

# SOCIOCULTURAL FACTORS ASSOCIATED WITH CONTRACEPTIVE USE IN PUERTO RICO<sup>1</sup>

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## INTRODUCTION

Population growth and family planning practices in Puerto Rico have received very thorough study (1-16). Their continuing evaluation can be partly attributed to unexpectedly high levels of fertility and population growth occurring despite socioeconomic changes taking place since the 1940s, and a corresponding need for social scientists to account for these developments.

Although fertility did not decline like mortality, contraceptive use was far from unknown. According to Hill et al. (9), in 1953 40% of the married women in Puerto Rico had used or were using contraceptives. But their use was irregular and sporadic, and therefore not very effective. Sterilization was the contraceptive method preferred by women, but its application after an average of six pregnancies did little to reduce fertility.

The same authors (9) state that lack of any government policy for providing family planning services in the 1950s prevented women from getting the information needed to make effective use of contraceptive methods, and also kept those who could not afford to purchase contraceptive devices from having other access to them.

Despite the initial lack of government-sponsored family planning programs, by 1969 a third of the married women 20 to 49 years old had been sterilized (12). Indeed, Presser (12, 17) noted that sterilization had been the decisive factor in lowering fertility and reducing population growth in Puerto Rico. Presser characterized this use of sterilization as a behavior pattern at the community level that was strongly influenced by the positive attitudes of private sector physicians and health professionals.

In 1970 the Government decided to establish family planning programs at all its health centers. At this point the island was densely populated, the natural growth rate was higher than in developed countries, and the decision to establish family planning programs could no longer be postponed (18).

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The purpose of the work reported here was to examine the family planning practices utilized more than a decade after the Government made family planning part of its public policy. What patterns of contraceptive use had changed? What sociocultural variables came to be connected with contraceptive use patterns? What degree of acceptance did the family planning services encounter among the population? These are the questions that this analysis sought to answer.

## SURVEY SAMPLE AND METHODS

The survey population was a representative stratified sample of the entire island of Puerto Rico. The sample included 150 sectors, each containing 30 habitable dwelling units, so that a total of 4,500 dwellings were included. An interview guide was used to identify all the women 15-49 years of age living in those dwellings.

In this way 3,493 eligible women were identified, of whom 3,175 (91%) completed interviews between September and December 1982 and became study participants. The interviews provided retrospective information on each subject's history of pregnancies, married life, contraceptive use, migration, education, and employment, together with basic data on fertility, income, maternal and child care, breastfeeding, and attitudes toward abortion.

## RESULTS

The data in Table 1 indicate that 45.7% of all Puerto Rican women 15-49 years of age were using contraceptives in 1982. The preferred contraceptive method was female sterilization (used by 27.0% of the survey participants), followed by the pill (used by 5.5%) as a far less common second choice. An unexpected finding was that 2.9% reported using male sterilization, a slightly higher percentage than reported using condoms (2.6%) and intrauterine devices (2.5%). It was also found that 7.7% of the women interviewed were clearly at risk of becoming pregnant, since they reported being sexually active but were using no form of contraception.

Among women who were married, the percentage using contraceptive methods rose from almost 46% to about 69% (Table 2). Again, female sterilization (used by 41%) was the preferred method. However, 11% of the married women reported being sexually active and using no contraception, so that the risk of pregnancy among the married women was higher than among the survey subjects as a whole.

The rise in the popularity of sterilization as a contraceptive method started to become evident in the 1960s. Table 3 shows data gathered by seven studies of family planning methods beginning in 1947. These data indicate that the percentage of contraceptive users rose only slightly from 1968 (60%) to 1982 (64.1%). However, despite the assumption that introduction of the pill would reduce the rate of sterilization (19), the percentage sterilized rose from 35.5% in 1968 to 42.6% in 1982. Also contrary to expectations, the percentage using the pill declined after 1974, dropping from some 20% in that year to 7.7% in 1982.

**TABLE 1. Percentage distribution of the 3,174 female survey participants 15–49 years of age in Puerto Rico, by contraceptive practices at the time of the interview.**

Contraceptive practices	% of study participants (N = 3,174)
<i>Currently Using:</i>	45.7
Female sterilization	27.0
Male sterilization	2.9
Contraceptive pill	5.5
Intrauterine device	2.5
Rhythm method	3.4
Condoms	2.6
Other	1.8
<i>Nonusers:</i>	54.3
At risk of pregnancy	7.7
Reportedly not at risk of becoming pregnant because of:	
Pregnancy-related circumstances	8.4
Sterility	4.6
Lack of sexual activity	33.6
<b>Total (%)</b>	<b>100.0</b>

**TABLE 2. Percentage distribution of the 1,798 married survey participants 15–49 years of age in Puerto Rico, by age group and contraceptive practices at the time of the interview.**

Contraceptive practices	Age group in years (showing % using each method)							Total
	15–19	20–24	25–29	30–34	35–39	40–44	45–49	
<i>Currently using:</i>	40.6	53.8	68.7	76.3	80.0	76.1	63.4	69.4
Female sterilization	0.0	11.4	36.0	47.3	53.8	54.6	46.2	40.5
Male sterilization	0.0	0.5	2.6	4.1	9.2	5.7	6.4	4.6
Contraceptive pill	24.2	22.4	12.5	6.3	2.4	1.3	1.1	8.3
Intrauterine device	2.4	6.7	5.6	4.1	3.2	2.2	1.9	3.8
Rhythm method	6.6	5.7	5.0	6.3	5.7	4.5	2.6	5.2
Condoms	4.8	3.8	3.6	5.6	4.0	5.2	3.0	4.4
Other methods	2.6	3.3	3.4	2.7	1.8	2.6	2.1	2.7
<i>Nonusers:</i>	59.4	46.2	31.3	23.7	20.0	23.9	36.6	30.6
At risk of pregnancy	22.4	13.3	10.3	8.8	8.5	10.8	12.0	10.9
Reportedly not at risk of becoming pregnant because of:								
Pregnancy	37.0	31.0	19.7	12.1	6.4	3.2	2.6	13.5
Sterility	0.0	1.9	0.7	1.4	4.8	8.6	20.2	5.3
Lack of sexual activity	0.0	0.0	0.6	1.4	0.3	1.3	1.7	0.8
<b>Total %</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
<b>Total (N)</b>	<b>(83)</b>	<b>(210)</b>	<b>(313)</b>	<b>(325)</b>	<b>(333)</b>	<b>(293)</b>	<b>(241)</b>	<b>(1,798)</b>

**TABLE 3. The rates at which surveys conducted from 1947 to 1982 found married women in Puerto Rico to use various contraceptive methods.**

Year of survey	Author(s) and reference	Age ranges of women surveyed	Current users (%) of contraceptive methods	Sterilization (%)		Contraceptive pill (%)	Intrauterine device (%)	Other methods (%)
				Female sterilization	Male sterilization			
1947	Hatt (4)	15-49	<sup>a</sup>	—	—	—	—	—
1953	Hill et al. (9)	20-49	—	—	—	—	—	—
1965	Presser (11)	20-49	—	—	—	—	—	—
1968	Vázquez Calzada (20)	15-49	60.0	34.1	1.4	11.3	1.6	11.6
1974	Clapp and Mayne, Inc. (19)	15-49	61.1	—	—	20.0	3.6	9.0
1976	Vázquez Calzada and Morales (14)	15-44	64.6	35.4	2.8	12.7	3.4	10.3
1982	PRFFPA <sup>b</sup> (26)	15-49	64.1	38.6	4.0	7.7	3.6	10.2

<sup>a</sup> — Data not available or not reported  
<sup>b</sup> PRFFPA = Puerto Rico Fertility and Family Planning Assessment.

The analyses that follow are based on the group of women who were married at the time of the interview, since it could be assumed that they were sexually active. Table 2 indicates that contraceptive use increased with age among the married women up to the 35-39 year group (80%), after which it declined, falling to 63% in the 45-49 year group. The Table 2 data also indicate that the pill was the preferred family planning method among young married women of the 15-19 year group, 24% of whom said they used it. (A similar percentage (22%) was at risk of becoming pregnant for failing to use any contraceptive method.) The pill was still the preferred method among married women in the 20-24 year group (22% users), but female sterilization had risen to a significant level, 11% reporting that they had been sterilized. The percentage sterilized continued to rise among progressively older age groups, becoming the principal method used in the 25-29 year group and climbing from 36% in that group to 55% in the 40-44 year group before declining slightly to 46% in the 45-49 year group. Meanwhile, beginning with the 25-29 year group the percentage using the pill showed a sharp decline. Male sterilization tended to be used by women who were a little older, on the average, than those using female sterilization.

Table 4 compares contraceptive use patterns among married women with different degrees of education. According to the data collected, sterilization was used most frequently by the women who had never finished high school. This group also appeared to run the highest risk of becoming pregnant. The lowest percentage of sterilizations (25%) was found among the college-educated women, who also had the highest percentage of sterilized spouses (9%). Like male sterilization, use of condoms and the rhythm method rose with educa-

**TABLE 4. Percentage distribution of 1,715 married survey participants 15-49 years of age in Puerto Rico, by contraceptive practices and educational level.**

Contraceptive practices	Educational level		
	< High school	High school	University
<i>Currently using:</i>	72.3	71.0	65.9
Female sterilization	54.8	35.8	24.5
Male sterilization	2.6	5.8	9.4
Contraceptive pill	5.5	9.6	6.9
Intrauterine device	2.3	5.2	4.5
Rhythm method	1.7	6.8	10.9
Condoms	3.3	4.3	8.4
Other methods	2.2	3.6	1.4
<i>Nonusers:</i>	27.7	29.0	34.1
Reportedly not at risk of pregnancy	15.3	19.9	26.4
At risk of pregnancy	12.4	9.1	7.7
Total %	100	100	100
Total (N)	(738)	(761)	(216)

tion. However, use of the pill and intrauterine devices was least frequent in the least educated group, most frequent in the group with a high school education, and at an intermediate level among the college-educated group.

Table 5 shows relationships between contraceptive use patterns and parity. In general, it shows contraceptive use levels to have risen as parity increased. Childless women and those with one child made less use of family planning methods than those with two or more children. None of the nulliparous women and only 2% of those with one live birth were sterilized. (Women in these groups tended to use reversible methods such as the pill. In contrast, those with two or more live births showed a marked preference for sterilization.)

Data relating to the influence of birthplace, childhood residence, religion, employment, and urban versus rural residence on contraceptive methods

and risk of pregnancy are shown in Table 6. Female sterilization was found to be the most common contraceptive method in all cases. As compared to women born outside Puerto Rico, those born in Puerto Rico tended to make greater use of it. Similarly, women raised in Puerto Rico tended to make more use of sterilization than those raised outside it, but the difference was not so great as among those with different birthplaces. Also, women living outside of metropolitan areas showed a slightly greater tendency to use sterilization than did those in the metropolitan areas.

The smallness of the difference observed in the use of sterilization by employed versus unemployed women was unexpected. However, it had been expected that the influence of religious

**TABLE 5. Percentage distribution of the 1,798 married survey participants 15-49 years old in Puerto Rico, by contraceptive practices and the number of live births at the time of the interview.**

	Number of live births						Total
	0	1	2	3	4	5+	
<i>Currently using:</i>	19.5	45.1	74.7	85.4	85.4	74.3	69.4
Female sterilization	0.0	2.3	36.4	62.1	66.2	54.4	40.5
Male sterilization	2.1	1.7	5.3	6.6	3.3	5.5	4.6
Contraceptive pill	9.2	18.5	11.0	3.7	3.3	4.1	8.3
Intrauterine device	0.6	6.3	6.2	2.7	2.8	1.1	3.8
Rhythm method	6.2	8.1	6.1	4.5	2.0	3.3	5.2
Condoms	1.0	4.2	6.1	4.2	5.1	3.3	4.4
Other methods	0.5	4.0	3.7	1.8	2.8	2.5	2.7
<i>Nonusers:</i>	80.5	54.9	25.3	14.3	14.6	25.7	30.6
At risk of pregnancy	25.4	15.2	9.9	5.4	8.3	12.0	10.9
Reportedly not at risk of becoming pregnant because of:							
Pregnancy	49.4	30.3	10.7	4.1	1.6	4.1	13.5
Sterility	5.1	7.4	4.2	4.5	4.7	7.8	5.3
Lack of sexual activity	0.6	2.1	0.6	0.4	0.0	1.9	0.8
Total %	100	100	100	100	100	100	100

**TABLE 6. Associations between contraceptive practices and birthplace, childhood residence, religion, employment, and residence at the time of the interview among married survey participants 15-49 years old.**

	% using indicated contraceptive methods			
	Female sterilization	Other "modern" methods <sup>a</sup>	"Traditional" methods <sup>b</sup>	At risk of pregnancy
<i>Place of birth:</i>				
Puerto Rico	49.4	15.7	6.7	10.1
Other	28.3	30.0	7.8	13.1
<i>Childhood residence:</i>				
Puerto Rico	48.3	16.6	6.4	10.1
Other	41.0	19.5	7.3	14.2
<i>Religion:</i>				
Catholic	47.1	18.4	6.3	10.4
Protestant	49.7	15.0	6.2	9.4
Other	49.0	11.6	6.3	11.0
<i>Employment:</i>				
Employed	45.6	17.2	8.2	10.3
Not employed	48.4	16.8	5.6	10.3
<i>Area of residence when interviewed:</i>				
Metropolitan area	43.8	19.0	7.5	9.6
Nonmetropolitan area	52.3	14.4	5.1	11.2

<sup>a</sup> Male sterilization, contraceptive pill, intrauterine device, condoms, diaphragm, vaginal foam, vaginal jelly

<sup>b</sup> Rhythm and withdrawal.

differences would be small, because virtually all fertility studies in Puerto Rico have found the religion variable to exercise little significant influence on family planning patterns (9).

Table 7 shows the percentages of married women provided with various types of contraception by different sources (public medical services, private medical services, pharmacies, and others). This breakdown indicates that although female sterilization was obtained through both public and private health services, the private services provided sterilization for more of the women (51.3%) than did the public services (40.8%). In contrast, 67.4% of the reported male sterilizations were obtained through private services. The pill was obtained mainly from public services, while

IUDs were obtained from both public (40.2%) and private (48.4%) services. Also, pharmacies were found to be important sources of the pill, condoms, and other modern methods such as the diaphragm, vaginal foam, and contraceptive jellies.

## CONCLUSIONS AND RECOMMENDATIONS

Family planning has been legitimized as accepted behavior by a majority of Puerto Rico's married women. The prevalence of contraceptive practices among women on the island (around 70%) compares favorably with that found in the United States (21, 22). Sterilization is the method preferred by Puerto Rican women. Since this measure is not reversible, and is therefore cumulative, the high prevalence reflects its long

**TABLE 7. Sources of contraceptive methods, as reported by 1,133 married survey participants<sup>a</sup> 15-49 years old, showing the percentages involved in each case.**

Source	Sterilization <sup>b</sup>		Reversible modern methods			
	Female	Male	Contraceptive pill	Intrauterine device	Condoms	Other modern methods <sup>c</sup>
<i>Public medical services:</i>	40.8	27.9	42.8	40.2	28.2	35.7
Hospital	38.1	17.2	10.7	13.2	6.0	5.6
Health center	2.7	10.7	32.1	27.0	22.2	30.1
<i>Private medical services:</i>	51.3	67.4	22.7	48.4	7.6	32.0
Hospital	49.0	31.7	0.7	1.7	0.0	3.3
Physician, clinic	2.3	35.7	22.0	46.7	7.6	28.7
<i>Pharmacy:</i>	0.0	0.0	32.3	0.0	62.6	32.3
<i>Other:</i>	0.5	0.0	2.2	0.0	1.7	0.0
<i>Source outside Puerto Rico:</i>	7.4	4.7	0.0	11.4	0.0	0.0
Total %	100	100	100	100	100	100
Total (N)	(733)	(88)	(142)	(70)	(75)	(25)

<sup>a</sup> Users of modern contraceptive methods and/or male/female sterilization

<sup>b</sup> Excluding sterilizations not performed for contraception.

<sup>c</sup> Diaphragm, vaginal foam, vaginal jelly.

history of acceptance as a contraceptive method. It should be noted that sterilization has also gained in popularity in the United States, where it is currently the most-used contraceptive method (23). In that country in 1983, 22% of the married women and 11% of the married men were sterilized (21-24). In Puerto Rico, although the prevalence of male sterilization is much lower than that of female sterilization, its prevalence is nevertheless much higher than in other Latin American countries (25, 26).

Women tend to be sterilized relatively young compared to men in Puerto Rico, but the highest prevalence of sterilized women in terms of family size is found among women with three or more children. This fact would seem to indicate that sterilization is based on a decision by the married couple as to how many children they want.

The fact that the prevalence of sterilization is higher among less educated women (Table 4) comes as no surprise. For one thing, less educated women tend to marry and have children younger; and, for another, less educated women may be less informed about reversible contraceptive methods. It is important that these factors be considered by health planners when preparing work programs, especially since less educated women tend to be those most at risk of pregnancy (Table 4).

Overall, it appears that women in Puerto Rico have legitimized contraceptive use and that Puerto Rican society has provided various ways for them to obtain the contraception desired. However, the high prevalence of young women who are sterilized after having the number of children they want indicates a need to provide women with information about suitable methods for birth spacing and access to such methods in order to protect maternal health. This need is greatest among disadvantaged so-

cioeconomic groups—such as women with the fewest years of education.

Structural and cultural changes arising from socioeconomic development have influenced the acceptance of family planning in Puerto Rico. However, the support that family planning has received from private health professionals, community groups, and the government family planning program has played a major role in this process (13). In general, it is known that the pace at which socioeconomic development influences fertility is slow (27), and that the process needs to be hastened by programs such as the family planning services that were offered in Puerto Rico by community groups and, at a later stage, by the Government.

## SUMMARY

A survey of family planning practices in Puerto Rico was conducted in 1982. Based on interviews with women 15-49 years old, the survey included 3,175 women who constituted a representative stratified sample of the Puerto Rican population. Information was obtained about each subject's history of pregnancies, married life, contraceptive use, fertility, maternal and child health, breast-feeding, migration, education, employment, and attitude toward abortion.

The survey indicated that some 46% of all Puerto Rican women 15-49 years old and 70% of all married women in this age range were using contraception in 1982. Sterilization (principally female sterilization) was the most



common method, being used by 42.6% of the married interview subjects. The pill and other reversible methods tended to be more popular among the younger women, with sterilization becoming markedly more common among older age groups and among women with two or more children. Sterilization was also used by a higher percentage of married women who had not finished high school, who had been born in Puerto Rico, and who had grown up in Puerto Rico. Neither religion nor employment appeared to exert much influence on sterilization or other contraceptive practices.

The prevalence of female sterilization was considerably higher than that found in the United States in 1983, while the prevalence of male sterilization was lower. However, the prevalence of male sterilization in Puerto Rico was considerably higher than in other Latin American countries.

Overall, it seems evident that women in Puerto Rico have legitimized contraception and that society has provided various ways for them to achieve the results desired. However, the high prevalence of young women who are sterilized after having the number of children they want indicates a need to provide information about suitable methods of birth spacing and access to such methods in order to protect maternal health.

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