The relationship between certain attitudes and the levels of fertility in five cultural groups was explored in this study. The group studied were blacks, Cubans, American Indians, migrant Chicanos, and white Protestants. Mothers, aged 35-45, with one or two children (small family) or five children (large family) were compared. Attitudes measured included those toward pregnancy, family, abortion, sex, birth control, and parents. Findings indicated that large family mothers were generally more negative toward birth control, sex, and family. Cultures differed significantly on all six attitudes, with attitudes toward abortion and pregnancy being the best discriminators. Significant interactions between culture and size were found on attitudes toward birth control and pregnancy. In general, large families wanted fewer children than they had, and their negative attitudes toward birth control might be related to their ineffective experiences; however, the trend was reversed in the migrant group where small family mothers were more negative toward birth control. Since small family mothers among migrant Chicanos were difficult to find and their estimates of ideal family size were large, it is likely that their negative attitudes toward birth control reflected an aversion to its use. (Author/AM)
FERTILITY RELATED ATTITUDES OF MINORITY MOTHERS WITH LARGE AND SMALL FAMILIES

MARGARET W. LINN, PhD
Director, Social Science Research
Veterans Administration Hospital
Associate Professor of Family Medicine
and Instructor in Psychiatry
University of Miami School of Medicine
Miami, Florida

LEE GUREL, PhD
Director of Manpower & Research Development
American Psychiatric Association
Washington, D.C.

JOAN S. CARMICHAEL, MSW
Research Social Worker
Veterans Administration Hospital
Adjunct Instructor, Dept. of Epidemiology
University of Miami School of Medicine
Miami, Florida

PATRICIA WEED, MSW
Research Social Worker
Veterans Administration Hospital
Department of Family Medicine
University of Miami School of Medicine
Miami, Florida

NANCY WEBB, MSW
Research Social Worker
Veterans Administration Hospital
Department of Family Medicine
University of Miami School of Medicine
Miami, Florida

Supported by HEW Grant from National Institute of Child Health and Human Development NICHD #HD06032
ABSTRACT

The relationship between certain attitudes and levels of fertility in five cultural groups — Blacks, Cubans, American Indians, migrant Chicanos, and white Protestants — was explored. Mothers, aged 35 - 45, with one or two children (small family N = 253) or five children (large family N = 196) were compared. Using the semantic differential, attitudes toward Pregnancy, Family, Abortion, Sex, Birth Control, and Parent were measured. Large family mothers were generally more negative toward Birth Control, Sex, and Family. Cultures differed significantly on all six attitudes with those toward Abortion and Pregnancy being the best discriminators. Significant interactions between culture and size were found on attitudes toward Birth Control and Pregnancy. In general, large families wanted fewer children than they had and their negative attitudes toward Birth Control might be related to their ineffective experiences; however, the trend was reversed in the Migrant group where small family mothers were more negative toward Birth Control. Since small family mothers among migrant Chicanos were difficult to find and their estimates of ideal family size was large, it is likely that their negative attitudes toward birth control reflected an aversion to its use.
It has been said, to unite mankind, an invasion from outer space would be needed (Editorial, 1972). Earth, however, is not without its own invasion. New inhabitants, some 200,000 strong, reach this planet every day. The alarming fact is that they come not from outer space but from man himself. As Pogo so aptly phrased it, "we have met the enemy and he is us!"

The designation of 1974 as World Population Year and the assembling of the World Food Conference in Rome in 1975 helped focus more attention on the population problems that have concerned population researchers since the early 60s. In 1972, the world population reached 3780 million (Population Reference Bureau, 1972). A year later, it was 3860 million (Population Reference Bureau, 1973). And, if the present exponential rate of growth continues, these numbers will be doubled in only 35 years. Quality of life in the future will be vastly different from that known today. Even though the U.S. birth rate has recently declined, estimates for growth in the U.S. population are still 50% for the next 35 years, because of the increase in the number of adults of childbearing age (Freika, 1970). Although this country accounts for only one-sixth of the world's population, it uses 50% of the world's resources. Buckhout (1972) has stressed that, from the standpoint of consumption, one child born in the U.S. equals 10 born in India.

The pressing problems of malnutrition and population growth are intimately related. It is no coincidence that countries with the highest populations also have the highest rates of infant mortality and the most malnutrition. These same relationships are probably also reflected with-
in our own U.S. subcultures below the poverty level. Scrimshaw (1974) pointed out that malnutrition and fertility are related in several ways. Malnutrition in early childhood adversely affects learning and behavior of the children that survive. Malnourished adults cannot work as well and are less productive. Both factors affect social and economic development, though paradoxically, this very development could provide incentives to limit family size. In highly industrialized countries, the desire to limit family size is often related to improved economics and opportunity.

At least two forces, with different philosophies, are working toward solutions. The family planning groups believe in voluntary control over timing of pregnancies. Clinics help parents to have the number of children they desire, spaced as they want them. Fertility control, on the other hand, has as its objective the prevention of births. Methods suggested for control divide into those with a punitive ring (mandatory sterilization or increased taxes) and those that propose incentives (less tax for unmarried persons, monetary awards for married couples who abstain from having children for several years, or free nursery schools for children so that mothers can go to school or work).

A third approach, which fits somewhere between those mentioned, says that understanding the motivations that lead people to have many children can be determined and possibly manipulated to achieve the goal of a depressed birth rate. These factors may be economic, social, cultural, or attitudinal. For example, it is known that the birth rate follows the death rate down. This is particularly true of infant mortality. People keep having children if they cannot be sure that the ones they
have will live. Thus, improved pre-natal care or infant care for low income families are essential.

The pill is only effective if a woman follows medical advice. Compliance with advice is often a problem for health providers and noncompliance may result from a woman's basic attitudes, largely culturally derived, concerning the importance of the family, the role of being a parent, the right of intervention in "what God has planned" by birth control or abortion, her experiences or perceived expectations of pregnancy, and attitudes about sexual intercourse. This present study examined these attitudes in four U.S. subcultures and related attitudes to whether mothers in these cultures had had a large or small family. The objective of the research was to determine if the mother's attitudes discriminated large and small families consistently among cultures or whether some attitudes were culture specific. Ideally, attitudes should be collected before children are born, with each mother followed up some 15-20 years later to determine if attitudes predicted behavior (completed family size). However, like studies dealing with correlates of schizophrenia or correlates of aging, these factors are generally studied after the dependent variable has been determined, unless one wished to devote an inordinate number of years and cost to doing longitudinal research on a large cohort of patients. Unfortunately, the substitution of a cross-sectional design limits the conclusions that can be drawn from data, and in the case of this study, can only answer whether the mothers' completed family size was explained by her current set of attitudes toward fertility related concepts.
METHOD

Data reported here were collected as part of a larger study on culture and family size and relate specifically to attitudes of the mothers. The study was conducted in 1973-1975 in Miami, Florida.

Mothers, 35 to 45 years of age, with one or two children (small family N = 253) or no less than five children (large family N = 196) were randomly selected for study. Older mothers were chosen so that family size, for all practical purposes would be a fait accompli. The separation of the two groups by two children provided either a very small or very large family for comparison. Minority groups were composed of 99 Blacks from a model city area, 78 Cubans from so-called Little Havana district, 85 Indians from the Miccosukee and Seminole tribes, and 77 Chicanos from a large migrant farming area. A group of 110 middle-class white Protestants were used as a majority comparison group.

Mothers were interviewed in their homes by female research workers of the same ethnic background in the case of the Black, Cuban, and White groups or were accompanied by an Indian mother or Chicano mother when these groups were interviewed.

Background data which described demographic variables and marital and contraceptive history were collected. Social class was measured by Hollingshead's (1957) two factor index. Knowledge of birth control methods was estimated by adding together all the methods the mother could name. Degree of affiliation with the church was the mother's estimate on a four point scale ranging from very active to inactive and no affiliation. Attitudes toward PREGNANCY, FAMILY, ABORTION, SEX, BIRTH CONTROL, and
PARENT were measured by Osgood's semantic differentials (Osgood, Suci. & Tannenbaum, 1957). Concepts were always presented in the same order as listed above. Twelve bipolar adjectives with high loadings on the evaluative factor were used. Items were: safe-dangerous, happy-sad, cleandirty, pleasurable-painful, beautiful-ugly, wise-foolish, healthy-sick, right-wrong, useful-useless, controlled-accidental, pleasant-unpleasant, and relaxed-tense.

Items were scored on a seven-point scale with a higher score representing a more negative attitude. The order of some items was reversed in order to avoid a response set bias.

The six concepts and their adjectives were translated into the native language of the cultural groups. They were pretested on samples from each of the groups who spoke both English and the other language until there was consensus that the translation had equivalent meanings to the English ones.

Where reading difficulty was encountered (mostly in the Indian and Chicano groups), the interviewers were instructed to explain the semantic differential technique and read adjectives to the subjects who indicated where they wanted a mark placed on the scale. Interviewers recorded if material had been presented in this manner.

The focus for analysis was how attitudes related to fertility (large and small family size) across the cultural groups. Since social class, knowledge about birth control methods, and degree of affiliation with the church varied across the groups and were significantly correlated with attitudes, these three variables were entered as covariates singly and in
combination to determine if attitudes differed even with these influences partialled out. A 2x5 factorial design using multivariate analysis of covariance tested for significant differences between attitudes of mothers of large and small families, significant differences across cultures, and significant interactions between family size and culture. Since the white core culture served as a comparison group for the four minorities, parallel analyses, with and without the white Protestants, were performed. This made possible determination of how the minorities differed among themselves as well as how the groups differed when the white majority group was included. It was expected that attitudes would differ less among the minorities than when analyses included the core culture.

RESULTS

Results will be presented in terms of sample characteristics related to social class, knowledge about birth control methods, and degree of church affiliation and then in terms of comparison of attitudes of the cultural groups according to large and small family size.

Sample Characteristics: As might be expected, the subcultures differed from the majority white group in being lower in social class, with accompanying consequences of lower educational levels and less income. The Cuban group was nearer to the white core culture in social class. Chicanos were the lowest, Indians next to the lowest, and Blacks next in levels of social class. On a five point scale, social class ranged from 2.4 to 4.8. Knowledge of birth control methods ranged from a low of a mean of .7 of a method known by large family Indians to a high of 6.2 methods named by the white Protestant mothers who had small families.
The Cubans, as well as over half of the Chicanos were Catholic. All the white core culture, 91% of the Blacks, and over three-fourths of the Indians were Protestants. Large family mothers had slightly stronger church affiliation. Age of the mothers did not differ significantly across cultures or between large and small family size.

Comparison of Attitudes: Table 1 presents the mean scores for the evaluative factor for each of the semantic differentials. Table 2 gives the corresponding F-values. These values have been arranged to present levels of significance related to analyses including and excluding the white core culture. Columns 1 and 2 of Table 2 show tests of significance between means for the main effect of family size; columns 3 and 4 for the main effect of culture; and columns 5 and 6 those related to tests of significant interaction of size and culture.

An inspection of the means in Table 1 indicates that most of the attitude ratings were in the favorable range of the scales. The mothers' attitudes toward Abortion were the only ones that could be considered in a negative range. Therefore, in interpreting the significant differences in the other attitudes between the groups, they reflect more or less of a favorable response, and not negative as opposed to positive attitudes.

Table 2 indicates that there was an overall difference using all the six attitude scores between large and small family mothers as well as between cultures. The magnitude of differences was typically greater when the white group was included; however, they were highly statistically significant even for the minorities alone. Attitudes were more signifi-
cantly different across culture (Multivariate P<.001) than for family size (Multivariate P<.01). The multivariate difference related to interaction shows that small and large family mothers did not have the same kinds of attitudes in each of the cultures. This was more pronounced when the core culture was included (P<.001) as compared to only the minorities (P<.01).

Looking at the univariate differences, only three of the six attitudes differed statistically between mothers of large and small families. Attitudes toward Family tended to be slightly more favorable among mothers of small size families. Likewise, small family mothers had a more positive attitude toward Sex. Finally, attitudes toward Birth Control varied the most between mothers of different family size, with the direction again being less favorable attitudes for mothers with more children. In fact, Table 1 shows that large family Cuban and Indian mothers and small family Chicano mothers approached the negative values on the scale when responding on attitudes toward Birth Control.

The magnitude of attitude differences was greatest in describing the five cultural groups. Five of the attitudes showed .001 levels of significance when the white group was included. The attitude toward Abortion differed the most. The mean scores indicate that the white core culture rated Abortion less negatively than did the other groups. In fact, the attitudes of the white group were the most favorable of all the five groups toward Sex, Abortion, and Birth Control. Large family Indian mothers gave the least favorable responses to five of the six concepts, with only one attitude (Abortion) rated less favorably by any other group.
(Cuban mothers). Differences were generally not as pronounced between the four minority groups, where attitude about Pregnancy (rather than Birth Control) was the most important discriminator of the four groups. Indian, Chicano, and Black mothers were much less favorable than Cuban mothers in their attitudes toward Pregnancy. Although attitudes toward Parent did not differentiate fertility levels, they did discriminate between cultures. Chicano and Cuban mothers were more positive in their attitudes toward Parent.

The overall multivariate tests of interaction were significant, with two of the six attitudes showing specific significant interactions at a univariate level; these being attitudes toward Birth Control and toward Pregnancy. Figure 1 shows the pattern of responses to the 12 items describing Birth Control for each of the five groups divided by mothers with large and small families. As can be seen, large family mothers were typically much less positive in their responses in every culture except the Chicano group, where the small family mothers had a less favorable attitude toward Birth Control.

This same lack of consistency across cultures applied to the concept of Pregnancy, although not at as highly significant a level. Small family Cubans, Indians, and Chicano mothers were slightly more favorable toward Pregnancy, than Blacks, where it was the large family mother who was more favorable, and in the white core culture, where there was little difference between large and small family mothers in their responses concerning pregnancy.
Other Pertinent Data: In order to evaluate the attitudes in relationship to behavior of the mothers, findings on certain other variables collected in the study need to be known. Chicanos said they wanted and they had the largest number of children; the large family mothers averaged 7.3. The large family Black mothers had 7.2 children but wanted about three less. Large family Cuban and white mothers averaged 5.8 and 5.9 children, but large family white mothers wanted fewer children and Cuban mother about what they had. The small family Cuban mother wanted an average of two more children than she had, which was the highest estimate of any of the groups concerning more children.

More of the small family Cuban mothers (28%) had had abortions than any other group. More mothers of large families, particularly in the Cuban, Indian, and Chicano groups had frequently used no method of birth control.

DISCUSSION

The general findings of the study were that attitudes differed more when the white core culture was included than when only the minorities were considered. However, groups still differed according to their subcultures. Attitudes typically differed more across cultures than according to levels of fertility of the mothers, even with social class, knowledge of birth control, and degree of church affiliation held constant. Furthermore, culture had an influence on attitudes of mothers in that not all large and small family mothers reacted similarly to certain concepts.

The white group stands out as one group where the small and large family mothers' attitudes were almost the same. Furthermore, they were
significantly less negative about Abortion and Birth Control than the sub-cultures. This might be expected with the more liberalized views on these topics in recent years, and more time may be needed for subcultural groups to be assimilated into the mainstream of contemporary thinking. Large family white mothers with \( f \) were difficult to find as evidenced by the mean number of 5.8 children in large families. In effect, very large white family is vanishing and the similarity of mothers' attitudes may account for the comparatively smaller "large" size family.

Although Cubans said they wanted more children, and had more favorable attitudes toward Family, Pregnancy, and Parent, their overall fertility was slightly lower than the white Protestants. Likewise, although their attitudes toward Abortion were more negative than the other sub-cultures, over twice as many Cubans had had abortions than any other group. The high number of abortions in this study is consistent with other studies that show similar rates in Latin American countries (Armijo, 1965; Hill, 1968; Hutchinson, 1964), where it has been said that abortion is often the major method of birth control. The contradiction between Catholic ideology and action is striking and difficult to explain. The inconsistency between desired family size and actual size, with attitudes that were more in keeping with large size families, perhaps is a result of cultural conflict. To the Cubans, the family is very important. Most of these women migrated from Cuba, where many had been quite financially secure. Although most Cubans in Miami live in close proximity in a Little Havana area where cultural identification is perpetuated by the Spanish language and customs; many mothers,
because of their desire to give their family the comforts of life to which they were once accustomed, have had to enter the labor force. A choice between having more children or a higher standard of living has to be made.

In many respects, Indian mothers held the most aberrent attitudes. Considering the history of the Indian... understandable. While acculturation has occurred for a few, the majority have never assimilated. Futhermore, large family mothers were considerably more negative than small family ones. However, Indians in general, held the most unfavorable views of Sex and Pregnancy. Seminoles do not fit the usual family mold. Men often live with the wife's family after marriage and children belong to the mother and her family. Although the mortality rates have dropped, Indian mothers had more miscarriages and tubal ligations. They also knew and used fewer methods of birth control than other groups. Over two-thirds of the large family mothers never used any method at all. These events may account for some of their more negative attitudes, particularly about pregancy.

Among the Chicanos, large families were easy to find. In fact, the deviant pattern was a small family. The Chicanos in this study came mostly from Texas. This was about their sixth trip to Florida as migrants. They were the poorest in income and educational achievement. Like the Cubans, the family is the single most important social unit. The wife is usually devoted to the husband and children and serves the needs of the husband, with her own needs secondary to those of family members. The male is dominant, and must prove his "Machismo" through sexual prowess and
there is a strong fondness for large families. A mother may like to use birth control but will worry about what her friends will say or her husband will think. There is also some evidence that young educated Chicanos and Blacks, who are politically conscious, favor higher fertility but for different reasons. Family planning is seen as an effort to limit their race. In a recent study, these groups estimated desired family size as at least 4 children as compared with white estimates of 2.6. Chicanos wanting more opportunity for self identity, for "la Raza", replied to the question concerning the importance of children, "Because it is a natural role of humanity, and also because it is a hope that our raza has. We should double the actual number of Chicanos as soon as possible" (Buckout, 1972).

The more favorable response of the small family mothers toward Pregnancy was not found in the Black group. This seems consistent with the fact that Black mothers wanted fewer children than they had. Black Americans have generally been shown (as a group) to have higher fertility than whites (Grabill, Kiser & Whelpton, 1958). But, Peterson has argued that race is not the cause of family size, but an index of social class. Furthermore, when Blacks and whites have been equated in education and socio-economic status, Black fertility seldom appeared much higher than whites and was often significantly lower (Peterson, 1961). Bumpass and Westoff (1970) reported over twice the number of unwanted births among Blacks as compared with whites.
In general, large families wanted fewer children, and their negative attitudes toward Birth Control (failure?), Family, and Sex tended to confirm this; however, the trend was reversed in the Chicano group. Small family migrant Chicanos were more negative toward Birth Control. In fact, very few small family migrants could be found, which may support the finding that migrant Chicanos want large families, and in this instance, a negative view of Birth Control may be related to an aversion to its use rather than a preference.

Given the knowledge that subcultures differ in attitudes about fertility related concepts, where does this lead? If one accepts that lowered fertility of the white core culture is related to more homogeneous attitudes between large and small families in that group, one might hope that subcultures would approach a similar response. Perhaps, the best plan is not one that rests on intervention but rather on acceptance. Acculturation pressures have been responsible for much personal and family conflict. Suggesting that minority mothers who want large families need to change their attitudes and reduce their family size would be unwise. For change to be creative and not destructive, cultural values must be respected. Seward (1972) has commented that the double bind theory that applies to development of schizophrenia may also contribute to "culture splitting". For, equality of opportunity may be more official than actual. She comments further that "Faced with a new set of values, the minority group member feels his basic identity threatened. For him to maintain sufficient ego strength to withstand and balance the stress of cultural change requires the reassurance that his original values are respected as
well as the acceptance of his membership in the core culture. It is only by retaining pride in his basic identity that he can accept this new identity with pride."
REFERENCES


Hutchinson, B. H. Induced Abortion in Brazilian Married Women. America Latina, 1964, 7, 19.


**TABLE 1 - MEAN ATTITUDE SCORES FOR FIVE GROUPS ACCORDING TO LARGE AND SMALL FAMILY SIZE**

<table>
<thead>
<tr>
<th>SEMANTIC DIFFERENTIALS</th>
<th>Black N=98</th>
<th>Cuban N=78</th>
<th>Indian N=89</th>
<th>Chicano N=74</th>
<th>White N=108</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sm.</td>
<td>Lg.</td>
<td>Sm.</td>
<td>Lg.</td>
<td>Sm.</td>
</tr>
<tr>
<td>Pregnancy</td>
<td>2.5</td>
<td>2.2</td>
<td>1.9</td>
<td>2.0</td>
<td>2.7</td>
</tr>
<tr>
<td>Family</td>
<td>1.7</td>
<td>1.9</td>
<td>1.4</td>
<td>1.5</td>
<td>1.8</td>
</tr>
<tr>
<td>Abortion</td>
<td>5.4</td>
<td>5.7</td>
<td>5.9</td>
<td>6.3</td>
<td>5.9</td>
</tr>
<tr>
<td>Sex</td>
<td>1.9</td>
<td>2.1</td>
<td>1.6</td>
<td>1.8</td>
<td>2.4</td>
</tr>
<tr>
<td>Birth Control</td>
<td>2.1</td>
<td>2.9</td>
<td>3.0</td>
<td>3.9</td>
<td>2.7</td>
</tr>
<tr>
<td>Parent</td>
<td>1.8</td>
<td>1.8</td>
<td>1.5</td>
<td>1.3</td>
<td>1.8</td>
</tr>
</tbody>
</table>

**NOTE:** Higher mean score indicates a more negative attitude.
TABLE 2 - F-VALUES RELATED TO ATTITUDE SCORES ACCORDING TO FAMILY SIZE AND CULTURE WITH AND WITHOUT THE WHITE GROUP INCLUDED, CONTROLLING FOR SOCIAL CLASS, BIRTH CONTROL KNOWLEDGE, AND DEGREE OF CHURCH AFFILIATION.

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>SIZE</th>
<th></th>
<th>F RATIOS</th>
<th></th>
<th>INTERACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TOTAL N=449</td>
<td>SUBCULT N=339</td>
<td>TOTAL N=449</td>
<td>SUBCULT N=339</td>
<td>TOTAL N=449</td>
</tr>
<tr>
<td>Pregnancy</td>
<td>1.54</td>
<td>1.78</td>
<td>8.96***</td>
<td>10.80**</td>
<td>3.74**</td>
</tr>
<tr>
<td>Family</td>
<td>4.78*</td>
<td>6.74**</td>
<td>4.19**</td>
<td>4.95**</td>
<td>1.24</td>
</tr>
<tr>
<td>Abortion</td>
<td>.04</td>
<td>.16</td>
<td>13.67***</td>
<td>2.96*</td>
<td>1.36</td>
</tr>
<tr>
<td>Sex</td>
<td>5.12*</td>
<td>4.54*</td>
<td>5.67***</td>
<td>5.82***</td>
<td>.72</td>
</tr>
<tr>
<td>Birth Control</td>
<td>12.84***</td>
<td>9.70**</td>
<td>4.83***</td>
<td>3.72*</td>
<td>6.76***</td>
</tr>
<tr>
<td>Parent</td>
<td>.25</td>
<td>.10</td>
<td>5.62***</td>
<td>7.43***</td>
<td>1.41</td>
</tr>
</tbody>
</table>

* P < .05   ** P < .01   *** P < .001

Multivariate F for Five groups for **Size** = 3.05**, for **Culture** = 5.29***, and for **Interaction** = 2.06***

Multivariate F for Four Groups for **Size** = 2.99**, for **Culture** = 4.26***, and for **Interaction** = 2.12**

NOTE: MANOVA program performs univariate and multivariate analyses providing an exact solution with equal or unequal numbers of observations in the cells. See: Hughes, E. F., LaRue, R., and Yost, M. Jr.: Multivariate Analysis of Variance on Small Computers, Clyde Computing Service, Box 166, Coconut Grove, Miami, Fl.