Fertility and Family Planning in Haiti

James Allman

Haiti, a Caribbean country with a population of over 5 million in 1980, shares the western one-third of the island of Hispaniola with the Dominican Republic. The capital city, Port-au-Prince, has undergone rapid growth in recent years; its 1980 population was over 850,000. However, most of the Haitian population (about 75 percent) still live in rural areas and earn a meager livelihood from agriculture.

During the 1970s, this least developed country in the western hemisphere began to undergo significant social and economic change after a period of economic stagnation. This is reflected in government efforts at creating an infrastructure for development, the growth of assembly industries and tourism, substantial inputs of foreign assistance, and in the establishment of a national family planning program. Although Haiti is still among the least developed nations of the world, increasingly there are indications of important changes in many fields.

Like many developing countries, Haiti has a relatively young population—over two-fifths are under age 15, and only 12 percent are aged 50 or older. Outmigration has been important throughout the twentieth century; between 1950 and 1980 an estimated 12 percent of native-born Haitians left the country for the United States, the Dominican Republic, Canada, the Bahamas, or elsewhere.[1]

The country covers 27,700 square kilometers, only 8,000 of which are cultivated with possibly an additional 3,000 cultivable. The population density exceeds 540 and 390 persons per square kilometer of cultivated and cultivable land respectively. The population is extremely poor and the country underdeveloped; only 4 percent of dwellings are supplied with electricity (0.2 percent in rural areas), 82 percent of the population work in agriculture, unemployment is estimated at 14 percent, more than three-fourths of the population over age ten are illiterate, and per capita GNP is estimated at below US$270 in 1980.

Policymakers are beginning to sense the urgency of Haiti's demographic situation, and a population policy is slowly emerging. Since 1971, when the Division of Family Hygiene (DHF) was established, a national family planning program has received government support. The DHF program began operating in 1973 through hospitals and health clinics. The DHF has been responsible for maternal and child health care, as well as family planning. It initially operated almost exclusively through fixed facilities in urban centers. Mobile clinics and community outreach workers were added to the program in 1977. Now the Department of Public Health and Population (DSPP) is integrating MCH and family planning into its expanding rural primary health care program. The DHF will focus its future activities on innovative approaches to family health care and to supplementing DSPP efforts rather than having direct administrative responsibility for MCH. The DHF will also set norms for maternal and child health care in Haiti and ensure that standards are maintained.

Efforts are currently under way at the DHF to broaden access to health care and modern methods of contraception through community organizations and groups, commercial channels, factories, women's groups, and in collaboration with various governmental and private organizations.[2]

This paper will consider levels and trends in fertility and some of the factors—including union patterns, desired family size, infant mortality levels, and breastfeeding patterns—that determine the current situation. It will then examine knowledge and use of

James Allman, Ph.D., is resident adviser at the Division d'Hygiène Familiale, Port-au-Prince, Haiti, for the Center for Population and Family Health, Columbia University, 60 Haven Avenue, New York, N.Y. 10032. From 1976 to 1978 he was resident adviser at the Institut Haitien de Statistique for the World Fertility Survey.

contraception and the impact of the recently established national family planning program. Factors likely to influence future trends in fertility and family planning are briefly presented in concluding.

The major source of data is the 1977 Haiti Fertility Survey (HFS), conducted throughout Haiti in 1977 as part of the World Fertility Survey program. This is the first nationally representative survey in Haiti that furnishes data on contraceptive knowledge and use. Further, HFS results, compared with results from the 1971 population census and the 1971–75 multiround demographic survey, provide the means for assessing levels of fertility and indicate trends and differentials. Since the survey was conducted four years after the national family planning program began in urban areas in 1973, it also indicates the program's initial impact and provides a baseline to assess future progress in family planning. Most of the data reported here appear in *1977 Enquête Haitienne sur la Fécondité*. Some additional tabulations were done by WFS London. Of the nationally representative sample of 3211 women aged 15–49 years interviewed in the HFS, 2176 were ever in union, and 1842 were in union at the time of the survey.

Fertility in Haiti

Until the early 1970s Haiti lacked accurate vital statistics, survey, or census data on which to base estimates of fertility. The results of the 1971 population census, which suggested relatively low population growth between 1950 and 1971 and rather moderate crude birth rates and total fertility rates, were greeted with considerable skepticism by demographers familiar with Latin American population dynamics. Similarly, results from the 1971–75 multiround demographic survey were considered by many to seriously underestimate both mortality and fertility.[3] However, the results of the 1977 HFS, combined with census and multiround demographic survey data and a number of in-depth, carefully executed micro surveys of population and public health, all concur in the estimates of basic demographic parameters for Haiti in the 1970s.[4]

Table 1 indicates that although fertility rates are certainly not low in Haiti, they are nevertheless considerably below the extremely high levels (TFRs over 6.5 and even 7) observed in some African and Middle Eastern countries. In addition, the three sources of data presented confirm marked urban/rural fertility differentials. The capital city of Port-au-Prince, which contains about 17 percent of the total population, has the lowest fertility rates. Other urban areas have higher rates than the metropolitan region but considerably lower rates than the rural regions. Fertility rates appear lower in 1977 than in 1971, suggesting a possible decline. The anomalously lower rates reported in the 1971–75 multiround demographic survey suggest that these estimates may be less accurate than the others.

TABLE 1 Estimates of total fertility rates for Haiti, selected sources and years

Source and years	Total Haiti	Rural	Port-au-Prince	Other Urban
1971 census	5.70	6.26	3.50	4.26
1971–75 demographic survey	5.13	5.56	3.21	3.80
1977 HFS (three years before survey average)	5.50	6.10	4.00	—

SOURCE: Enquête Haitienne sur la Fécondité (HFS), 1977; and Allman and May, cited in note 4, p. 508.

Fertility Determinants

Previous research on fertility determinants in Haiti using the conceptual model proposed by Bongaarts suggests that the major variables determining fertility levels are union patterns, prolonged breastfeeding, and use of traditional and modern contraception.[5]

Union patterns are complex in Haiti. Most women begin their marital careers in unions that do not entail cohabitation. Several types of consensual unions exist, and women are more likely to be in these than in a legal union. Throughout marital careers, nonlegal unions prevail; there is no tendency for commonlaw or noncohabiting unions to evolve into legal marriage, as has been found elsewhere in the Caribbean.

Haitian women tend to have several types of unions, often with several different partners. The women ever in union interviewed by the HFS had an average of 2.17 unions and 1.52 partners. Urban women had higher average numbers of both unions and partners, suggesting more complex union patterns in the cities compared with rural areas.

Although entry into sexual unions is almost universal for Haitian women by age 30 and spinsters are rare, first union is relatively late. Of the representative sample of women aged 15–49 interviewed in the HFS, 31 percent had never been in union. These were primarily younger women: 80 percent of the 15–19-

year-olds, 40 percent of the 20–24-year-olds, and 14 percent of the 25–29-year-olds had never been in union. The singulate mean age at union was calculated at 21.6 years. Because of the late entry into unions, adolescent fertility is practically the lowest in Latin America.

The average number of children ever born to women varies considerably by a women's current union status. Women in unions without cohabitation have the lowest rates. Both commonlaw and marriage have the highest rates, with married women having considerably higher averages after age 35. For the 45–49-year-old group, women in commonlaw unions had on average 6.0 live births, compared with 7.5 for married women.

Similarly, looking at union history, marriage is the union type leading to highest fertility, followed by commonlaw unions. Women who began their union patterns in visiting unions and were also in these kinds at the time of the Haiti Fertility Survey had an average of 3.7 live births, compared with 7.3 live births for currently married women and 6.2 live births for women currently in commonlaw unions who were also first in visiting unions.

The number of partners a woman has had also plays a role in determining fertility. For identical union histories, the average number of children born decreased when the number of partners increased from one to two for union durations of 10–19 years and over 20 years. However, at union durations of less than 10 years, fertility tended to increase with higher numbers of partners.

Because of the complexity of Haitian union patterns compared with most other countries participating in the World Fertility Survey, additional efforts beyond the analysis presented in the first report will be needed to elucidate the dynamics of union patterns and the relationship between nuptiality and fertility. The use of such concepts as "legitimacy" and "illegitimacy," "marital fertility," and "stability" and "instability" of unions, current in the demographic and social science literature, has come under serious criticism in recent years when applied to the populations of Caribbean societies. Many researchers believe that the theoretical approaches to Caribbean family structure and the conceptual frameworks applied cloud more than clarify the sociocultural reality of the region.[6] An adequate understanding of union patterns in Haiti and their role in determining fertility patterns is still a distant prospect; it will require interdisciplinary analysis drawing on the perspectives of anthropologists, economists, psychologists, and sociologists well grounded in the realities of Haitian culture and society.

Breastfeeding patterns are another important factor determining both fertility and infant and child mortality in Haiti. Breastfeeding is usually prolonged; the average age at weaning is 18 months in rural areas and 12 months in the cities.[7] Although data on the relationship between breastfeeding, postpartum amenorrhea, and birth intervals were collected by the WFS, they have yet to be analyzed. Such analysis should be a priority in fertility research and (as we shall see when we consider infant mortality trends) deserves attention by public health officials since current declines in breastfeeding in urban areas may be related to apparent recent increases in infant mortality rates.

Infant Mortality and Fertility

The 1977 HFS provides the first reasonably accurate nationally representative direct measures of infant mortality (see Table 2). As with retrospective surveys in general the HFS probably underestimates the actual IMR. However, it does provide a direct estimate that can serve as a reference point for the various indirect estimates now so popular in the demographic literature. The IMRs for Port-au-Prince have apparently increased dramatically over the last 20 years, reaching almost 200 per thousand in the 1971–75 period. Rural IMRs are considerably below those of the capital city. The national IMR is 124 per thousand. It would not be surprising to find that rural IMRs have been underestimated and that the national IMR is closer to the 150 level, as estimated by various sources around 1975.[8]

The causes of the high levels of infant mortality in Haiti, particularly the apparent dramatic increase in Port-au-Prince during the 1970s, should receive attention by those concerned with public health and population dynamics. It is clear from the HFS that

TABLE 2 Infant mortality rates (per 1000) for Port-au-Prince and rural areas, by five-year cohorts of males and females, 1956–75

	Cohorts			
Area	1956–60	1961–65	1966–70	1971–75
Port-au-Prince	144	137	122	197
Rural areas and small cities	124	142	143	103
Haiti	132	139	137	124

SOURCE: HFS, 1977, Table 3.2.3.1.

breastfeeding durations are considerably shorter in Port-au-Prince than in rural areas. Similarly the 1978 nutrition survey reported an alarming tendency for younger, low-parity, more educated women to breastfeed for shorter durations and to use bottle milk earlier. In Port-au-Prince a significant number of women did not breastfeed at all.[9] As in certain European populations around 1900, the decline in breastfeeding durations and the use of breastmilk substitutes may be leading to a greater IMR in the capital than in rural areas.[10]

Although the relationship between infant mortality and fertility is complex,[11] it is clear in the Haitian case that in spite of higher urban IMRs (also confirmed by the 1978 nutrition survey), fertility is considerably lower in Port-au-Prince than in the rural areas. We find here, as also in certain historical examples, a case of high and possibly rising IMRs hand in hand with fertility levels that are declining or at least at a lower level than elsewhere in the country.

Family Size and Gender Preferences

The 1977 HFS found that Haitian women desired an average total family size of 3.58 children. Women under age 40 said they wanted fewer than four children, while women over 40 desired more than four. There was a direct correlation between age and number of children desired. Younger women wanted fewer children. Over 50 percent of the women wanted three or fewer children. Married women wanted an average of 4.09 children, women in commonlaw unions 3.62, and women in visiting unions 2.97.

Rural women wanted an average of 4.04 children, urban women of rural origin 3.77 children, and urban women 3.02 children. There were also differentials by level of education, with women with no education wanting 4.04 children, women who had been to primary school 3.29, and women with some secondary education 2.95.

As may be seen in Table 3, 43 percent of fecund women (aged 15–49) currently in union want no more children. Over half the urban respondents with fewer than four children said they wanted no more children, as did over 40 percent of the rural women.

Son preference was not found in the 1977 HFS. A large number of women interviewed did not express a preference for either sons or daughters, contrary to the situation in some other societies at similar levels of development. These findings correspond to other studies in Haiti that showed little discrimination against females in regard to breastfeeding and weaning.[12]

TABLE 3 Percent of fecund women currently in union who want no more children, by number of living children

Area	Total	Number of living children			
		0–1	2–3	4–5	6 +
Rural	43.1	8.5	42.1	67.4	80.4
Urban, of rural origin	44.9	9.6	58.8	91.1	95.2
Urban	43.6	14.7	70.5	83.3	88.2
Total	43.4	10.2	48.7	72.2	82.9

NOTE: Includes women currently pregnant.
SOURCE: HFS, 1977, Table 3.1.3 C

Knowledge of Contraception

The 1977 Haitian Fertility Survey collected information from all women 15–49 years old concerning their knowledge of both modern and traditional methods of fertility regulation. Knowledge of contraceptive methods was elicited using the standard World Fertility Survey approach. After an introductory statement referring to a popular national radio program on health and family life, each woman was asked to name any methods that she knew could be used to delay or prevent pregnancy. The interviewer then read a list of methods not mentioned by the respondent, who indicated, for each, whether she had heard of the method. Considerable care was taken in pretesting the questionnaire, so that the Creole terms corresponded to methods of family planning known throughout the country.[13] For the HFS report and this paper, a woman is classified as knowing about a method if she reported having heard of it, either before or after probing by the interviewer.

Of all the women ever in union, over 85 percent knew or had heard of one or more contraceptive methods. Of the list of methods, the following were considered efficient: the pill, the IUD, other female scientific methods (contraceptive foam or jellies, the diaphragm), the condom, and male and female sterilization. Eighty-two percent of the women ever in union said they knew of one of these efficient methods of contraception.

The findings in Table 4 indicate high levels of awareness of both modern and traditional methods of fertility regulation, probably due to the substantial efforts at information, education, and communication made by the DHF since 1973. Earlier studies of the knowledge about and receptivity to modern contraception of the Haitian population indicated little awareness and interest before 1973.[14]

TABLE 4 Percent of women ever in union aged 15–49 reporting knowledge of a contraceptive method

Method	Percent reporting knowledge
1 Pill	75.4
2 IUD	51.8
3 Female scientific methods	30.0
4 Condom	52.7
5 Male sterilization	14.1
6 Female sterilization	37.9
7 Abortion	55.8
8 Douche	31.7
9 Rhythm	55.9
10 Withdrawal	49.3
11 Abstention	41.8
12 Folkloric methods	5.0
Total efficient methods (methods 1–6)	82.1
Total all methods (1–12)	85.2

SOURCE: HFS, 1977, Table 4.2.2

Of the 2176 women ever in union interviewed during the 1977 HFS, 12 percent said they had at some time used an efficient contraceptive, while an additional 25 percent had used no efficient method but had used one or more other methods. Thus, a total of 37 percent of the women had ever used contraception.

Contraceptive Prevalence

Using service statistics on new acceptors and estimates of women who began using modern methods before 1977, the DHF 1977 Annual Report estimated that about 34,000 women were using contraceptives provided by the national program. These 34,000 contraceptive users can be divided into two groups: 20,000 new acceptors in 1977 and 14,000 women who began contraceptive use before 1977 and were continuing use according to service statistics on revisits to health facilities for resupply. Data on type of method being used are available for the 20,000 new acceptors. For the estimated 14,000 women who began contraceptive use before 1977 and continued using in 1977, we estimated the number of women using various methods by applying the same proportions using each method as prevailed among the new acceptors in 1977. That is, 57.4 percent of the 14,000 (n=8036) are estimated to be using the pill, 5.2 percent the IUD (n=728), 21.3 percent condoms (n=2982), and 16.1 percent foam or other female scientific methods (n=2254). These estimates and the data on new acceptors give an indication of current use by contraceptive method in 1977 according to program statistics (see Table 5). Current use may be somewhat overestimated since the 20,000 new acceptors in 1977 are presumed to be current users.

TABLE 5 Estimated number of women aged 15–49, currently in union and fecund, using contraceptives in 1977 by method (percentage in parentheses)

Method	1977 DHF service statistics	1977 HFS[a]
1 Oral contraceptives	19,558 (3.9)	21,959 (4.4)
2 IUD	1,772 (0.4)	2,994 (0.6)
3 Female scientific methods	5,475 (1.1)	499 (0.1)
4 Douche		3,494 (0.7)
5 Condoms	7,254 (1.5)	6,987 (1.4)
6 Rhythm		27,449 (5.5)
7 Withdrawal		30,943 (6.2)
8 Abstinence		26,451 (5.3)
9 Female sterilization		1,497 (0.3)
10 Male sterilization		988 (0.2)
11 Abortion		1,497 (0.3)
Total	34,059 (6.8)	123,271 (25.0)

[a]The unedited and unweighted frequency distribution of the HFS indicates use by method of contraception as follows: 68 women, oral contraceptives; 9 IUD; 2 female scientific methods; 10 douche; 21 condoms; 81 rhythm; 91 withdrawal; 77 abstinence; 3 female sterilization; 2 with partners that had male sterilization; and 3 who had an abortion.

SOURCE: 1977 Rapport Annuel, Division d'Hygiène Familiale, Port-au-Prince; and HFS, 1977, Table 4.4.1.

The Haitian Institute of Statistics estimated that around the time of the survey (i.e., 1 January 1978) there were 1,205,100 women aged 15–49 in Haiti. Of these, 41.6 percent were in union and fecund, according to the 1977 HFS, for a total of 501,322 women. This figure was multiplied by the percentages of women who said they were using each contraceptive method asked about in the 1977 HFS. The results are presented along with estimates from DHF service statistics in Table 5.

Comparing HFS and Program Statistics

Table 5 compares estimates of the number of women using program methods in 1977 based on DHF service statistics and HFS results. The estimates of use are quite similar. The HFS estimates the use of "efficient" methods of contraception (orals, IUDs, female scientific methods, female and male sterilization) at 6.5 percent of exposed women, or 32,586 women. This is close to the estimate derived from DHF service statistics of 34,059 women using program methods in 1977.

The two sets of estimates vary somewhat when specific methods are considered. Thus, the HFS estimates suggest higher numbers of women using oral contraceptives and IUDs than the DHF service statistics, and considerably less use of foam and other female scientific methods. Condom use for the two sources of data are nearly identical.

It is reasonable to believe that the service statistics underestimate use of orals, IUDs, and condoms since the DHF is not the only source of supply of these methods. Orals and condoms can be bought in pharmacies, and private physicians insert IUDs. The discrepancy between the data on use of foam and other female scientific methods may be due to DHF statistics overestimating use of these methods due to lack of information on continuation rates, to underestimating use of these methods by the HFS, or, most plausibly, to a combination of these two factors. In addition, discussions with health facility personnel indicated that foam use was generally for a short period of time since Haitian women do not prefer this method. They are encouraged to use the method, rather than orals, if they are breastfeeding or have contraindications that would make use of orals unadvisable.

It should be emphasized that the two data sets are consistent and very close in the estimates they give for the major DHF program methods (i.e., orals, IUDs, and condoms). Thus, the findings suggest that the DHF service statistics are of quite good quality.

Source of Contraceptive Supply

Those women interviewed during the 1977 Haiti Fertility Survey who had used or were currently using modern contraception were asked whether they were supplied by health centers or a hospital; by a private physician; or by another source, most likely a pharmacy for sales of oral contraceptives or condoms.

Two-thirds of the women using orals were supplied by health centers, 20 percent by private doctors, and 17 percent by other sources. About half the condom users were supplied by health centers and the others by nonmedical sources. Most IUDs were inserted in health centers, except for some urban women who obtained this method from a private physician. Virtually all female scientific methods were distributed by health facilities. Urban/rural differentials in source of supply were evident, with higher percentages of urban women reporting their source for orals and condoms as other than health centers or physicians. This may be due to the fact that these methods are sold in urban pharmacies. In addition, high proportions of more educated women received orals and condoms outside of health centers than those with no schooling or little education.

Factors Influencing Fertility Regulation

As noted previously, the national family planning program did not get under way in urban hospitals and clinics until 1973. In the four years before the 1977 HFS, there was a gradual expansion of contraceptive acceptors, limited primarily to urban areas. It was only in the 1978–79 period that the national family planning program began to use community and volunteer groups, army dispensaries, and the commercial sector to distribute modern contraceptives and provide services to rural areas.

Of the women in union and fecund who were exposed to the risk of pregnancy, 25 percent were reported using a method of fertility regulation in 1977 (Table 5). Seven percent were reported as currently using efficient methods and 18 percent using inefficient methods. Thus, three-quarters of the women at risk of childbearing at the time of the survey (75 percent) were not practicing contraception, and, of those who were, the majority were using inefficient methods.

Current use of contraceptives generally, and of efficient methods in particular, is positively associated with the number of living children that women reported. Over 20 percent of the women with four or more children were using a method of contraception, compared with less than 15 percent of those with fewer than four children.

The most popular methods were inefficient ones: 6 percent of the women were using withdrawal, 6 percent rhythm, and 5 percent abstinence. On the other hand, 4 percent were using the pill, 1 percent condoms, and less than 1 percent IUDs. The other methods in current use were used by less than 1 percent of the exposed women. In considering the characteristics of women currently contracepting, all current users, regardless of method used, were grouped together.

Table 6 shows the percentage of all women ever in union and of all women exposed to the risk of pregnancy who are currently contracepting, by age, number of living children, and selected background variables. Current use is markedly different for women with no education and those with at least some education. Women who have attended school are more likely to be using contraception than those who have not. Similarly, there is a higher level of current use among urban women (or those from rural areas now living in urban areas) than among rural women.

TABLE 6 Percent of women aged 15–49 and ever in union or exposed to risk of pregnancy, currently using any type of fertility regulation, by selected background variables

Background variable	Currently contracepting	
	Ever in union	Exposed to risk of pregnancy
Current age		
<25	13	20
25–34	17	26
35–44	16	26
45+	13	29
Number of living children		
<4	14	22
4–6	18	28
7+	27	42
Geographical background		
Rural	13	20
Urban, of rural origin	20	34
Urban	20	34
Education		
None	12	19
Primary, 1–4 years	22	36
Primary, 4+ years	26	41
Secondary+	31	44
Union status		
Visiting	17	20
Commonlaw	15	24
Married	25	35
Out of union	0	0
Religion		
Catholic	15	24
Protestant	17	29
Total	16	25

SOURCE: HFS, 1977, Tables 4.5.1; 4.5.5. A, C; 4.5.6. A; 4.4.3; 4.4.5 A, D, F; 4.4.2.

TABLE 7 Percent of women reporting current use of efficient contraception who want no more children, by age and selected background variables

Background variable	Total	Current age			
		<25	25–34	35–44	45 +
Education					
None	5	3	7	4	6
Primary, 1–4 years	21	8	25	20	25
Primary 4 + years	18	38	18	19	0
Secondary +	24	21	46	0	0
Geographical background					
Rural	6	4	7	4	7
Urban, of rural origin	23	13	37	19	0
Urban	23	19	30	16	30
Total	10	9	15	7	7

SOURCE: HFS, 1977, Table 5.2.4 AA.

TABLE 8 Percent of fecund women currently in union who have never used contraception, by desire for additional children and age

Current age	Total	Desire for more children		
		Wants future births	Wants no more	Undecided
<25	60	62	50	78
25–34	62	70	48	88
35–44	62	77	54	72
45 +	62	80	50	83
Total	62	68	50	81

SOURCE: HFS, 1977, Table 5.3.1.

Protestants reported greater current use of contraceptives than did Catholics, and older women who were exposed to the risk of pregnancy showed somewhat greater use than younger women. More married women were contracepting than those in commonlaw or in visiting unions.

Use According to Fertility Intention

Table 7 shows that only 10 percent of women exposed to the risk of pregnancy who said they wanted to terminate childbearing were current users of contraception. The proportion ranged from 6 percent in rural areas to 23 percent among urban women and generally was highest among women with some education.

Table 8 indicates that 50 percent of the women who said they wanted no more children had never used contraception. Further, 32 percent who said they wanted a future birth had used some method of fertility regulation, suggesting use of contraception for spacing purposes as well as for attempting to terminate childbearing.

Discussion

Although the 1977 HFS confirmed the few previous estimates of a relatively moderate level of fertility in Haiti, and indicated marked urban/rural differentials, it is still too early to speak of fertility trends and declines. Results from the 1982 census and the contraceptive prevalence survey scheduled for 1983 will be needed to detect movement in the fertility levels identified in the 1970s.

Much additional analysis beyond the first HFS report will have to be done to clearly understand the determinants of fertility trends in Haiti. For example, we still do not clearly understand the dynamics of

Haitian union patterns and their apparent differences in urban and rural areas. Concepts fairly standard in demographic analysis related to fertility and nuptiality, such as "marital fertility," pose special problems in the Haitian case since legal marriage is not widespread. Similarly, data from the HFS on widespread polygamous unions will have to be incorporated into analysis of nuptiality.

The impact of breastfeeding patterns on fertility also merits serious study; recent research in Haiti indicates prolonged breastfeeding, but differentials suggest that important changes are taking place, particularly in urban areas. Both the 1978 nutrition survey and the 1977 fertility survey show alarmingly shorter durations of breastfeeding in urban areas, particularly among younger, low-parity women.

A module on factors other than contraception influencing fertility was used in the HFS. Its analysis, not undertaken as part of the first report, could provide in-depth information on birth-interval dynamics and the relationship between breastfeeding and postpartum amenorrhea.

Additional analysis will also have to be undertaken to assess the impact of contraceptive use (currently at 25 percent of exposed women) on fertility. This will also be problematic since current contraceptive use in Haiti is primarily use of traditional methods, whose effectiveness is difficult to estimate.

Another important factor related to determinants of fertility is male outmigration. An estimated 12 percent of native-born Haitians were living outside Haiti in 1980. This phenomenon, as well as the complex internal mobility of both men and women, could be very important in reducing exposure to risk of pregnancy by spousal separation.

Analyzing the HFS data that were intended to indicate unmet demand for contraception is problematic since, as Westoff cautions, "the measurement of fertility desires is of an uncertain validity that may vary across countries. Not only will the strength and stability of a preference to have no more children vary among women within countries, but among women in some less developed nations, the salience of the idea of fertility control itself is very low."[15] However, if we accept the responses of Haitian women at face value, a significant proportion (40 percent) of the 64 percent of women ever in union who never used contraception said they intend to use fertility regulation in the future. If they do, current use could increase to over 40 percent of women ever in union and possibly to around 50 percent of women exposed to risk of pregnancy.

The relatively high current and past use of "inefficient" or traditional methods of fertility regulation also suggests that Haitian women are already motivated to space children and limit family size. Data on birth intervals, which are generally extended, and on fertility rates, which are relatively moderate, support this argument. It is plausible, though not certain, that if modern methods of contraception were widely available in rural areas, women in large numbers would use them. This was the experience with a house-to-house experimental contraceptive distribution project conducted by the Division of Family Hygiene during 1978–80.[16] Ways of expanding contraceptive services, particularly among the rural and urban poor, are currently being tested and generalized. Therefore, the next five years could be a period of dramatic increase in use of modern contraception and the beginning of rapid fertility declines.

Few are optimistic about possibilities of dramatic short-term improvements in Haiti's economic situation.[17] It should therefore be interesting to study fertility trends and family planning activities in the years ahead, since Haiti may provide another test for the proposition that even in the absence of dramatic economic development, fertility declines can take place if certain conditions exist. In the case of Haiti, the social and cultural context and the creativity and dynamism of the national family planning program are key factors that give hope for important demographic changes in the future.

References and Notes

This research received support from the Office of Population, USAID, Washington, D.C. The author acknowledges the helpful suggestions of Youssef Courbage on an earlier version of the paper.

1 James Allman, "Haitian international migration, some policy considerations," paper presented at the Population Association of America Annual Meeting, Washington, D.C., 26–28 March 1981.

2 Ary Bordes, "Family planning in the 1980's, a 20-year perspective," *People* 8, no. 5 (1981): 5.

3 John Hobcraft, "The demographic situation in Haiti," Centro Latinoamericano de Demografia, Santiago, Series D, no. 96 (1978); and United Nations Fund for Population Activities, "Population policy compendium—Haiti" (New York: UNFPA, 1981).

4 See James Allman and John May, "Fertility, mortality, migration and family planning in Haiti," *Population Studies* 33, no. 3 (1979): 505–521; and James Allman, "Intermediate variables affecting fertility levels in rural Haiti," Battelle Population and Development Policy Paper no. 10, Washington, D.C., 1979.

5 See James Allman, "Sexual unions in rural Haiti," *International Journal of Sociology of the Family* 10, no. 1 (1980): 15–39; "Conjugal unions in rural and urban Haiti," *Social and Economic Studies* (forthcoming, 1982); "Age at

menarche and fertility in Haiti," *Human Organization* (forthcoming, 1982); and Allman, cited in note 4.

6 See Yves Charbit, "Union patterns and family structure in Guadeloupe and Martinique," *International Journal of Sociology of the Family* 10, no. 1 (1980): 41–66; Yves Charbit and Henri Leridon, *Transition demographique et modernisation en Guadeloupe et en Martinique* (Paris: Presses Universitaires de France, Cahier no. 89, Institut National d'Études Démographiques, 1980); J.R. Manyoni, "Legitimacy and illegitimacy: Misplaced polarities in Caribbean family studies," *The Canadian Review of Sociology and Anthropology* 14, no. 4 (1977): 417–427; M.G. Slater, *The Caribbean Family: Legitimacy in Martinique* (New York: St. Martin's Press, 1977); and Peter J. Wilson, *Crab Antics, The Social Anthropology of English-Speaking Negro Societies of the Caribbean* (New Haven: Yale University Press, 1973).

7 Philip Graitcer, James Allman, M. Amédée-Gédéon, and E. Duchett, "Current breastfeeding and weaning practices in Haiti," *Journal of Tropical Pediatrics* (forthcoming, 1982).

8 See Allman and May, cited in note 4; Hobcraft, cited in note 3; and Institut Haitien de Statistique, "Projections provisoires de la population d'Haiti, 1970–2000," Cahier no. 8, Unité d'Analyse et de Recherches Démographiques, 1980.

9 Haiti, Bureau of Nutrition, "Haiti nutrition status survey: 1978," Port-au-Prince, 1979.

10 See W. R. Aykroyd, "Nutrition and mortality in infancy and early childhood: Past and present relationships," *The American Journal of Clinical Nutrition* 24 (1971): 480–487; and John Knodel, "Town and country in nineteenth century Germany: A review of urban-rural differentials in demographic behavior," *Social Science History* 1, no. 1 (1977): 356–382.

11 See James Allman and Jon Rohde, "Infant mortality in relation to the level of fertility control practice in developing countries," Proceedings of the IUSSP General Conference, Manila, Philippines, 9–16 December 1981, vol. 1, pp. 97–112; Samuel H. Preston (ed.), *The Effects of Infant and Child Mortality on Fertility* (New York: Academic Press, 1978); and Etienne van de Walle and John Knodel, "Europe's fertility transition: New evidence and lessons for today's developing world," *Population Bulletin* 34, no. 6 (1980).

12 Graitcer et al., cited in note 7.

13 Suzanne Nedjati-Allman, "Rapport sur le questionnaire de l'enquête Haitienne sur la fécondité: Etude linguistique" (London: World Fertility Survey, 1978).

14 See J. A. Ballweg, R. E. Webb, and G. Biamby, "Mortality and acceptability of family planning in a Haitian community," *Community Health* 5 (1974): 304–311; G. Berggren, M. Vaillant, and N. Garnier, "Lippes loop insertion by midwives in healthy and chronically ill women in rural Haiti," *American Journal of Public Health* 64, no. 7 (1974): 719–722; and J. M. Stycos, "Haitian attitudes toward family size," *Human Organization* 23 (1964): 2–42.

15 C. F. Westoff, "The ummet need for birth control in five Asian countries," *International Family Planning Perspectives and Digest* 4, no. 1 (Spring 1978): 17.

16 See Ary Bordes, James Allman, and Adeline Verly, "Planificacion familiar en comunidades de Haiti," in *Planificacion Familiar en America Latina: Programas Comunitarios y Comerciales*, ed. Alcides Estrada (Washington, D.C.: Battelle Institute, 1981), pp. 133–157; and Ary Bordes, James Allman, Joanne Revson, and Adeline Verly, "Household distribution of contraceptives in rural Haiti, the results and costs of the Division of Family Hygiene's experimental project," in *Cost-Benefit and Cost-Effectiveness Analysis of Family Planning Programs*, ed. I. Sirageldin, D. Salkever, and R. Osborns, (forthcoming, 1982).

17 Inter-American Development Bank, *Economic and Social Progress in Latin America, 1980–1981 Report* (Washington, D.C., 1981); Mats Lundahl, *Peasants and Poverty: A Study of Haiti* (New York: St. Martin's Press, 1979); and Gerard Pierre-Charles, "Modernisation et développementisme en Haiti: Conditions et limites," *Conjonction* 144 (1979): 5–28.