School (≥ 7 years)	Other
Number of respondents (N)^b	167	177	159	180	168	174
Percentage in each type of occupation:						
Total	100	100	100	100	100	100
Professionals	22	3	17	4	2	5
Students	20	13	16	4	2	0
Managerial or technical workers	31	19	27	6	5	1
Teachers, secretarial workers, employees	7	15	13	12	7	2
Merchant supervisors	11	18	8	11	11	3
Semi-skilled manual workers	5	24	12	36	50	48
Unspecialized light manual workers	1	3	4	11	10	12
Heavy manual workers	1	1	1	7	10	22
Unemployed persons and others	2	4	2	9	3	7

^aCurrent occupation, or last occupation if retired.

^bNumber of answers missing: 5.

payment for any interviewing by the responsible interviewer would be forfeit. Although seemingly hard on the interviewers, this regulation may have had a very beneficial effect on the study. The field work was completed within a month and the interviewing proved to have been conscientiously done. It turned out that no payment had to be cancelled, and in fact a gratifying spirit of camaraderie prevailed, encouraged by the mutual interdependence of the group.

Attempts to obtain an interview were sometimes heroic. In most cases many more than the required minimum of three visits were made to the subject's house. In no case, of course, was the replacement of a man originally in the sample acceptable, nor was it acceptable to trace a man who had moved and to interview him at his new place of residence. All the field work was carried out in the month of October 1970.

Before each questioning session began, the interviewer would introduce himself, show his credentials, and explain the purpose of the study. A brief background description of the study was also presented on the front page of the questionnaire. A translation of this introductory text appears in Appendix 3.

Results

Interviews Not Obtained

Of the total 1,410 men in the sample, 20 were foreigners and thus not eligible to be interviewed. Of the 1,390 remaining, 360 could not be interviewed. Explicit refusal accounted for only 67 of these. A variety of reasons, presumably covering a desire not to be interviewed in some cases, were given by another 109 subjects. The respondent was unavailable due to temporary or permanent absence in 156 cases, in eight cases the address could not be located, and in 20 the reason for failure to obtain the interview was unclear.

Interview Characteristics

The interviews took an average of 25 minutes each. Good cooperation by the respondent was obtained in a great majority of cases. Most of the spontaneous comments volunteered after the interview were favorable, and the quality of the interview as judged by the interviewer was generally good.

Basic Respondent Characteristics

Table 1 summarizes major sociodemographic characteristics of the respondents. Men of the middle socioeconomic level with three or more years of university training tended to be younger than those in the other strata. They also showed less tendency to be married and had comparatively fewer children.

Table 2 summarizes the respondents' occupations. As expected, there was a high degree of correlation between the socioeconomic and educational category in which each man was placed as a result of the house-to-house census and his socioeconomic status as indicated by the occupation reported during the course of the later interview.

Knowledge about the Census of 1970

In April 1970, six months before the interview phase of this study, the Government of Chile carried out its ten-year National Census of Population and Housing. The census was widely publicized beforehand in an attempt to raise public levels of consciousness and to emphasize the importance of cooperating with census takers. Afterwards, when the first results appeared, another round of publicity was generated because the census revealed that the national population was smaller than had been expected. That is, Chile's population was found

to be around 9.3 million, whereas prior official projections had placed it at 9.7 million.

These events provided us with an opportunity to assess the respondents' awareness and interest concerning population matters. We therefore sought to find out how much knowledge they had acquired.

Well over 90 per cent of the people in all six categories responded affirmatively to the question "Has there been a counting, that is, a census of the number of inhabitants in the country this year?" Of course, as Table 3 shows, fewer knew of the census results. In the uppermost stratum, 86 per cent of the men had heard or read something about the results, less than half had discussed these results with friends or colleagues, and about half were aware that fewer than the expected number of inhabitants had been reported. These proportions fell rapidly as socioeconomic and educational levels declined. In the lowest stratum, 22 per cent of the men had heard or read something about the results, 14 per cent had talked about the results with friends or colleagues, and only

8 per cent were aware of the unexpectedly low result.

The actual size of Chile's population was relatively well-known at all levels. In the top stratum, 91 per cent of the men gave an answer within what we defined as the correct range (9-10 million), and even in the lowest stratum 46 per cent answered correctly.

Attitudes on Population Size

All respondents, no matter what their answers to previous questions, were asked the following: "Do you think that the country has too few inhabitants, too many inhabitants, or that the number of inhabitants is fine?" The results, summarized in Table 4, show the first signs of a trend confirmed by data to be presented later. That is, despite being much less informed about population matters than their more educated counterparts, men in the lower levels seemed nevertheless to have more of a sense of crowding, a sense of what could

TABLE 3—*Knowledge of 1970 census results, including only subjects aware that the census had occurred.*

	Socioeconomic levels and educational groups					
	Upper level		Middle level		Lower level	
	University (≥ 3 years)	Other	University (≥ 3 years)	Other	School (≥ 7 years)	Other
Number of respondents (N) ^a	167	178	159	180	169	177
<u>(1) Have you heard or read something about the census results?:</u>						
Yes (%)	86	63	72	39	37	22
No (%)	14	37	28	61	63	78
<u>(2) Have you talked with your friends or colleagues about the census results?:</u>						
Yes (%)	45	36	49	23	25	14
No (%)	55	64	51	77	75	86
<u>(3) Are there in Chile fewer, more, or an equal number of inhabitants than what was generally expected?:</u>						
Fewer (%)	52	49	45	25	21	8
Same or more (%)	48	51	55	75	79	92
<u>(4) Approximately how many inhabitants are there in Chile?:</u>						
9-10 million ^b (%)	91	84	80	61	61	46
Other (%)	9	16	20	39	39	54

^aThe numbers of answers missing were as follows: Question 1--65; Question 2--73; Question 3--169; Question 4--85.

^bNumbers in this range were considered correct.

TABLE 4—Opinions about current population size.

	Socioeconomic levels and educational groups					
	Upper level		Middle level		Lower level	
	University (≥ 3 years)	Other	University (≥ 3 years)	Other	School (≥ 7 years)	Other
<u>Do you think that the country has too few inhabitants, too many inhabitants, or that the number of inhabitants is fine?</u>						
<u>Number of respondents (N)^a</u>	163	173	157	175	162	164
"Too few" (%)	69	58	53	42	39	31
"Too many" (%)	4	6	8	8	6	13
"Fine" (%)	27	36	39	50	55	56
<u>Why do you think there are "too few" inhabitants?</u>						
<u>Number of respondents (N)^b</u>	112	102	84	73	63	47
Territorial reasons (%)	68	69	60	63	64	60
Natural resource reasons (%)	23	15	19	11	14	21
Other reasons (%)	9	16	21	26	22	19

^aNumber of answers missing: 36.

^bNumber of answers missing: 25.

perhaps be called population pressure. At the top level, as many as two-thirds of the men thought that Chile had "too few" inhabitants at the present time and only 4 per cent thought there were "too many." At the lowest level, only one-third of the men thought there were "too few" inhabitants and 13 per cent thought there were "too many."

Most of the reasons given for thinking that the country had "too few" inhabitants centered on the population's small size relative to the national territory and the availability of natural resources. Reasons for thinking that the country had "too many" inhabitants were based almost entirely on economic considerations. Those who thought that the number of the country's inhabitants was "fine" were about equally divided between those noting that Chile was capable of supporting this number and those reasoning that more inhabitants would only bring the country more problems.

Attitudes on Population Growth

Almost all the respondents (98 per cent) answered "more" to the question "Are there

now in Chile fewer inhabitants, more inhabitants, or the same number of inhabitants as there were ten years ago?" Those who answered "more" were then asked: "Is the present number of inhabitants a little bigger, somewhat bigger, or much bigger than it was ten years ago?" Table 5 shows that only 20 per cent of the men in the top educational and socioeconomic level answered "much bigger," while 40 per cent of the men in the lowest stratum answered thus. If the educational groups are combined and the men divided only in terms of socioeconomic status, the percentages who answered "much bigger" comprised 19, 28, and 35 per cent, respectively, of the upper, middle, and lower socioeconomic levels.

As before, the feeling of population pressure among men in the lower socioeconomic categories was not accompanied by accurate knowledge of the facts. At the lowest level, 45 per cent of the men ascribed population growth in Chile to people having more births now than in the past or to couples marrying earlier. At the top level, 41 per cent of the men ascribed this growth to improved health or economic conditions, answers which are certainly more correct.

The next question was "Is it good, bad, or

TABLE 5—Opinions about current population growth.

	Socioeconomic levels and educational groups					
	Upper level		Middle level		Lower level	
	University (≥ 3 years)	Other	University (≥ 3 years)	Other	School (≥ 7 years)	Other
<u>Is the present number of inhabitants a little, somewhat, or much bigger than 10 years ago?</u>						
<u>Number of respondents (N)^a</u>	162	171	154	173	157	161
A little bigger (%)	33	44	31	30	33	22
Somewhat bigger (%)	47	38	46	38	37	38
Much bigger (%)	20	18	23	32	30	40
<u>Attitude toward present population growth</u>						
<u>Number of respondents (N)^b</u>	127	123	119	122	101	104
Should be faster	9	16	9	5	5	0
Present growth is good	43	40	34	28	35	39
Should be no faster than now	10	11	11	6	7	4
Should be slower	38	33	46	61	53	57
<u>Would it be better for the country if the number of inhabitants grew more slowly, more rapidly, or just as it is now?</u>						
<u>Number of respondents (N)^c</u>	124	121	113	122	99	105
Faster	21	32	14	10	12	13
As it is now	43	37	42	37	41	33
Slower	36	31	44	53	47	54

^aNumber of answers missing: 52.

^bNumber of answers missing: 322.

^cNumber of answers missing: 334.

immaterial for the country that the number of inhabitants should grow this way?" ("This way" implied at whatever rate the respondent had indicated earlier, as selected from the choices of a little, somewhat, or a lot.) And this was followed by the query "Why is it good (bad) that the number of inhabitants should grow this way?" The results, summarized in the middle portion of Table 5, again showed a clear difference in the attitudes at upper and lower socioeconomic levels. The percentages of respondents desiring faster growth than the rate perceived represented 14, 7, and 3 per cent of the men in the upper, middle, and lower socioeconomic levels, respectively. The percentages desiring slower growth represented 36, 54, and 54 per cent, respectively.

Analysis of the reasons given for wanting slower growth showed concern about unemployment, particularly in the lower strata. Proceeding from top to bottom, men who

specifically cited unemployment as underlying their belief that population growth should be slower accounted for 4, 4, 7, 11, 15, and 14 per cent of those in the six educational and socioeconomic categories.

The next question asked was "Would it be better for the country if the number of inhabitants grew more slowly, more rapidly, or the same way as now?" Again, men in the lower strata showed a preference for slower growth more often than those in the upper strata. Respective percentages for the upper, middle, and lower socioeconomic levels were 34, 49, and 51 per cent.

Table 6 shows the relationship between the respondents' perception of population growth ("Is the present number of inhabitants a little, somewhat, or much bigger than ten years ago?") and their attitude toward this growth. In general, the slower the growth perceived, the more often its effect on the country was

TABLE 6—*Relationship between perceived growth rates and perceived desirability of faster or slower growth.*

Perceived 10-year population growth ^a	Attitude toward this growth ^b	Socioeconomic levels and educational groups					
		Upper level		Middle level		Lower level	
		University (> 3 years)	Other	University (> 3 years)	Other	School (> 7 years)	Other
A little	Number of respondents (N) ^c	40	50	37	36	36	24
	Should be faster	23	36	24	16	14	0
	Good/no faster	52	50	38	42	45	71
	Should be slower	25	14	38	42	41	29
Somewhat	Number of respondents (N) ^c	60	49	53	48	39	36
	Should be faster	2	4	2	0	0	0
	Good/no faster	57	55	53	27	41	44
	Should be slower	41	41	45	73	59	56
Much	Number of respondents (N) ^c	25	22	26	37	26	43
	Should be faster	4	0	4	0	0	0
	Good/no faster	44	46	35	37	42	25
	Should be slower	52	54	61	63	58	75

^a"Is the present number of inhabitants a little, somewhat, or much larger than 10 years ago?"

^b"Is it good, bad, or immaterial for the country that the number of inhabitants should grow this way?" and "Why is it good (bad) that the number of inhabitants should grow this way?"

^cNumber of answers missing in the whole table: 317.

considered favorable. But differences in perception alone did not account for the greater desire on the part of the poor to see a slower rate of growth; for among those with similar perceptions of recent growth, the poor were more likely than the well-to-do to want the growth rate reduced. Thus, regardless of what they thought the rate of growth to be, the higher socioeconomic groups were less concerned about slowing the rate than the rest of the sample. We may conclude that the differences in attitude toward population growth between men of different socioeconomic strata were linked with differing perceptions of the growth rate, and also with differing attitudes toward the particular rate perceived.

Perception of Government and Church Influence

Another question asked during the interview was "At the present time, does the Government (Catholic Church) influence in one way or another the number of children couples have?"

Both the Government and the Church were seen as much less influential by men at lower socioeconomic and educational levels than by those at upper levels. Going from upper to lower levels, those who thought the Government had any current influence represented 59, 51, 49, 33, 37, and 22 per cent of the respondents. Those who thought that the Church had any current influence represented 62, 53, 55, 41, 38, and 25 per cent (Table 7).

Conclusions

The findings in this study are remarkably parallel to the results so graphically described by Stycos (3) and scientifically analyzed by himself and others (4-7); that is, it appears that lower socioeconomic groups in Latin America seem to be more ready for large-scale family planning programs than higher socioeconomic groups.

The present study shows that a similar difference in attitude may prevail with regard to population planning, at least in the urban

TABLE 7—Perceived Government and Church influence on family size.

	Socioeconomic levels and educational groups					
	Upper level		Middle level		Lower level	
	University (≥ 3 years)	Other	University (≥ 3 years)	Other	School (≥ 7 years)	Other
<u>At present, does the Government influence in one way or another the number of children couples have?</u>						
Number of respondents (N) ^a	158	174	158	177	164	160
Yes (%)	59	51	49	33	37	22
No (%)	41	49	51	67	63	78
<u>At present, does the Catholic Church influence in one way or another the number of children couples have?</u>						
Number of respondents (N) ^b	158	176	154	174	160	159
Yes (%)	62	53	55	41	38	25
No (%)	38	47	45	59	62	75

^aNumber of answers missing: 39.

^bNumber of answers missing: 49.

area of Santiago. There, men at the lower socioeconomic levels seemed to feel more need for population control than those at the upper levels. This feeling was not associated with awareness of important national population events, or even with accurate knowledge of the causes of population growth. In fact, their knowledge about these subjects was meager. Rather, the feeling was associated with disproportionately common perception of "too many" inhabitants around them, rapid ("much") growth in the number of inhabitants, and a desire that growth be "slower." This latter desire could be attributed both to a more frequent perception of rapid growth and to a more frequent desire to slow the growth regardless of its rate.

It is beyond the scope of this study to assess the reasons for this difference between the well-to-do and the poor. The question can be raised, however, as to whether actual life experiences may have had a decisive influence. The poor man in urban Santiago is likely to have direct experience with unwanted crowding. He knows there is little space where he lives; he may have seen waves of people settling on the border areas of his slum; he has small

rooms in his house, he often has more children than he wanted, he has queued for food at the market place, he knows the unpleasant pushing on crowded buses, and perhaps most important, he knows there are too many workers for the number of available jobs. The man that life has favored socioeconomically and educationally is far less likely to have daily contact with such conditions. He lives in the suburbs, where each house is surrounded by a plot of grass; he is likely to have only two to four children, and if he has more it is probably because he wanted more; he drives to work in his private car, perhaps goes to the country for the weekend, and is far less likely to be involuntarily unemployed or underemployed than his poorer counterpart. Thus he may have factual knowledge about the size of the country's population and the reasons for its growth. But he is not as likely to be faced daily with this growth's unpleasant consequences.

The data obtained in this study thus raise an important point. For it is those who are better educated and better off who have the greatest say in whether a population policy is clearly formulated, even though they may not be the ones who feel the need for it the most.

ACKNOWLEDGMENTS

The author would like to express her appreciation to the Department of International Health at the Johns Hopkins School of Hygiene, and especially to Dr. Carl E. Taylor, Dr. Timothy D. Baker, Dr. William A. Reinke, and Dr. Thomas L. Hall for their continuous support and encouragement during this study.

Thanks is also given to the Latin American Center for Demography (CELADE) for extending its official support and for the use of its facilities, and to Miss Carmen Miró for her advice on the questionnaire and field work.

The author is also grateful to the University

of Chile for making possible the cooperation with the School for Statistical Technicians; to Dr. Alfonso Rodriguez, whose command of statistics and whose leadership qualities greatly benefited the study; and to José Miguel Albala, Jaime Carrión, Isabel Encina, and Farid Isa, the four students who were especially involved with work on the sample.

This study was supported by grant number AID/csd-1939 from the Agency for International Development (AID) to the Johns Hopkins School of Hygiene.

SUMMARY

This article explores Chilean attitudes toward the national population's size and rate of growth, as indicated by a special survey conducted for this purpose. The survey sample consisted of 1,410 men 20 to 54 years of age in urban Santiago, who were separated into six categories on the basis of their education and socioeconomic status. The subjects were interviewed by 36 students from the University of Chile who utilized a prepared questionnaire

including both open-ended and multiple-choice questions.

The results clearly indicate that men in the lower socioeconomic categories tended to know less about the population's size and growth than their better-off counterparts. Nevertheless, they more often felt that Chile had "too many" inhabitants, that recent population growth had been rapid, and that this rate of growth should be reduced.

APPENDIX 1: THE SAMPLE

The sample used for this study was a probability sample of men 20 to 54 years of age in the City of Santiago, separated into six groups according to the following criteria:

- 1) High socioeconomic level, 3 or more years of university education.
- 2) High socioeconomic level, less than 3 years of university education.
- 3) Middle socioeconomic level, 3 or more years of university education.
- 4) Middle socioeconomic level, less than 3 years of university education.

- 5) Low socioeconomic level, 7 or more years of school.
- 6) Low socioeconomic level, less than 7 years of school.

The preparation of the sample involved two stages. First, the area of the city was divided into primary units, each with an equal probability of inclusion in the sample. Second, in each unit selected a listing was made of men in the 20-54 age group, the men were separated into the six specified groups, and individuals were selected from each group; within each

group, every man had an equal likelihood of being selected.

Division of Santiago into Primary Units (Areas)

Data from the 1960 National Population and Housing Census were updated to the year 1969, taking into account all structures built and removed during the intervening years. As in the 1970 national census, the City of Santiago was defined as being composed of the following 14 districts: Cisterna, Conchalí, La Florida, Nuñoa, Providencia, Quinta Normal, San Miguel, Santiago, and the urban sectors of Barrancas, La Granja, La Reina, Las Condes, Maipú, and Renca. All persons habitually residing in private housing in these areas were included in the population from which the sample was to be drawn. Collective residences such as prisons, hospitals, schools, hotels, etc., were excluded. The "primary units" of selection were 12,550 areas with an average of 35 housing units each, the actual number of housing units ranging from a minimum of 20 to a maximum of 60. A one-to-fifty sample of these primary units was then taken systematically, starting from the center of the city (Santiago) and proceeding in the form of a spiral to the outskirts (Renca). A sample of 251 primary units was thus obtained. Identification of these on a map of the city showed a completely random distribution. A census was then taken in each primary unit selected.

Selection of Secondary Units (Individuals)

During the census of the primary areas, each housing unit was classified as indicating high, medium, or low socioeconomic status. Specific guidelines were given to the census takers for this classification and several group sessions

were held prior to the census for clarification of these instructions. Ultimately, however, the classification depended on the census takers' subjective judgment. Arrival at this judgment was facilitated by substantial socioeconomic differences between large sectors of the country's population. A six-level classification scheme might have presented real problems, but the three-level system used did not entail many difficulties or differences of opinion.

During the preliminary census, an adult resident in each housing unit was asked to provide the first name, sex, age, and education of the persons residing in the unit. A complete listing of all residents was thus obtained. Men 20 to 54 years of age were then selected at random from within each of the six educational and socioeconomic categories, the sampling fraction varying so as to obtain a total of approximately 220 men in each category. The actual number of men obtained and the sampling fraction applied in each category were as follows:

<i>Category</i>	<i>Number of men</i>	<i>Sampling fraction</i>
1	266	0.0179
2	266	0.0144
3	218	0.0200
4	220	0.0021
5	220	0.0035
6	220	0.0029
Total	1,410	

Thus, in the second stage of sample selection all the men within each category had an equal likelihood of being selected, but the proportion selected from the total available in each category varied considerably.

APPENDIX 2: CODING PROCEDURES

The coding procedure for open-ended questions was as follows: A 10 per cent random sample of the questionnaires was chosen by arranging all the questionnaires in numerical order, selecting one of the first ten at random, and thereafter selecting every tenth one systematically. All the answers to open-ended questions in this sample were then listed, and

exhaustive, mutually exclusive categories were developed. Four coders, all college graduates and all speaking Spanish as their native language, thereupon used these categories to code the answers to all 1,030 questionnaires.

One hundred per cent verification was also performed; that is, the coding of every question in every questionnaire was verified by another

coder. The atmosphere during the whole coding procedure was congenial, with the four coders working in the same room and having a free interchange of opinions at all times. This was invaluable in gaining the confidence of the coders and allowing them to report disagreements without feeling they were correcting or

finding fault with their co-workers. Disagreements were usually settled by a consensus of opinion. Two of the coders had carried out sociological research in Chile before, and their interpretation of some of the answers proved very worthwhile.

APPENDIX 3: INTRODUCTORY MESSAGE

The following is a translation of the brief introduction printed on the front page of each questionnaire:

"The University of Johns Hopkins, in collaboration with the Latin American Center for Demography (CELADE), is conducting a study of current opinions about the number of inhabitants in the country. We have to interview a number of people in the City of Santiago, and you are one of the persons who

has been selected at random to give your opinions.

"The study is for scientific purposes only and, therefore, there are no questions of a political nature in the questionnaire. Your answers will be confidential and your name will not appear at any time in the analysis in connection with your answers. Since the questions ask for your opinion, there are no correct or incorrect answers. We ask that you be frank and sincere and we promise you strict confidentiality."

REFERENCES

- (1) Hall, M-Françoise. Population growth: U.S. and Latin American views. *Population Studies* Volume 27, November 1973.
- (2) Hall, M-Françoise. Population control: Latin America and the United States. *Int J Health Serv* 4 (3): 725-730, 1973. Special issue: "Population Growth in International Perspective."
- (3) Stycos, J. Mayone. *Children of the Barriada*. Grossman Publishers, New York, 1970.
- (4) Stycos, J. Mayone. "Catholicism and Birth Control in the Western Hemisphere." Presentation to the Fourth Annual National Conference of the Catholic Inter-American Cooperation Program, 1967. (Mimeographed.)
- (5) Stycos, J. Mayone. Ideology, faith, and family planning in Latin America. In: *Exploding Humanity*, edited by H. Regier and J. Falls. Anansi, Toronto, 1969, pp. 91-104.
- (6) Stycos, J. Mayone. *Ideology, Faith and Family Planning in Latin America*. McGraw-Hill, Inc., New York, 1971.
- (7) Sanders, T. The relationship between population planning and belief systems: The Catholic Church in Latin America. *American University Field Staff Reports* 17: 7, 1970.