

WORLD FERTILITY SURVEY



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↙ The Senegal Fertility Survey 1978 A Summary of Findings

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The World Fertility Survey is an international research programme whose purpose is to assess the current state of human fertility throughout the world. This is being done principally through promoting and supporting nationally representative, internationally comparable, and scientifically designed and conducted sample surveys of fertility behaviour in as many countries as possible.

The WFS is being undertaken, with the collaboration of the United Nations, by the International Statistical Institute in co-operation with the International Union for the Scientific Study of Population. Financial support is provided principally by the United Nations Fund for Population Activities and the United States Agency for International Development. Substantial support is also provided by the UK Overseas Development Administration.

This summary is one of a series containing the salient findings of the First Country Reports of the countries participating in the WFS programme. A copy of the report itself, *Enquête sénégalaise sur la fécondité 1978* is available for reference at all WFS depository libraries, or may be obtained from the International Statistical Institute, 428 Prinses Beatrixlaan, PO Box 950, 2270 AZ Voorburg, Netherlands, on payment of US \$10 postage.

For information on Country Reports, WFS publications, and WFS depository libraries, write to the Publications Office, International Statistical Institute, 428 Prinses Beatrixlaan, PO Box 950, 2270 AZ Voorburg, Netherlands. For information on the WFS generally, write to the Information Office, World Fertility Survey, International Statistical Institute, 35-37 Grosvenor Gardens, London SW1W 0BS, UK.

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THE SENEGAL FERTILITY SURVEY 1978

A SUMMARY OF FINDINGS

1. THE SETTING

Senegal lies in the extreme west of the African continent in the northern hemisphere, between the 12th and 16th degree of latitude north and the 12th and 17th latitude west. It is situated south of the Senegal river from which the country takes its name. It covers an area of 196,722 square kilometres. It borders on the north with Mauritania, on the east with Mali, and on the south with Guinea and Guinea Bissau, with the Atlantic Ocean to the west. Its climate is characterized by a short humid season (3-4 months) alternating with a long dry season (8-9 months).

Estimates derived from the general population census of April 1976 indicate that by 1 July 1976 Senegal had a total population of 5,114,600, which implied a mean density of 26 inhabitants per square kilometre. Rural density is 15 inhabitants per square kilometre. One-third of the total national population live in the 20 or so urban centres which vary widely in size. The population of Senegal is more than 80 per cent Muslim.

All demographic studies carried out at national level since 1970 have found that Senegal's population is very young, with more than half the population under 20 years of age. The total number of very old people is relatively low: under 6 per cent of the total population are 60 years of age or more. The sex ratio is about 97.5 men for every 100 women.

The findings of the 1970-1 national demographic survey and the 1976 census revealed that the population of Senegal was not only larger than foreseen but also that it was growing at a more rapid rate than that envisaged by the first four economic and social development plans: 2.6 per cent rather than 2.2 per cent as envisaged; at this rate the population doubles every 27 years.

Accordingly, in December 1979, the Government created the Commission Nationale de la Population (CONAPO), with a mandate to study the overall problems related to population, in order to establish a basis for a coherent long-term population policy.

2. THE SURVEY

The effects of population growth on economic prosperity alone would have justified a survey at national level to obtain better fertility data. However, the Senegal Fertility Survey (Enquête Sénégalaise sur la Fécondité) was not an isolated operation. It was carried out within the framework of a demographic research programme established by the Bureau of Statistics (Direction de la Statistique). It was performed during the first stage of a three-stage national demographic survey undertaken by the Republic of Senegal for its Fifth Economic and Social Development Plan (1977-81). A survey on manpower was carried out at the second stage, and a further survey on migration is planned for the third stage.

The Senegal Fertility Survey (SFS) was undertaken by the Direction de la Statistique, with technical assistance from the World Fertility Survey and financial support from the United Nations Fund for Population Activities.

Planning of the survey was initiated in June 1977; the fieldwork was carried out between May and October 1978; the statistical tables were produced and processed between July 1980 and January 1981; and the First Country Report was published in July 1981.

The sampling plan adopted by the SFS was a nationally representative probability sample, drawn by means of a three-stage national survey. Prior to the first-stage sampling, each area unit (block) or AU was allocated a number of sub-area units (SAUs) according to the size of their populations, the size of these SAUs being approximately constant. A sample of these AUs was then drawn by systematic selection with probability proportional to the size of the AU (or 'PPS sampling'). In each AU drawn in the first stage, the SAUs, until then hypothetical, were updated through fieldwork; only one of them was drawn, with equal probability. Following this, the interviewers enumerated the total population in each SAU sampled, using the household schedule. This household survey provided the means of identifying all women between 15 and 49 years of age, of whom one out of every nine was selected for the individual fertility interview. As a result of this sampling plan, the samples obtained for both household and individual surveys are self-weighting.

A total of 193,032 individuals were enumerated in the household survey. There was at least 0.5 per cent of non-response (refusal to answer or absence of persons able to answer in the household). A total of 3985 successful individual interviews were completed from the total selected sample of 4441 women aged 15-49. The response rate in the individual survey was 89.7 per cent.

In the household survey, 11 teams, each comprising 5 interviewers, collected basic demographic data on all resident or visiting members of the SAUs selected. The fieldwork for the individual survey was carried out by four teams of female interviewers (a total of 20 interviewers). Both the household and individual surveys were carried out at nearly the same time in a given area. A considerable logistical effort was needed for transporting the teams of interviewers.

The household schedule collected general data concerning the age and sex structure of the total population, internal migration, and the distribution of the population according to ethnic group and marital status. No attempt was made to measure fertility or mortality in the household survey.

The individual questionnaire used was the WFS core questionnaire, adapted to the particular conditions prevalent in Senegal. The SFS also used the WFS module, "Factors Other Than Contraception Affecting Fertility".

The individual questionnaire was translated into the country's four main languages: Wolof, Poular, Serer and Mandingue. Data editing and processing were carried out by the information service of the Direction de la Statistique, with assistance from the WFS. Statistical tables were prepared at WFS headquarters, and the SFS assistant technical director prepared the First Country Report.

The present document summarizes the main findings of the survey contained in the First Country Report.

3. FINDINGS

3.1 Nuptiality and exposure to the risk of childbearing

In the Senegal Fertility Survey, marriage is defined as a legal or religious union. The few women living in a common law union (8 women out of 3985) or with a man without being legally married are also classified as currently married or ever married. Thus, 87 per cent of all women included in the individual survey are reported as ever married. The highest proportion of single women is found among women aged under 20 of whom 41 per cent had never married; this proportion declines rapidly to 14 per cent at ages 20-24 and 4 per cent at ages 25-29. After age 30 virtually all women (99.8 per cent) are either married or have been married.

At the time of the survey, 83 per cent of the women were currently married, 3 per cent were divorced or separated, 1 per cent were widowed and 13 per cent were single.

Age at first marriage

Marriage in Senegal occurs at a very early age. The mean age at first marriage for the respondents in the survey was 16.4 years. Half of all women are married by the age of 15.6. There is no distinct trend towards an older age at first marriage. Nevertheless, there seems to be a slight increase in the age at marriage among women under age 30 at the time of the survey (see table 1).

TABLE 1
PERCENTAGE DISTRIBUTION OF WOMEN ACCORDING TO AGE AT FIRST MARRIAGE BY CURRENT AGE

Current Age	Age at First Marriage							Not yet married	Total	Median Age	No of women
	<15	15-17	18-19	20-21	22-24	25-29	30+				
15-19	28	28	3	0	0	0	0	41	100	16.4	914
20-24	27	35	15	7	2	0	0	14	100	16.2	757
25-29	30	37	12	7	7	2	0	4	100	15.8	664
30-34	36	45	9	5	3	1	0	0	100	15.1	499
35-39	34	46	10	5	2	2	1	0	100	15.2	494
40-44	34	42	11	8	2	2	1	0	100	15.2	400
45-49	26	48	15	5	3	1	1	0	100	15.6	257
All	30	38	10	5	3	1	0	13	100	15.6	3.985

Age at first marriage may vary according to certain factors such as education, region and type of place of residence, urbanization, place of residence and ethnic group of the woman. In Senegal, it is slightly higher for women living in urban areas, literate women, those living in the eastern region or those belonging to the Diola ethnic group. The greatest difference appears between literate and illiterate women, their median age at first marriage being 21.6 and 15.8 years respectively.¹ The median age for urban women is 18.3, compared to 15.6 for rural women. Ethnic group appears to be less important as a differential factor, except among the Diola, whose median age is 19.1. Median ages vary among the other five ethnic groups between 15.4 (for Poular women) and 16.8 (for the Serer). As regards region of residence, only those women living in the eastern region of the country, the Dakar region, have a higher median age at first marriage (17.6 years). Women living in the other three regions report very similar median ages at first marriage, between 15.5 and 15.9.

The interaction between these four factors has the effect of reinforcing certain differentials, so that those women who marry later in life are also better educated and live in urban areas in the eastern region.

Marital stability

After first marriage, the persistence of exposure to the risk of pregnancy depends on the frequency of the dissolution of unions and that of new marriages. Of the 3472 ever-married women in the survey, 71 per cent are still in their first marriage, 9 per cent are widowed and 20 per cent are divorced. For women aged 30 and over, these percentages are 53 per cent, 20 per cent and 27 per cent, respectively.

This relative instability of first unions does not seem to have affected significantly the time spent in a union. The extensiveness of nuptiality is shown in the rates of remarriage which is almost automatic in Senegal: 89 per cent of women whose first marriage had been dissolved had remarried at the time of the survey and 95 per cent of ever-married women are currently married. The average percentage of time spent in the marital state since first marriage is 94.5.

The average number of marriages per ever-married woman is 1.3. Forty-six per cent of women whose first marriage had occurred 30 years ago or more had been married more than once.

The type of place of residence appears to be the main factor associated with marital instability. Thirty-four per cent of urban women had their first marriage dissolved, compared to 27 per cent of rural women. Of the six ethnic groups, the Mandingue show the smallest percentage of marriage dissolution (21 per cent) and the Poular and Serer the highest (32 and 31 per cent). The remaining three groups show percentages around 27-29 per cent.

Only one appreciable differential in the percentage of women who remarry is apparent. Literate women remarry much less frequently than illiterate women (76 per cent compared to 91 per cent).

¹ *Literate women account for 15 per cent of all women aged between 15 and 49.*

Thus the dissolution of unions has very little effect on fertility, since dissolution is almost invariably followed by remarriage.

Polygamy

All currently married women were asked about the number of wives their husbands had and in cases of polygamous marriage their own marriage rank.

Polygamy is relatively common and occurs among all ethnic groups in Senegal. The findings of the household survey, covering 200,000 household members, show that 32 per cent of all married men were polygamous in 1978. The prevalence of polygamy increases progressively with the age of the woman. While at ages of 15-20, almost one married woman in three was living in a polygamous marriage, at ages 40-44 two women in three were living in a polygamous marriage.

The practice of polygamy is associated with certain socio-economic, geographic and ethnic factors. These factors are particularly significant for women under 30 years of age. Younger women who live in urban areas, who are literate, who live in the west or north-east, or who belong to the Poular or Serer groups are less affected by polygamy. For women over 30 years of age, ethnic group is associated with the greatest difference. The lowest incidence of polygamy is found among Diola, Serer and Poular women (approximately 51 per cent of married women aged 30 and over), whereas it is most prevalent among Wolof and Mandingue women (70 and 75 per cent). There is some evidence to suggest that the incidence of polygamy is increasing. Thirty-two per cent of married men in the household survey had two wives or more in 1978, while 28 per cent of all men in the 1970-1 national demographic survey were polygamous.

3.2 FERTILITY AND FERTILITY PREFERENCES

Number of live births

In order to examine the cumulative fertility of the sample women, information was obtained on all live births since the first birth until the time of the survey were included. The mean number of live births is 3.5 for the total sample, and 4.0 for ever-married women (see table 2).

TABLE 2
PERCENTAGE DISTRIBUTION OF WOMEN ACCORDING TO NUMBER
OF LIVE BIRTHS, BY CURRENT AGE

Current Age	Number of live births										Mean (ever-married women)	Mean (never-married women)	Mean total (all women)	
	0	1	2	3	4	5	6	7	8	9+				Total
15-19	65	26	8	1	0	0	0	0	0	0	100	0.7	0.1	0.4
20-24	21	27	26	18	6	2	0	0	0	0	100	1.9	0.3	1.7
25-29	7	10	14	17	24	17	8	2	1	1	100	3.5	0.3	3.4
30-34	5	3	6	7	9	17	23	17	9	5	100	5.3	-	5.3
35-39	3	6	6	7	8	8	15	15	15	18	100	5.9	-	5.9
40-44	4	5	4	5	7	8	9	12	14	34	100	6.8	-	6.8
45-49	4	3	4	4	8	5	9	11	13	39	100	7.2	-	7.2
All	22	15	11	0	8	7	8	6	5	9	100	4.0	0.2	3.5

Over half the women aged between 30 and 34 and over two-thirds of those aged 35 and over had already had six live births at the time of the survey. The percentage of women with no live birth was 65 per cent in the 15-19 age group, but only 3 per cent among women aged 45-49. This last percentage gives a fair estimate of primary sterility in Senegal, which is not high.

For women aged 45 and over, ie women who have almost reached the end of their reproductive period, the mean number of live births is 7.2.

In Senegal, where 99.8 per cent of all women over 30 had been married at least once, the fertility of never-married women is very small. Never-married (or single) women in the survey had an average of 0.2 children per woman.

Differentials in cumulative fertility

After controlling for differences in age structure, the mean number of live births for all women is slightly higher in rural areas than in urban areas (3.7 children compared to 3.3). Similarly, illiterate women have an average of 0.5 births more than literate women with 3.7 births compared to 3.1 births (table 3, column 4). However, these differences are almost exclusively the result of variations in the age at first marriage, which is higher in urban areas and among literate women. Ever-married women have the same average number of live births regardless of their place of residence or level of literacy (4 births) for a given marriage duration. The only exception is found among the Poular group, who have a slightly lower average number of births (3.7 births), even when standardized for the number of years since first marriage (table 3, column 2).

MEAN NUMBER OF LIVE BIRTHS BY LEVEL OF LITERACY, PLACE
OF RESIDENCE AND ETHNIC GROUP

	<u>Ever-married women</u>		<u>All women</u>	
	Mean number range of births	Mean number of births standardized by the direct method for the number of years since first marriages	Mean number of births	Mean number of births standardized for current age
	(1)	(2)	(3)	(4)
<u>Level of Literacy</u>				
Literate	2.8	4.1	1.8	3.1
Illiterate	4.2	4.0	3.9	3.7
<u>Place of Residence</u>				
Urban	4.0	4.1	3.1	3.3
Rural	4.0	4.0	3.8	3.7
<u>Ethnic group</u>				
Molof	4.1	4.1	3.4	3.5
Poular	3.8	3.7	3.4	3.5
Mandingue	4.5	4.4	4.2	4.2
Serer	4.5	4.3	4.0	3.7
Diola	4.4	4.3	3.7	3.3
Others	3.7	3.8	3.3	3.3

Effects of infant and child mortality on family size

The relatively high level of fertility of Senegalese women is partially offset by a high infant and child mortality. Out of an average of 4 live births per ever-married woman, only 2.9 were living at the time of the survey. Of 7.2 children born to women aged between 45 and 49, only 4.9 survive, ie a loss through death of 32 per cent.

TABLE 4
MEAN NUMBER OF LIVE BIRTHS, CURRENTLY LIVING AND DECEASED
(EVER-MARRIED WOMEN)

Current Age	Mean number of children			Proportion of surviving children
	Live births	Currently living	Deceased	
15-19	0.7	0.6	0.1	.819
20-24	1.9	1.5	0.4	.784
25-29	3.5	2.7	0.8	.755
30-34	5.3	4.0	1.3	.748
35-39	5.9	4.2	1.7	.708
40-44	6.8	4.6	2.2	.676
45-49	7.2	4.9	2.3	.680
All	4.0	2.9	1.1	.723

According to data collected in the birth history of the individual interview for the most recent five-year period (1973-7, the rate of infant mortality was 118 deaths per thousand births. There is a substantial difference between women living in urban areas (71 per thousand) and those in rural areas (137 per thousand), as well as between literate (77 per thousand) and illiterate women (120 per thousand). Wolof women appear to have the lowest infant mortality rate (90 per thousand), the highest rate being observed among Mandingue women (173 per thousand). Thus, the level of infant mortality remains high, particularly in rural areas.

Child mortality before the age of five also remained very high. For the period from 1968-72, the mortality rate between the ages of one and five was 177 per thousand.

Early marital fertility

The average number of live births during the first five years of marriage is 1.5 for women who have been married for at least five years (see table 5). Only three per cent of women reported a live birth before their first marriage. Age at first marriage is a determining factor in fertility during the first five years of marriage. The older the age at marriage, the shorter the interval between marriage and first birth, ranging from 24 months for women marrying below age 15 to 17 months for

those marrying at the age of 22 or more. Nearly 13 per cent of women remain childless after five years of marriage.

TABLE 5

MEAN NUMBER OF LIVE BIRTHS BEFORE OR DURING FIRST FIVE YEARS OF MARRIAGE, BY NUMBER OF YEARS SINCE FIRST MARRIAGE AND AGE AT FIRST MARRIAGE

(LIMITED TO WOMEN FIRST MARRIED FIVE YEARS AGO OR MORE)

Number of years since first marriage	Age at first marriage					All	Number of women
	<15	15-17	18-19	20-21	20+		
5-9	1.5	1.6	1.8	1.9	2.2	1.7	586
10-19	1.4	1.6	1.8	1.6	1.7	1.6	1057
20+	1.4	1.5	1.7	1.4	2.5	1.5	1006
All	1.4	1.6	1.7	1.6	2.0	1.5	
Number of women	996	1167	273	136	77		2649

The slight trend towards higher fertility in the first five years of marriage among the younger generations could be the spurious result of the omission of more distant births or of reference period errors among the older women. Alternatively, the increase could be genuine, reflecting a change in the components of birth intervals (perhaps shorter lactation among younger women - see section 3.4).

Recent fertility

The crude birth rate (number of live births per thousand women) is 48 per thousand for the five years preceding the survey. The age-specific fertility rates, based on data from the 1970-1 National Demographic Survey (NDS), the 1960 Demographic Survey and the 1978 Senegal Fertility Survey (SFS) is as follows:

TABLE 6

AGE-SPECIFIC AND TOTAL FERTILITY RATES ESTIMATED FROM SENEGAL FERTILITY SURVEY (1978), NATIONAL DEMOGRAPHIC SURVEY (1970-1) AND DEMOGRAPHIC SURVEY (1960)

Fertility rates (per thousand)	Age groups							Total fertility rate
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	
SFS 1978	189	304	332	265	179	108	34	7.1
NDS 1970-71	165	290	272	228	161	109	63	6.4
1960 Survey	158	242	243	204	153	47	26	5.4

Sources: Enquête Démographique Nationale 1970-71: Direction de la Statistique, Situation Economique du Sénégal, 1978, Ministère de l'Economie et des Finances, Dakar, p 16.
Enquête Démographique de 1960: "La Population du Sénégal", doctoral thesis by Louis Verrière, 1965, p 113.

The higher rates derived from the 1978 survey data are not due to an increase in fertility since 1960. Rather, they reflect the fact that the fertility level has been progressively more accurately estimated in each survey. Retrospective fertility rates based on the SFS birth history data indicate that fertility has remained relatively constant during the whole of this period.

The total number of children that would be born to a woman by age 49, implied by the current fertility rates, is shown below for certain socio-economic variables

<u>Literacy level</u>	<u>Total fertility rates</u>	<u>Total marital fertility rates</u>
Literate	6.3	8.4
Illiterate	7.3	8.0
<u>Type of place of residence</u>		
Urban	6.5	8.2
Rural	7.5	8.0
<u>Ethnic group</u>		
Wolof	7.2	8.3
Poullar	6.9	7.5
Mandingue	8.1	8.7
Serer	7.8	8.9
Diola	6.3	8.1
Others	6.7	7.5
All	7.1	8.1

The total fertility rate for illiterate women is higher (7.3 children) than for literate women (6.3), and this total is also higher among rural women (7.5 children) than among urban women (6.5). These differentials are explained by the level of fertility rates observed in age groups 15-19 and 20-24. The fact that at these ages we find higher rates among illiterate women and women living in rural areas is essentially due to the effect of age at first marriage, which is higher among literate women and women living in cities.

It is likely that differences between ethnic groups are also due to the effect of age at first marriage. Diola women, for example, who have the lowest TFR (6.3) also have the highest median age at first marriage (19.1 years).

These differences are greatly diminished or reversed when we consider only marital fertility.

Overall, recent fertility in Senegal is high and differentials among socio-economic groups are fairly small. Any differences observed appear to be determined mainly by the fertility of young women, itself influenced by the age at first marriage.

Family size preferences

The question regarding desired family size is a delicate one to ask in Senegal, because of the traditional attitude that children are a gift of God, and should be desired in as a great a number as possible.

All women in the sample were asked the question: "if you could choose exactly the number of children to have in your whole life, how many children would that be?" In spite of the efforts made by the interviewers to obtain a numerical response, 29 per cent gave a non-numerical answer such as "it depends on God" or "it depends on my husband".

The percentage of women who gave a numerical answer declines regularly as the age of the woman increases: over 80 per cent for women aged 20-24, declining to 62 per cent for women aged 40-44 and 46 per cent at 45 years and over.

The average desired number reported by ever-married women who gave a numerical answer is 9 children. Fifty-three per cent of these women declared an ideal of nine or more children.

The number of living children at the time of the survey seems to have little influence on the answers given by the respondents:

No of living children	0	1	2	3	4	5	6	7	8	9+
Mean number desired	7.9	8.4	8.8	9.0	8.8	9.1	9.6	9.6	9.4	9.1

Preference for sex of next child

All women currently pregnant at the time of the survey were asked the question about the desired sex of their next child. Forty-two per cent of these women stated they would prefer a boy and 23 per cent a girl.

The remaining 35 per cent had no preference, and often answered "it depends on God". The percentage of women with this more fatalistic attitude increases with age.

3.3 CONTRACEPTIVE KNOWLEDGE AND USE

Knowledge of contraception

Sixty per cent of ever-married women stated that they had heard of at least one contraceptive method, either traditional or modern, and 20 per cent knew at least one modern method (the majority of these knew the pill). Data classified by age show that the proportion of women who did not know any method at all is highest among younger women (those under 20 years of age) and among the older women (those aged 35 and more). The proportion of women who knew only of traditional methods increases steadily with age. The highest proportion of women who declared knowledge of modern methods is found among the younger women. Among modern methods the pill is the most widely known (by 18 per cent of ever-married women), followed by the IUD (9 per cent) and the condom (8 per cent).

Among the traditional methods, abstention is the best known and the most widely used. But it is possible that in the survey the question about abstention was misinterpreted by some respondents and post-partum abstinence may have been confused with abstinence as a method of contraception, as the word 'abstention' may be associated with the Muslim custom which prohibits any sexual intercourse during the 40 days following childbirth.

TABLE 7
PERCENTAGE OF EVER-MARRIED WOMEN WHO HAD HEARD OF AND WHO
EVER USED MODERN OR TRADITIONAL CONTRACEPTIVE
METHODS, BY CURRENT AGE

Current age	Knowledge			Use		
	At least one modern method	One or more traditional methods only	Any method (modern or trad.)	At least one modern method	One or more traditional methods only	Any method (modern or trad.)
15-19	16	29	45	0	8	8
20-24	28	37	65	1	10	11
25-29	25	41	66	2	13	15
30-34	22	41	63	2	9	11
35-39	15	46	61	1	10	11
40-44	12	44	56	1	11	12
45-49	14	46	60	0	8	8
Ensemble	20	40	60	1	10	11

Use of contraception

Eleven per cent of the women interviewed stated that they had used at least one contraceptive method at some time, 3 per cent having used some method besides abstinence and 1 per cent a modern method (the majority having used the pill). This level of contraceptive use is one of the lowest recorded in the WFS programme to date.

The percentage of women using any contraceptive method at the time of the survey is also very low: 4 per cent of currently married women. For literate women the percentage is 13.4.

3.4 FACTORS OTHER THAN CONTRACEPTION AFFECTING FERTILITY

The survey allowed collection of data on certain factors other than contraception, age at first marriage and marital dissolution which might affect fertility. Most of these questions were restricted to the last closed interval and the open interval. The last closed interval refers to the period between the last two pregnancies, whereas the open interval refers to the time since the last end of the pregnancy up to the date of the survey.

Data collected for these intervals concern breastfeeding and temporary separation of over 3 month. Given the almost negligible reported length of temporary separation (15 days on average), we may assume that this factor does not have any major influence on fertility.

Breastfeeding

In addition to its importance for the health of the child, breastfeeding delays the return of ovulation and therefore has a great influence on the woman's exposure to the risk of pregnancy.

Among the 2091 women (52 per cent of the sample) with at least two pregnancies, only 9 had not breastfed their children.

TABLE 8

PERCENTAGE DISTRIBUTION OF WOMEN ACCORDING TO LENGTH OF LACTATION DURING THE LAST CLOSED INTERVAL

Not breast-fed	Until child died	Length of lactation in months					Total	Mean duration (in months)	Number of women
		0-6	7-12	13-18	19-24	25+			
2	15	1	8	34	35	5	100	20	2392

For all women who reported the length of lactation, the mean duration is 20 months, and the duration of full lactation (breastfeeding without any supplementary food) is about 6 months. Thus, breastfeeding is quite prolonged in Senegal: 90 per cent of children are weaned after 12 months and 48 per cent after 18 months.

On average, the length of breastfeeding is shorter among women under 30 years of age (19 months) than among women aged 30 or more (21 months).

The length of breastfeeding differs by nearly 3 months between the older and the younger generations of women.

Certain socio-economic factors are associated with the length of breastfeeding during the last closed interval. Level of literacy, type of place of residence and husband's occupation all appear to be associated quite significantly with the average duration of breastfeeding. Thus, the period of lactation is shorter among literate women (16 months) than among illiterate women (20½ months) and among women living in urban areas (18 months) than among their rural counterparts (21 months).

In a population such as that of Senegal where there appears to be little conscious control of fertility within marriage, a decline in the length of lactation should result in a shortening of birth intervals, since it has generally been observed that the longer the duration of breastfeeding and hence of amenorrhoea, the longer the interval between two live births.

Thus, the apparent decrease of the average duration of breastfeeding could bring about an increase in fertility, in view of the lack of a counter-acting increase of contraceptive use. This might explain, in part, not only the trend towards an increase in fertility at the beginning of marriage observed in Senegal (see table 5) but also the slightly higher level of early fertility among urban women and educated women.

4. CONCLUSIONS

Nuptiality in Senegal is intensive and virtually universal. Age at first marriage is relatively young (16 years). At the time of the survey, 83 per cent of women aged between 15 and 49 were married. The relative instability of marriage in Senegal, reflected in the 29 per cent of first marriages dissolved, is counterbalanced by the fact that remarriage is usual after a union has been dissolved. The practice of polygamy is relatively important and occurs within all ethnic groups: 48 per cent of married women, between 15 and 49 years of age, were living in a polygamous union. It seems that these characteristics of nuptiality have not changed significantly to date, though a slight increase in the mean age at first marriage has been observed.

The near universality of marriage in Senegal is one of the factors responsible for the relatively high levels of fertility, since women are thus exposed to a maximum risk of pregnancy. The total number of children ever born for women aged 45-49 is 7.2 children. The crude birth rate for the five years prior to the survey is 48 per thousand. Fertility in Senegal does not appear to have changed much during the past 30 years. Differences between different socio-economic groups are minimal. Any differentials that could be observed seemed to be due more to ethnic origin than to social background or place of residence. Fertility in urban areas is only slightly lower than in rural areas, and this difference is almost entirely due to the fact that age at first marriage is higher in urban areas.

However, it is possible that some changes in fertility trends are beginning to take place in Senegal. Since contraceptive practice is so low, being used by only four per cent of currently married women at the time of the survey, the two most important factors affecting fertility are age at first marriage and length of lactation. Two contradictory movements appear to be taking place. On the one hand, age at first marriage is increasing with the development of urbanization and education, while, on the other, the length of lactation, rather long at present, is showing a tendency to decrease among the more educated and urban women.

Due to modernization and education, these trends in age at first marriage and length of lactation could well lead to important changes in fertility in the near future, particularly in urban areas. Thus, the trend towards a shortening of the duration of breastfeeding makes married urban women more exposed to the risk of pregnancy, and acts positively on the level of fertility. However, with the decline of infant mortality, we may anticipate changes in attitude, as women are more sure about their children's survival, leading to a decrease in fertility in urban areas. Thus it is possible that modernization may bring about a greater demand for family planning among younger, educated and urban women.

The combination of all these factors mean that Senegal could find itself on the threshold of the final stages of demographic transition, provided that the elements which up to now have only affected a minority of women spread throughout the country and affect a greater proportion of the population.