

Trends and Differentials in Births to Unmarried Women:

United States, 1970-76

An analysis of trends and differentials in childbearing by unmarried women. Discusses variations in relation to age of mother, live-birth order, race, educational attainment, and place of residence. Also examined is the relationship of childbearing by unmarried women with health factors such as low birth weight and prenatal care.

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TRENDS AND DIFFERENTIALS IN BIRTHS TO UNMARRIED WOMEN

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INTRODUCTION

The continued increase in the number of births to unmarried women, particularly since the mid-1960's when the number of births to married women began to decline, has led to widespread public concern and interest in determining the factors behind the rising trend as well as the consequences of childbearing by unmarried women. The purpose of this report is to describe this trend and to analyze some of the factors associated with it.

The principal topics covered are trends and differentials in the incidence of childbearing by unmarried women as measured primarily by the birth rate for unmarried women (the number of births per 1,000 unmarried women 15-44 years of age), factors accounting for the observed trends and variations, and differences in socioeconomic and health status between births to unmarried and married mothers.

For the most part the discussions of trends extend through the 1976 data year. The sections of the report covering differentials in childbearing by unmarried women and characteristics of infants born to these women, however, are based on data for 1975, the most recent year for which data were available when this report was written.

In this report the term "illegitimacy" is used interchangeably with "births to unmarried mothers," "out-of-wedlock childbearing," and

variations of these terms. The latter terminology may be preferable to "illegitimacy" because it focuses on the legal marital status of the mother rather than on the "legitimacy status" of the newborn infant. However, references to "births to unmarried mothers," "out-of-wedlock" births, "out-of-wedlock childbearing rates," and so forth are cumbersome, particularly in an extensive text such as this one. For this and other reasons the use of the term "illegitimacy" is widely accepted and used by other researchers in this area.¹⁻⁵

Illegitimacy is defined by State statute. Generally a child is classified as legitimate if he or she was conceived or born during lawful wedlock, regardless of whether or not the mother's husband was the child's biological father.

There are variations from State to State in the wording of the legitimacy status item. Most States, however, have adopted the wording included in the 1968 revision of the U.S. Standard Certificate of Live Birth: "Legitimate (specify yes or no)." Some States ask, "Is mother married?" or some variation of this wording. Although no systematic analysis has been conducted of the effect on illegitimacy statistics of these differences among States in the wording of this item, it is believed to be inconsequential. Beginning in 1978, most States have modified the wording of the item to ask "Is mother married?" as recommended by the 1978 revision of the U.S. Standard Certificate of Live Birth.

SOURCE OF DATA AND METHODOLOGY

The source of data for this report is the certificate of live birth filed for each child born in the United States. In 1976 the birth certificates of 38 States and the District of Columbia included an item asking for the legitimacy status of the child.

Over the years included in this study the number of States asking for the legitimacy status of the child has changed little. At one time, during the 1930's, the reporting of legitimacy status was nearly universal. However, during the 1940's a number of States removed the item out of concern for its confidentiality. Most States now include a separate confidential section on their certificates where the legitimacy item is located and take additional precautions to safeguard the privacy of the child and the mother.

The quality of illegitimacy statistics is affected by the completeness of birth registration as well as by the accuracy with which the legitimacy item is completed. However, for the more recent period covered by this report (1950-76), it is estimated that more than 97 percent of all births occurring in the United States were registered. Thus it is unlikely that improved reporting could account for any part of the observed increase in illegitimacy.

No attempt has been made to evaluate the quality of reporting for the legitimacy status question. It is impossible to say whether the quality has varied over time, yet it is probable that variation in accuracy exists among different segments of the population. For example, many assume that there is more falsification of legitimacy status among white women and women of higher socioeconomic status than among black women and women of lower income. It has also been argued, however, that since accurate registration of legitimacy status is necessary to facilitate adoption, white women are *less* likely to falsify their children's legitimacy status, since a much higher proportion of white than of black out-of-wedlock babies are adopted.⁶

With respect to the validity of the legitimacy status item as an accurate measure of

illegitimacy in the reporting area,^a an independent study was conducted for a sample of 1973 births to infer the legitimacy status of births occurring in the reporting States by comparing the mother's, child's, and father's surnames as reported on the birth certificate.⁷ That inferential study estimated that 71,605 illegitimate births occurred in the sample, whereas the number of registered illegitimate births totaled 71,241. Thus, the inferential method differed from the birth certificate item by only 0.5 percent. (See appendix III for a complete description of this study.)

It was noted earlier that only 38 States and the District of Columbia reported legitimacy status in 1976. Among the nonreporting States are New York, California, and Massachusetts, together accounting for 20 percent of all births in that year. In order to have national figures on illegitimacy, estimates are prepared for the number of illegitimate births occurring in these and other nonreporting States as a group. (Appendix table V shows the reporting status of each State.) To obtain national estimates, all States are grouped into nine geographic divisions. The combined ratio of illegitimate births per 1,000 total live births for all reporting States in a single division is then applied to all the live births occurring to residents of that division. This yields an estimate of illegitimate live births for the geographic division. This procedure is applied separately to white, black, and other births. The sum of these estimates for the nine geographic divisions makes up the estimate for the United States.

This method assumes that the nonreporting States in a given geographic division have the same proportion of births that are illegitimate as the reporting States in that division. The reliability of the estimates is therefore influenced by the proportion of all births that are

^aIn this sense, "validity" refers to the consistency between the information reported in the legitimacy status item and the inference based on the names of the mother, father, and child. It is not possible to detect from this procedure inaccuracies that arise from deliberate falsification of both the legitimacy status item and the names.

to residents of the reporting States in each geographic division. In some divisions this proportion is small, particularly in the New England, Middle Atlantic, Mountain, and Pacific Divisions. Thus it is not advisable to estimate the number of illegitimate births for any individual nonreporting State from this method.

With respect to the validity of the national estimates of illegitimate births prepared by the National Center for Health Statistics (NCHS), an independent estimate of these births was made for 1975. This method, described in detail in appendix IV, involved combining the numbers of illegitimate births registered in the legitimacy-reporting States with the numbers of illegitimate births inferred by the individual nonreporting States. The independent estimates of illegitimacy were remarkably consistent with the results obtained by the usual NCHS estimation procedure for all births. Estimates by race indicated that the usual estimation procedure undercounts the number of white illegitimate births somewhat and overstates the number of illegitimate births of all other races slightly. Nevertheless, considering that the inferential procedures are themselves subject to error, the usual estimation procedure seems to be reasonably accurate at the national level. This aspect is discussed in detail in Chamblee's thesis (see reference 7).

SUMMARY OF FINDINGS

The risk that an unmarried woman will give birth to a child has declined fairly steadily since 1970. This risk, as measured by the illegitimacy rate, declined from 26.4 illegitimate births per 1,000 unmarried women aged 15-44 years, to 24.7 in 1976. During this same period, however, all other measures of illegitimacy have increased considerably. The number of out-of-wedlock births rose from 398,700 in 1970 to 468,100 in 1976, an increase of 17 percent. This increase occurred during a period of generally declining fertility (principally among married women), when total births declined by 15 percent. Therefore, the proportion of all births that were illegitimate increased from 10.7 percent in 1970 to 14.8 percent in 1976.

The declining rate of childbearing by unmarried women has not had the effect of reducing the number of illegitimate births during this period for several reasons. There has been an increase in the population of unmarried women of all ages, and although the illegitimacy rate has declined for most age groups, it has increased for teenagers, particularly for those aged 15-17 years. The rate for the latter group rose from 17.1 per 1,000 in 1970 to 19.3 in 1976. The trend in the illegitimacy rate for teenagers is critical because the overwhelming majority of teenagers are unmarried and thus "at risk" of giving birth to a child out of wedlock. In addition teenage girls 15-19 years of age compose about one-half of the unmarried female population aged 15-44 years and account for half of all illegitimate births. Because of these factors it is not likely that there will be a decline in the total number of illegitimate births in the near future unless the recent trends in teenage illegitimacy rates are reversed. A number of factors associated with the trends in the teenage illegitimacy rate are considered in this report, including the incidence of premarital intercourse, the use of contraception, and the use of abortion.

There is a larger incidence of illegitimacy for the black population than for the white. This is true regardless of the measure used. A number of factors are examined, but a substantial racial difference persists, with the measure for the black population being several times larger than that for the white population.

Out-of-wedlock childbearing is becoming increasingly concentrated among teenage mothers. In 1975 an estimated 52.1 percent of illegitimate infants were born to mothers under 20 years of age. This proportion was 50.1 percent in 1970 and 44.4 percent in 1965. Because of this concentration of young mothers, the majority of illegitimate births—61.8 percent—were first births in 1975. Since unmarried mothers are more concentrated in the teenage group, they are less likely to have had the opportunity to complete high school: in 1975, 40.3 percent of unmarried mothers compared with 76.0 percent of married mothers had done so. It is clear that unmarried mothers are thus at a definite disadvantage socially and economically because of their lower educational attainment.

Four health factors in childbearing are considered in this report. It is shown that illegitimate infants are far more likely to be of low birth weight—2,500 grams or less (5 pounds 8 ounces or less)—than are legitimate babies (12.9 percent compared with 6.5 percent in 1975).

Unmarried mothers are more likely to have begun prenatal care late in pregnancy and to have made fewer prenatal visits than are married mothers. In 1975, 16.2 percent of unmarried mothers compared with 4.3 percent of married mothers began prenatal care in the last trimester or had no care at all.

The only health factor considered in this report for which there is now virtually no difference between legitimate and illegitimate babies is the attendant at birth. In 1975, 99.0 percent of legitimate births and 98.4 percent of illegitimate births were attended by physicians in hospitals. These figures reflect a substantial increase in the level of hospital deliveries for out-of-wedlock babies since 1964, when 89.1 percent of these infants were delivered in hospitals.

Although spontaneous fetal deaths are substantially underreported, there is nonetheless a considerable difference in the incidence of reported fetal deaths according to legitimacy status. In 1975 the fetal death ratio (fetal deaths per 1,000 live births) was 15.9 for illegitimate births—56 percent greater than that for legitimate births, 10.2.

The measurement of out-of-wedlock childbearing in terms of both the number of illegitimate births and the population at risk of bearing an illegitimate child is considered in detail in this report and in the appendixes. It is concluded that although there are shortcomings in the present estimates by the National Center for Health Statistics, they are adequate to analyze national trends and differentials in illegitimacy.

THE BIRTH RATE FOR UNMARRIED WOMEN: NATIONAL DATA

The Trend Since 1940

Trends in the rate of childbearing by unmarried women for the United States are now

available for a 36-year period. Although all States were in the birth registration area by 1933, estimates of out-of-wedlock births for the States not reporting legitimacy status were not made until 1938, and a consistent series of birth rates for unmarried women has been available only since 1940.

The birth rate for unmarried women for the United States increased relatively rapidly from 1940 to 1957 from 7.1 to 21.0 births per 1,000 unmarried women of childbearing age, an average annual increase of 0.8 births per 1,000. The rate continued to increase in the next 8 years but at a much slower pace—from 21.0 in 1957 to 23.4 in 1965, an average increase of 0.3 births per 1,000 per year. The period from 1965 to 1970 was again marked by a rapid increase in the illegitimacy rate. The rate rose in every year except one by an average of about 0.6 births per 1,000 per year, from 23.4 in 1965 to 26.4 in 1970. Since 1970 there has been a fairly steady decline in the illegitimacy rate, except that in 1975 the rate increased somewhat over the 1974 level. The rate in 1976 was 24.7.

Rates by Race and Age of Mother

Birth rates for unmarried women by color were prepared for the first time for an earlier NCHS report⁸ on the subject. The procedures used for estimating the population denominators for these rates are described in appendix II of this report. Rates by color are available for 1940, 1950, and annually since 1955. Rates by race are available since 1969, the first year for which illegitimacy statistics for the black population were compiled.

There continue to be wide differences in the incidence of out-of-wedlock childbearing between white women and women of all other races (figures 1 and 2 and table 1).^b From 1940 to 1960 the rate for white women increased from 3.6 to 9.2, and the rate for women of all other races rose from 35.6 to 98.3. During this period the rates for women of all other races were 10 to 11 times the rates for white

^bAs used in this report, the term "all other" refers to the combined grouping of all races other than white.

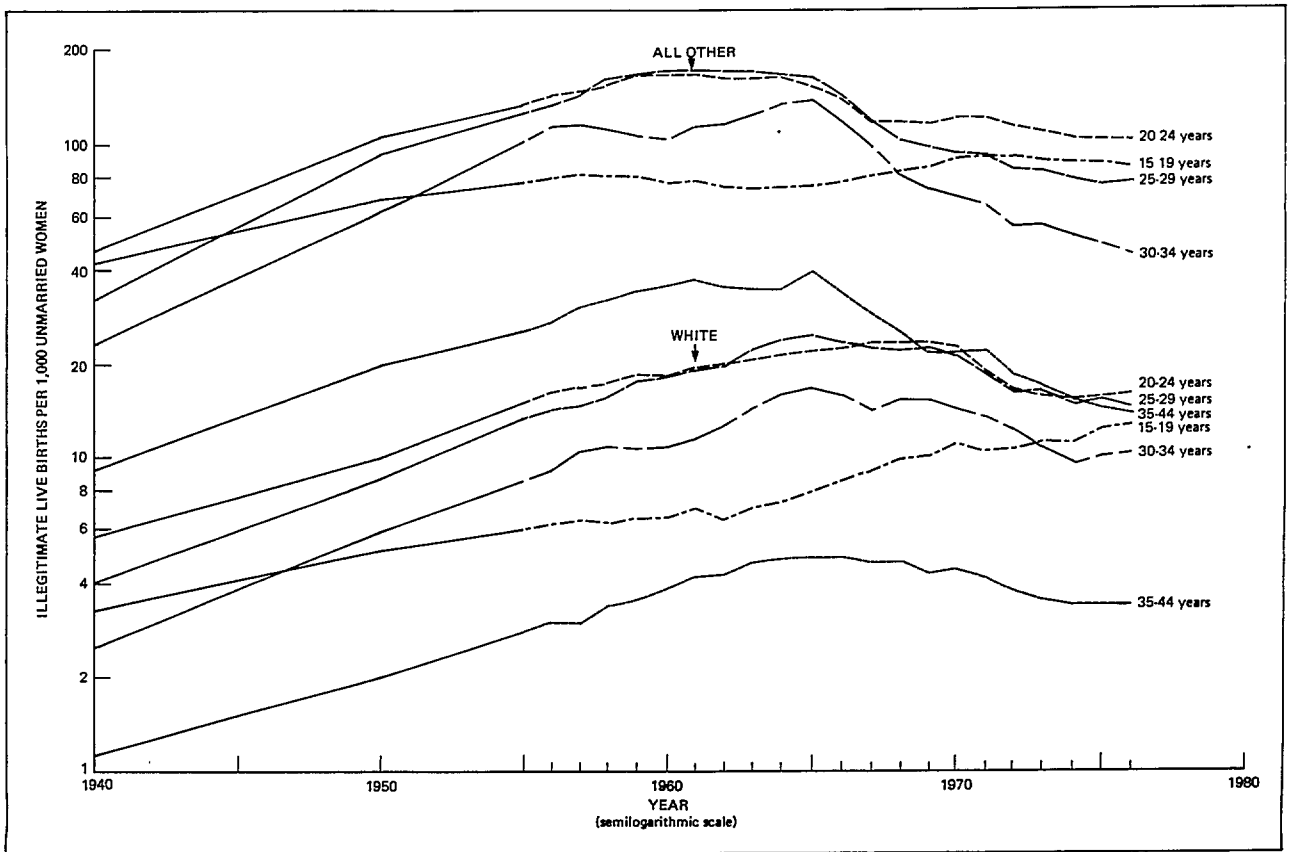


Figure 1. Estimated birth rates for unmarried women by age of mother and color: United States, 1940, 1950, 1955-76

women. Between 1960 and 1970 the color differential (defined as the ratio of the rate for all other women to the rate for white women) declined because the rate for white women generally rose during this period while the rate for all other women fell. In 1965 the rate for all other women was 97.4, or slightly more than 7 times higher than the rate for white women (11.6). Between 1965 and 1970 the rate for white women increased by about 20 percent to 13.9 while the rate for all other women declined by nearly 8 percent to 89.9. Thus the color differential was reduced considerably by 1970 when the rate for all other women was about 6½ times the rate for white women. The rates for both white and all other women declined between 1970 and 1976: in 1976 the rates were 12.7 and 78.1, respectively. The color differential continued to decline slightly in the most recent period because the rate for white women declined less (by

9 percent) than did the rate for all other women (by 13 percent).

The illegitimacy rates for each age and color group indicate that the trends were generally similar for white and all other women of the same age during the periods from 1940 to 1960 and from 1970 to 1976 (figure 2 and table 1). Between 1960 and 1965, the rates for white women in all age groups generally increased while those for all other women under 30 years of age decreased slightly. Rates for all other women 30 years of age and over increased during this period. There was no consistent trend in the age-specific rates for white women between 1965 and 1970—some increased, some decreased. For all other women, however, the trend was down for each age group except for the teenagers. Since 1970, all the rates have declined except for white women aged 15-19 years. Rates for white teenagers have continued to increase since the early 1960's,

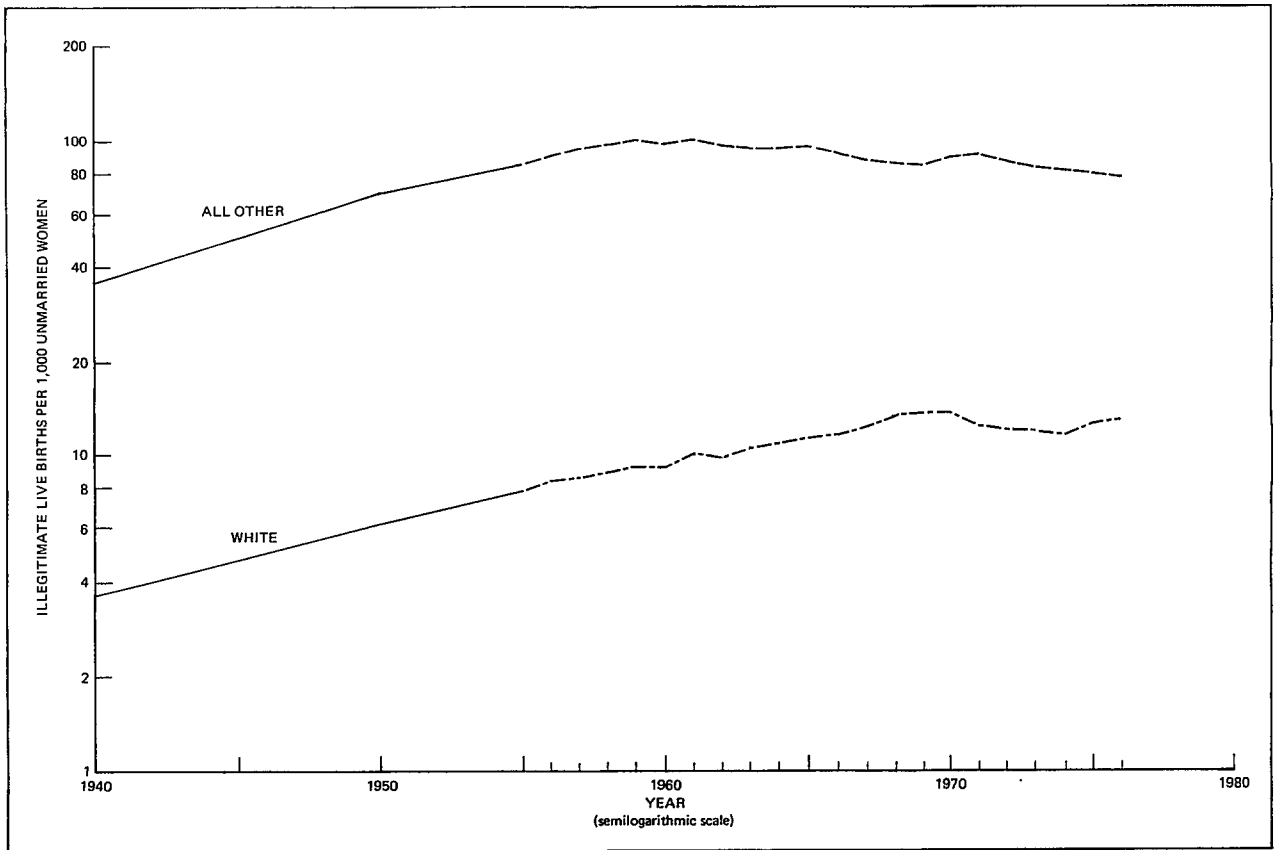


Figure 2. Estimated birth rates for unmarried women by color: United States, 1940, 1950, 1955-76

although the rate of increase has slowed down considerably since 1970. During the period 1960-70 the rate for white teenagers increased by an average of $6\frac{1}{2}$ percent per year; since 1970, the increase has averaged only about 2 percent per year. However, among young white teenagers 15-17 years of age, the illegitimacy rate increased considerably between 1970 and 1976—from 7.5 to 9.9, an increase of about 5 percent per year.

By 1976 the age-specific rates for white women (except for teenagers) were sharply down from the 1970 levels. The declines ranged from 28 percent to 32 percent for women aged 20 years and older.

The 1976 age-specific rates for all other women were also reduced from the 1970 levels. The decline was only about 7 percent for teenagers, but for the other age groups, the

declines ranged from 15 percent (women 20-24 years) to 41 percent (women 35-39 years).

Illegitimacy rates for black women have been available since 1969. In general the rates for black women are slightly higher than for all other women, and the trends in rates for these two groups are parallel.

The Teenage Rate

It is popularly believed that teenagers have the greatest risk of bearing an out-of-wedlock child. This is because more than 50 percent of out-of-wedlock births are to women under 20 years of age. Actually, though, teenage girls overall have the lowest illegitimacy rates (number of births per 1,000 unmarried women) of any age group under 30 (women under 30

give birth to more than 90 percent of all out-of-wedlock babies). However, it is also true that the teenagers have been the only group to show a persistent rise in the illegitimacy rates, from 22.4 in 1970 to 24.0 in 1976, an increase of 7 percent. In contrast, rates for other age groups have dropped very sharply since 1970, ranging from 16 percent for women 20-24 years to 35 percent for women 35-39 years. The result of these divergent trends has been that the illegitimacy rate for teenagers is now close to that for women in their twenties, and if recent patterns persist, it may reach the level of the rates for women 20 and over in a few years. In fact, the rate for older teenagers, 18-19 years of age, is now higher than the rate for any other age group of women. Although the levels of the age-specific rates for white and all other women differ widely, the trends just described apply in general to women of both color groups.

Since teenagers have been the one group not to follow the general downward trend in illegitimacy rates observed in recent years, it is useful to examine rates for separate age groups within the teenage years in an attempt to determine if one particular age group is responsible for the increase. Illegitimacy rates for the age groups 15-17 and 18-19 years for 1966-76 are shown in table 1. The rate for the 15-17-year-olds increased somewhat, and the rate for 18-19-year-olds declined only slightly between 1970 and 1976, a period during which rates for all other ages declined considerably.

The incidence of illegitimacy among 18-19-year-olds was nearly twice the level for women 15-17 years old in 1970. By 1976 the differential between older and younger teenagers had declined somewhat as a result of the considerably faster rate of increase in the rate for young teenagers.

Birth rates for unmarried black women were substantially higher than the rates for unmarried white women in both age groups. For 15-17-year-olds the rate for black women was 74.6 in 1976 compared with 9.9 for white women. For 18-19-year-olds the rates were 121.6 and 17.0, respectively. Since 1970 the rate for white women 15-17 years of age in-

creased 32 percent (from 7.5 to 9.9) while the rate for black women of the same age declined 4 percent from 77.9 to 74.6. Rates for 18-19-year-old women of both races fell between 1970 and 1976 by only 3 percent for white women and by 11 percent for black women.

It is evident that the younger teenagers are primarily responsible for the persistent rise in the illegitimacy rate for 15-19-year-olds and that this trend is far more pronounced for white teenagers 15-17 years of age than for black teenagers of the same age group.

Sexual Experience, Contraception, and Abortion

The combination of increasing teenage out-of-wedlock birth rates and increasing numbers of unmarried women has resulted in an even greater escalation in the annual numbers of out-of-wedlock births to women under 20 years of age (table 2). Illegitimate births to all other age groups have risen, too, but it is the births to teenagers that have constituted an increasing proportion of the total, in 1976 accounting for 50.3 percent of all out-of-wedlock births.

With these facts in mind it is appropriate to examine some of the factors that influence the levels of childbearing among unmarried teenagers. In this section the increased proportion of teenagers who are sexually experienced, the use of contraception and abortion among teenagers, and the possible compensating effects these factors might have had on the most recent trends in out-of-wedlock childbearing will be examined.

It appears that the growing rate of out-of-wedlock childbearing among women under 20 years of age, particularly young teenagers, is related to the sizable increase in the proportion of sexually experienced teenagers. In a study recently completed, Melvin Zelnik and John F. Kantner document widespread increases between 1971 and 1976 in the proportion of never-married women of 15-19 years who have had sexual intercourse.⁹ The proportion of sexually experienced 17-year-olds, for example, increased by 54 percent, from 26.6 percent to 40.9 percent. An increase in sexual

activity was measured for both white and black women, but the increases were substantially higher among white women at all ages except for 15-year-olds. They also found higher proportions of teenagers reporting more consistent use of contraception and increased use of the more effective medical methods (oral contraceptives and intrauterine devices). These findings would tend to indicate that teenagers, while more exposed to the risk of pregnancy because of increased sexual activity, have also moderated this increased risk by using contraception more effectively and consistently.

An earlier study by Zelnik and Kantner showed that high rates of premarital intercourse among teenagers are associated with fairly high levels of premarital pregnancies.^{10,11} Their 1971 survey found that of teenage girls who had had premarital intercourse 28.7 percent had experienced a premarital first pregnancy. The proportions for white and black teens were 23.3 percent and 46.2 percent, respectively. A key finding in the 1976 Zelnik and Kantner study was that for most teenagers there remains a gap between the time of first intercourse and the first use of contraception, and that "those who delay the use of contraception are much more likely than those who do not to have had a pregnancy." (See page 71 of reference 9.) Thus there continues to be a considerable degree of risk-taking by unmarried teenagers who have had intercourse. This no doubt is a key factor in the continued high level of childbearing among unwed teenagers.

Thus the very large increase in the out-of-wedlock birth rate for white women 15-17 years old between 1971 and 1976 (34 percent) is consistent with the even larger increase in the proportion of sexually experienced never-married women of that age group (45 percent). The increases in the proportions of sexually experienced women 18-19 years of age were considerably smaller, and they were not reflected in the changes in the illegitimacy rates, which declined for both white and black women. However, the inconsistency for the older teenagers may result from the far greater levels of contraceptive use among this group than among young teenagers and by the significant improve-

ment among all teenagers in effective contraceptive practice between 1971 and 1976.

Legalized abortion appears to have been responsible for a considerable portion of the overall decline in fertility in recent years. Christopher Tietze has estimated that about one-fifth of the national decline in total births between 1969 and 1973 was accounted for by legal abortions that replaced live births.¹² However, this proportion is lower than might be expected because a large portion of the legal abortions performed then constituted replacements for illegal abortions. (For additional evidence on this point, see references 13 and 14.) In addition the use of legalized abortion was substantial in only a few areas.

More recently, there is evidence both in the age and marital status distributions of abortion patients and in the trends in the illegitimacy rates for teenagers that abortion has acted to restrain and partially halt what had been a rapidly increasing rate of out-of-wedlock childbearing. Data from the Center for Disease Control's *Abortion Surveillance Reports* and the Alan Guttmacher Institute indicate a continued high level of use of abortion by teenagers—in 1975 about one-third of all abortions, or about 342,300, were obtained by teenagers. The rate of abortion use by teens increased from 19 abortions per 1,000 women aged 15-19 in 1972 to 32 in 1975, and the abortion ratio for this age group increased during this period from 250 abortions per 1,000 live births to 561^{16,17} (see reference 15 for other data on this point).

Data from the same sources show also that almost three-fourths of all abortions were obtained by unmarried women in 1975. This is a continuation of the increase in the proportions of abortions to unmarried women observed in previous years. The distribution of abortion recipients by race shows a steady increase in the percent of abortions to women of all other races. These women are more likely to have their pregnancies terminated by abortion than are white women, according to data from the District of Columbia and 18 of the 26 States that had data on this topic.

A review of recent trends in the out-of-wedlock birth rates for teenagers suggests strongly that abortion has had a key role in

holding back the previously escalating illegitimacy rates for women under 20. From 1966 to 1973, the year the Supreme Court declared anti-abortion statutes unconstitutional, the illegitimacy rate for 15-19-year-old women increased from 17.5 to 22.9, or an average of about 4.4 percent annually. A projection of this trend to 1976 would give an expected teenage illegitimacy rate of 25.9. Instead, in the 3 years after the Supreme Court decision, the rise in the teenage illegitimacy rate averaged only 1.6 percent annually to 24.0. The situation is similar for illegitimacy rates for teens 15-17 years of age and 18-19 years of age. The rates rose sharply between 1966 and 1973 and since then have increased relatively little. The greater use of abortion by pregnant teenagers of all other races compared with white teens is reflected somewhat in the *decline* since 1972 in the illegitimacy rates for women of all other races 15-19 years of age on the one hand, and the continued increase in the rates for white teenagers on the other.

Although it is difficult and perhaps impossible to be precise about the impact of legalized abortion on out-of-wedlock childbearing, the available data seem to indicate that abortion has at least had a restraining effect on what had been a steady upward trend in illegitimacy among teenagers.

Effect of Including Separated Women in the Denominator of the Out-of-Wedlock Childbearing Rate

There has been increasing discussion in recent years over which groups of women should be included in the denominator used for computing birth rates for unmarried women. The denominator used by NCHS in computing these rates consists of single (never-married), widowed, and divorced women 15-44 years of age. Some researchers believe that women separated for a long period of time should be included in the denominator as well; these women, it is said, are exposed to the risk of giving birth to an illegitimate child.^{3,5,18} It may be worth noting at this point that the vast majority (a minimum of 80.3 percent in

1973) of illegitimate births occur to never-married women.⁷

Separated women are not included in the denominator for a number of reasons.¹⁹ In general, a child's legitimacy status is determined on the basis of the marital status of the mother. For a large number of States it is required that if the mother is married the name of the husband be entered on the birth record as the father unless or until there is a court order determining paternity to be otherwise. Additionally, most States have adopted the concept that a child is legitimate if he or she was conceived or born during lawful wedlock, regardless of whether or not the husband was the child's biological father. This is the strictly legal aspect of the issue; that is, separated women, even those separated permanently or for an extended period of time, are nevertheless married, and any children they bear are assumed to be legitimate.

Although separated women are exposed to the risk of bearing children by men other than their husbands, it must be recognized that a certain proportion of them will list the legal husband as the father on the birth certificate, thus virtually assuring that their babies are reported as legitimate. In addition, some women who have been separated for a long period may have established a stable common-law relationship, and their births will probably be reported as legitimate. The difficulty is that there are no firm statistics on the relative proportions of separated women giving birth to acknowledged illegitimate babies compared with reported legitimate babies. And finally, there are probably some separated women who have babies fathered by their legal husbands.

For illustrative purposes out-of-wedlock birth rates have been computed for the years 1970-75 including separated women in the denominator (table 3). The principal effect of including separated women in the denominator of the illegitimacy rate is to reduce the levels of the rates (table A), particularly for all other and black women, because of the relatively large proportion of separated women. In 1975 rates computed with separated women included in the denominator were about 6 percent lower than conventionally computed rates for white women and about 18 percent lower

Table A. Percent difference between birth rates for unmarried women computed with and without separated women in the denominator, by age of mother and race: United States, 1970 and 1975

[Rates are live births per 1,000 unmarried women in specified group]

Year and age of mother	All races	White	All other	
			Total	Black
1975				
15-44 years.....	8.5	6.3	16.8	18.2
15-19 years	0.8	0.8	0.8	1.1
20-24 years	7.0	5.7	12.0	13.3
25-29 years	17.1	14.6	27.1	28.4
30-34 years	23.2	17.0	41.7	43.7
35-39 years	24.2	20.4	35.8	37.9
40-44 years	19.2	20.0	38.6	38.9
1970				
15-44 years.....	6.8	5.0	17.4	18.4
15-19 years	0.4	-	0.9	1.0
20-24 years	6.0	4.9	12.5	13.6
25-29 years	19.2	14.7	33.3	35.5
30-34 years	22.5	15.5	40.3	41.5
35-39 years	22.8	14.5	39.1	40.7
40-44 years	17.1	10.0	38.3	38.5

NOTE: Percents shown indicate the extent to which the rates computed with separated women in the denominator are lower than the rates which exclude them.

for black women. Since the inclusion of separated women in the denominator of the illegitimacy rate affects all other and black women more than white women, the color or racial differential for all ages combined is somewhat reduced when it is calculated on the basis of the recomputed rates. In both 1970 and 1975 the conventionally computed rates for all other women were about 6½ times the comparable rates for white women. When the recomputed rates are compared, those for all other women are found to be slightly over 5½ times the rates for white women.

By age of mother, the effects were greater for both black and white women 25 years of age and over. The percent differences in the rates were less than 1 percent for all teenagers but increased to 20 percent for white women 35-39 years of age and to 44 percent for black women aged 30-34 years.

It is also useful to examine the trend in the out-of-wedlock birth rates computed both ways to determine if the trends are similar or if they differ. Table B shows the percent changes in both sets of rates, by age of mother and race, between 1970 and 1975. The most striking finding in this table is that the percent changes in the rates (a decline in nearly every case) are similar for the two sets of rates. The year-to-year trends in the two sets of rates are also virtually identical. Thus, for recent years at least, the trends for age-race specific illegitimacy rates computed with separated women in the denominator are very nearly the same as the trends observed for the conventionally defined rates.

On the basis of the foregoing analysis and other research on this issue⁴ it may be concluded that illegitimacy rates based on the conventional definition provide a close approximation of differing levels of childbearing by

Table B. Percent change between 1970 and 1975 in birth rates for unmarried women computed with and without separated women in the denominator, by age of mother and race: United States

Base of rate and age of mother	All races	White	All other	
			Total	Black
Denominator includes separated women				
15-44 years.....	-7.7	-10.6	-10.0	-10.1
15-19 years	+7.6	+10.1	-2.9	-1.9
20-24 years	-18.6	-30.8	-13.8	-16.1
25-29 years	-22.4	-28.3	-12.3	-14.1
30-34 years	-33.8	-30.8	-31.9	-31.7
35-39 years	-34.3	-33.8	-33.8	-35.4
40-44 years	-27.6	-33.3	-34.8	-31.3
Denominator excludes separated women (originally published rates)				
15-44 years.....	-6.1	-9.4	-10.6	-10.4
15-19 years	+8.0	+11.0	-3.0	-1.9
20-24 years	-17.7	-30.2	-14.2	-16.4
25-29 years	-24.3	-28.4	-19.7	-22.6
30-34 years	-33.2	-29.6	-30.2	-29.0
35-39 years	-33.1	-28.9	-37.2	-38.3
40-44 years	-25.7	-25.0	-34.6	-30.8

unmarried women by age and race as well as indicate the trend in the age-race specific rates in recent years.

Live-Birth Order and Race

Illegitimacy rates by live-birth order are computed by relating the number of out-of-wedlock births of a given birth order to all unmarried women 15-44 years of age. The birth order for a given birth refers to all live births—legitimate or illegitimate—born to that mother. An illegitimate birth classified as a second (or higher) order birth may be the mother's second (or higher) order illegitimate birth or her first *illegitimate* birth, following one or more legitimate births. It is not possible to determine from information on the birth certificate which illegitimate births of second or higher order have occurred after previous illegitimate births and which are the first illegitimate children born to these mothers.

The minimum proportion of unmarried women who became mothers of an out-of-wedlock child for the first time in a given year can be estimated by relating the number of first births that were illegitimate to the population of unmarried women. Table C shows the trend in these rates since 1955 and indicates that in 1976, 1.5 percent of unmarried women became mothers for the first time. The proportions for each racial group were 0.9 percent for white women and 4.5 percent for black women.

The racial differential for the first birth rate is about half as large as that for second and higher order births; in 1976 the first birth rate for black women (45.1 illegitimate births per 1,000 unmarried women 15-44 years of age) was 5.1 times the rate for white women (8.8); the rate for second and higher order births for black women (38.2) was nearly 10 times that for white women (3.9). This would suggest that the large racial differential observed for all illegitimate births (6.6 times) results principally from the far greater incidence of higher order illegitimate births among black women than among white women.

The most striking feature of the trend in the racial or color differential by live-birth

Table C. Estimated birth rates for unmarried women by live-birth order and race: United States, 1955, 1960, and 1970-76

[Figures for live-birth order not stated are distributed. Rates are live births per 1,000 unmarried women in specified group]

Live-birth order and year	All races	White	All other	
			Total	Black
All births				
1976.....	24.7	12.7	78.1	83.2
1975.....	24.8	12.6	80.4	85.6
1974.....	24.1	11.8	81.5	86.6
1973.....	24.5	11.9	84.2	89.5
1972.....	24.9	12.0	86.9	92.2
1971.....	25.6	12.5	90.6	96.5
1970.....	26.4	13.9	89.9	95.5
1960.....	21.6	9.2	98.3	—
1955.....	19.3	7.9	87.2	—
1st birth				
1976.....	15.0	8.8	42.4	45.1
1975.....	15.3	8.8	44.8	47.4
1974.....	15.0	8.3	45.9	48.5
1973.....	15.1	8.3	47.2	50.0
1972.....	15.4	8.4	48.7	51.6
1971.....	15.6	8.8	49.7	52.8
1970.....	16.5	10.0	49.8	52.8
1960.....	10.6	5.9	40.0	—
1955.....	9.7	5.2	36.2	—
Birth of 2d or higher order				
1976.....	9.7	3.9	35.7	38.2
1975.....	9.5	3.7	35.6	38.1
1974.....	9.2	3.5	35.6	38.0
1973.....	9.4	3.6	37.0	39.5
1972.....	9.6	3.6	38.2	40.7
1971.....	10.0	3.8	40.9	43.7
1970.....	9.8	3.9	40.1	42.8
1960.....	11.0	3.3	58.3	—
1955.....	9.7	2.7	51.0	—

order has been the sharp decline in the differential for rates for births of second and higher orders. In 1960 this rate for all other women was 58.3, or 18 times the rate for white women (3.3), compared with the 9-fold differential in 1976.^c

^cRates for black women are available only since 1969; as a result this discussion is confined to rates for all other women, which were about 5-7 percent lower than the rates for black women from 1970 to 1976.

The differential for first birth rates has also declined, but not as sharply; in 1960 the rate for all other women was almost 7 times that for white women, and by 1976 the differential was just under 5.

OUT-OF-WEDLOCK BIRTH RATES BY STATE

Although each State has its own laws and regulations defining an out-of-wedlock birth, these differences affect only a minimal proportion of all infants since the vast majority of out-of-wedlock births are to women who have never been married. It is possible, though, that the quality of reporting legitimacy status varies from State to State and even within States. For example, it may be easier for a woman to misrepresent her marital status if she lives in a large metropolitan area than if she resides in a small town. Comparisons among geographic locations should therefore be made with caution; small differences may not be significant.

To date it has been possible to obtain estimates of the number of unmarried women by age for States for the calculation of illegitimacy rates only in census years. The rates shown in table 4 are average rates for 1969-71, the numerator being the average number of out-of-wedlock births in a specified group for 1969-71 and the denominator being the 1970 population for that group. The average illegitimacy rate for the total of the 38 reporting States and the District of Columbia for 1969-71 was 26.2. The rankings of the States were greatly influenced by the proportion of each State's population that is black, since rates for the black population are consistently higher than those for the white population. Thus the highest rates were found in the States of the South Atlantic and West South Central Divisions, which have large black populations.

There has been relatively little change in the rank order by State in the rates for all women and for white women from 1960 to 1969-71. Rank-order correlation coefficients were computed for the relationship among illegitimacy rates for the 27 States and the District of Columbia that reported legitimacy

status in both 1960 and 1969-71. For all women there was a positive correlation of 0.95 between the ranks for these two time periods. For white women the correlation coefficient was 0.80. It is not possible to compare measures for black women since the 1960 rates were computed for all other women rather than for black women.

PREMARITAL CONCEPTIONS ENDING IN LEGITIMATE BIRTHS

There are several possible outcomes for a pregnancy conceived prior to marriage: an out-of-wedlock birth; a miscarriage, stillbirth, or abortion; or a legitimate live birth. The latter results when a premaritally pregnant woman marries before the birth of her child. Some inferential data on premaritally conceived legitimate births are presented in table D. These data are based on the June 1975 survey of trends in childspacing conducted by the Bureau of the Census. According to table D, the incidence of premarital pregnancy has risen for white women since 1945, but the proportion leveled off during the 1960's and ranged between 13 and 15 percent up through 1970-74. The proportion for black women increased steadily over the period of the survey to a level of 20.7 percent for women who first married in 1960-64. Since then the proportion has declined to about 15 percent.

Table D. Estimated percent of women first married in specified years whose first child was born less than 8 months after first marriage, by race: United States, June 1975

Year of first marriage	White	Black
1970-74	12.5	15.0
1965-69	14.8	14.9
1960-64	12.6	20.7
1955-59	10.3	}15.3
1950-54	7.3	
1945-49	5.4	}13.3
1940-44	4.7	
1935-39	5.5	}12.5
1930-34	5.6	

SOURCE: Figures based on data in tables 27 and 28 in U.S. Bureau of the Census: Trends in Childspacing: June 1975. *Current Population Reports*. Series P-20, No. 315. Washington. U.S. Government Printing Office, 1978.

To obtain a minimum estimate of the proportion of first births conceived out of wedlock, the percent of first births that were illegitimate and the percent premaritally conceived (and born during wedlock) can be summed as shown in table E for 1972 births.

From these data, derived from the 1972 National Natality Survey,²⁰ it is apparent that the large color differential in the incidence of out-of-wedlock conceptions is dependent mainly on the differential in out-of-wedlock births. Put another way, by combining all out-of-wedlock conceptions, not just those born out of wedlock, it is seen that the color differential is considerably reduced. These data show that the proportion illegitimate for all other first births was 52.9 percent, or 4.8 times the proportion for white first births, 11.0 percent. When all premarital conceptions are included in the computation, the differential is cut almost in half—to 2.7. Thus nearly half of the difference in out-of-wedlock conceptions between the white and all other populations can be ascribed to differences in the timing of marriage after the discovery of a premarital conception.

Among teenagers the incidence of premarital pregnancy is extremely high, and nearly half of all births occur out of wedlock. Additional data on premarital conceptions are derived from a study by Melvin Zelnik and John F. Kantner, based on a survey conducted in 1976.²¹ They found that among teenagers who had had a first pregnancy, more than three-fourths of these pregnancies were conceived premaritally: the figures for white and

black women were 73.5 percent and 93.7 percent, respectively. Zelnik and Kantner also found that white teenagers were much more likely to marry before the end of the pregnancy than were black teenagers: 36.5 percent of premaritally pregnant white teens married before the outcome of the pregnancy, compared with only 8.8 percent of black teens.

The decline in the racial differential in out-of-wedlock childbearing in recent years may have resulted partly because white couples are now less likely to marry in order to legitimate a premarital conception. Evidence for this shift among teenagers is noted by Zelnik and Kantner, who report a 29-percent decline between 1971 and 1976 among white girls aged 15-19 in the proportion that had ever resolved a premarital pregnancy by marriage prior to the end of the pregnancy (from 52 percent to 37 percent).²¹

OTHER FACTORS AFFECTING TRENDS IN OUT-OF-WEDLOCK CHILDBEARING

There is some indirect but persuasive evidence that changes in what have been called "involuntary controls over conception" may account for a portion of the increase in out-of-wedlock childbearing—particularly during the 1940-60 period. Such involuntary controls include the age at which menstruation begins, involuntary sterility resulting from venereal and other fertility-impairing diseases, and spontaneous abortion or fetal loss.⁴ Cutright's research in this area shows a long-term decline in the age at which menstruation begins, partly associated with improved nutrition and health during childhood. Such a decline would increase the fecundity of young teenage women and thus augment the risk that premarital intercourse would result in pregnancy.

Another involuntary control over conception is sterility attributed to venereal and other diseases. Birth cohort data can be used to show the prevalence of childlessness among women who are past the childbearing ages. Tabulations of women according to the number of children they have had show, for example,

Table E. Percent of 1st births conceived out of wedlock, percent born out of wedlock, and percent premaritally conceived, by color: United States, 1972

Color	Total conceived out of wedlock	Born out of wedlock	Premaritally conceived and born within 7 months of marriage
White	21.8	11.0	10.7
All other	59.9	52.9	6.9

that 18.6 percent of women of all other races, aged 50 years in 1977, had never had any children. This proportion is considerably lower than that for comparably aged women in 1960 (29.5 percent), but also somewhat above the figure for younger women 35 years old in 1977 (12.7 percent).^{22,23} The trends were similar for white women 50 years old, except that the levels of childlessness were generally lower for white women. It seems likely that this trend toward fewer childless women, which until recently represented involuntary childlessness for the most part, represents an increase in fecundity, probably resulting from the reduced prevalence of venereal and other diseases. (For additional evidence on this point, see references 24 and 25.) An increase in the fecundity of the population would presumably affect both the married and the unmarried and, again, increase the likelihood that premarital intercourse would lead to pregnancy and childbirth.

With respect to spontaneous fetal losses, it is widely accepted that fetal deaths are substantially underreported.²⁶ Using 1960 data from New York City's Health Insurance Program, Phillips Cutright has estimated the likely true levels of spontaneous fetal loss in 1940 and 1960. He concluded that the decline in spontaneous fetal deaths during that period accounted for a considerable portion of the observed increase in illegitimate births, particularly those to all other women.⁴

TREND IN NUMBER OF BIRTHS TO UNMARRIED WOMEN

The estimated number of births to unmarried women in the United States has risen every year except one since 1940. During the period from 1940 to 1976 the estimated number increased by 5 times, from 89,500 to 468,100. (See table 2. Comparable data for each State are shown in table 5.)

Changes in the number of illegitimate births result, statistically, from changes in two factors: first, the "risk" that an unmarried woman will give birth to a child (the out-of-wedlock birth rate) and second, the size of the popula-

tion "at risk" (unmarried women of childbearing age). The years 1940-76 can be divided into two separate periods with respect to trends in these key factors. From 1940 to 1957 the birth rate for unmarried women rose sharply, tripling, from 7.1 to 21.0. At the same time the number of unmarried women actually declined. Although there was an increase in the total population of women, a declining proportion of them were unmarried, causing the decline in the number of unmarried women. (Table F shows the increases in the numbers of women and the declines in the proportions unmarried for census years 1940-70.) So the rapid increase in the number of illegitimate births during these years resulted solely from the increase in the illegitimacy rate. The rise in the number of illegitimate births would have been even larger had the proportions of women unmarried remained unchanged instead of declining as they did.

Since 1958 the birth rate for unmarried women has remained comparatively stable, increasing by only 17 percent over the entire 18-year period (from 21.2 in 1958 to 24.7 in 1976). However, both the number and proportions of unmarried women have risen sharply. Beginning in the middle 1940's and continuing through the 1950's the annual number of births increased; the girls born in those years were beginning to reach age 15 by 1958, and in each year thereafter there has been an increase in the number of women reaching the younger ages of the childbearing period. In addition the declining age at marriage observed during the 1940's was reversed beginning in the late 1950's as a consequence of the increasing proportions of young women remaining unmarried at each age. The increases in the proportions and numbers of unmarried women have been especially striking for women under 30, the age group that accounted for 93 percent of all illegitimate births in 1976. Thus the increase in the number of out-of-wedlock births since 1958 is primarily due to the increasing number of unmarried women of childbearing age. The rise in the number of out-of-wedlock births would have been even larger if the illegitimacy rate had continued to increase rather than leveling off as it did.

Table F. Number of unmarried women and percent of women unmarried in the childbearing ages, by color and age: United States, 1940, 1950, 1960, and 1970

[Populations enumerated as of April 1 for each year]

Color and age	1970	1960	1950	1940	1970	1960	1950	1940
Total	Number of unmarried women in thousands				Percent of all women who are unmarried			
15-44 years.....	15,392	10,289	10,017	12,523	36.3	28.5	29.3	39.1
15-19 years.....	8,412	5,555	4,434	5,439	88.7	84.3	83.3	88.4
20-24 years.....	3,300	1,686	2,021	2,870	39.5	30.5	34.4	48.7
25-29 years.....	1,194	765	1,050	1,461	17.5	13.8	16.7	25.9
30-34 years.....	813	688	814	1,016	13.9	11.3	13.8	19.6
35-39 years.....	766	761	830	888	13.4	11.9	14.5	18.5
40-44 years.....	907	834	868	849	14.7	14.1	16.9	19.4
White								
15-44 years.....	12,923	8,802	8,779	11,142	35.1	27.7	28.9	39.1
15-19 years.....	7,210	4,868	3,907	4,863	88.6	84.3	83.9	89.3
20-24 years.....	2,790	1,422	1,781	2,599	38.3	29.5	34.4	49.7
25-29 years.....	949	618	911	1,298	16.0	12.8	16.3	25.9
30-34 years.....	637	559	711	892	12.5	10.4	13.5	19.3
35-39 years.....	604	631	715	759	12.2	11.1	14.1	17.8
40-44 years.....	733	704	753	730	13.6	13.3	16.3	18.5
All other								
15-44 years.....	2,469	1,486	1,238	1,381	44.4	34.8	32.4	39.3
15-19 years.....	1,202	687	527	576	89.2	84.2	79.4	81.7
20-24 years.....	510	264	240	271	47.5	37.8	34.3	40.4
25-29 years.....	245	147	138	163	28.2	21.1	19.8	25.7
30-34 years.....	176	129	104	124	22.4	17.6	16.9	23.0
35-39 years.....	162	130	115	129	21.7	18.3	18.3	24.0
40-44 years.....	174	130	115	119	23.3	21.0	22.1	27.9

SOURCES: Figures for 1970 and 1960 based on data in table 203 in U.S. Bureau of the Census: United States Summary. *Census of Population, 1970, Detailed Characteristics*. Final report PC(1)-D1. Washington. U.S. Government Printing Office, 1973.

Figures for 1950 and 1940 based on data shown in table 102 in U.S. Bureau of the Census: United States Summary. *Characteristics of population, Pt. I, Census of Population, 1950, Vol. II*. Washington. U.S. Government Printing Office, 1953. ch. C.

OUT-OF-WEDLOCK BIRTHS AS A PROPORTION OF TOTAL BIRTHS

Analytical Deficiencies of the Ratio of Births to Unmarried Women

The ratio of births to unmarried women (number of out-of-wedlock births per 1,000 total live births) is the measure used to describe the proportion of all births classified as illegitimate. It is useful in judging the numerical

impact of out-of-wedlock babies on services provided for the newborn and in identifying geographic areas and population groups that have relatively high proportions of out-of-wedlock births and therefore a greater need for special services. These are important functions since the health of these infants is more precarious and their needs for social services greater than they are for legitimate infants.

However, the illegitimacy ratio has many shortcomings as an analytical tool. When using this measure, it is essential to remember that different factors affect the numerator and the

denominator. Out-of-wedlock births (the numerator) are affected by the size of the unmarried female population and the rate of illegitimacy. The denominator (the total number of live births) is largely influenced by the factors that affect marital fertility, including changes in the spacing of children, completed family size, and the proportion of women who are married. If any of these change, the ratio will change even if the numerator remains the same.

For example, although the illegitimacy rate has declined since 1970, the number of unmarried women has been increasing, and more children are being born out of wedlock. Simultaneously there has been a general decline in total fertility, associated with the delay of marriage by many women and the decline in the number of births within marriage. Because of these factors there has been a sustained rise in the illegitimacy ratio. Between 1970 and 1976 the ratio of births to unmarried women increased by 38 percent (table 6). The corresponding increases among white and black women were 36 and 34 percent, respectively. The three common measures of childbearing by unmarried women have changed as shown in table G.

Similarly contrasting impressions of the incidence of out-of-wedlock childbearing can be shown with respect to age differentials. Table 6 indicates, for example, that the illegitimacy ratio has been highest at the youngest ages. In 1976 the ratios were 863.5 for women under 15 years of age, 402.7 for those 15-19, and considerably lower for all women over 20.

Table G. Percent change between 1970 and 1976 in 3 common measures of childbearing by unmarried women by race: United States

Measure	All races ¹	White	Black
Number of births to unmarried women	+17	+13	+20
Birth rate for unmarried women	-6	-9	-13
Ratio of births to unmarried women per 1,000 total births.....	+38	+36	+34

¹Includes races other than white and black.

As shown in table 1, however, the illegitimacy rate has been higher at ages 20-24 and 25-29 than at ages 15-19.

Several factors contribute to the different pictures presented by the illegitimacy rate and ratio. Because very few teenagers are married in comparison with older women, a smaller proportion of teenage girls are liable to have a *legitimate* child. The result is that even though only a very small percent of the unmarried women aged 15-19 years have a child (2.4 percent in 1976), a much larger percent of all births to teenage mothers are classified as out of wedlock (40 percent of births to 15-19-year-olds in 1976). In contrast, a large proportion of women 20-24 years of age are married and having legitimate children. Therefore, although the unmarried women of this age have a higher risk of bearing an illegitimate child than do those 15-19, they contribute only a small proportion of all births to mothers aged 20-24 (13 percent in 1976).

Although the shortcomings of the illegitimacy ratio impair its usefulness for most analytical purposes, this measure is helpful in indicating the proportion of infants requiring special services. In many cases it is the only measure of out-of-wedlock childbearing, aside from total numbers, that can be computed because the population data needed for computing illegitimacy rates are often not available.

Trends in the Out-of-Wedlock Birth Ratio by Color

Between 1940 and 1950 the ratio of births to unmarried women changed relatively little, increasing from 37.9 to 39.8. Since 1950 the ratio has been increasing annually with only one or two exceptions.

By 1976 it had almost quadrupled from the 1950 level, reaching 147.8 (table 6). That is, nearly 15 percent of the babies born in 1976 were illegitimate. The reasons for the anomalous situation in which the illegitimacy ratio has risen without interruption while the rate has declined in recent years have already been reviewed.

The ratio for white infants varied little from 1940 to 1950—ranging between 16.5 and 23.6. Since 1950, however, the ratio has more

than quadrupled, increasing from 17.5 in 1950 to 76.8 in 1976. The period of the most rapid increase was from 1960 to 1976, when the ratio rose from 22.9 to 76.8, a gain averaging 3.4 births per 1,000 per year. During the 1950-60 decade the increase averaged only 0.5 illegitimate births per 1,000 per year.

For all other women the illegitimacy ratio increased only moderately from 1940 to 1950—from 168.3 to 179.6. Since 1950, however, the ratio has more than doubled—from 179.6 in 1950 to 451.5 in 1976. The ratio for all other women has been rising at a steadily increasing rate since 1950. The increase from 1950 to 1960 averaged 3.6 out-of-wedlock births per 1,000 per year; from 1960 to 1970 the annual increase averaged 13.4 births per 1,000; and since 1970 the increase has averaged 17.0 illegitimate births per 1,000 per year.

A comparison of the out-of-wedlock birth ratio for white and for all other women shows that the ratio for all other women has consistently been from 5 to 10 times higher than that for white women since 1940 (table 6). The trend in the color differential in the ratio is similar to that for the rate. That is, in 1940 the illegitimacy ratio for all other women was 8.6 times that for white women (168.3 compared with 19.5). By 1950 the color differential had increased to 10.3 (179.6 compared with 17.5). The differential declined somewhat in 1960 to 9.4 and declined further in 1970 to 6.2 (349.3 compared with 56.6). In 1976 the color differential continued to decline to 5.9.

The overall decline in the color differential since 1950 is due to a more rapid increase in the ratio for white women than for all other women. The reasons for the different rates of increase in these ratios include the more rapid increase in the out-of-wedlock *rate* for white women during this period, affecting the numerator of the illegitimacy ratio, and the simultaneous sharper decline in *marital* fertility for white women, affecting the denominator.

Out-of-wedlock birth ratios for black births have been computed since 1969. In general the trend in these ratios parallels that for all other births, although the levels are somewhat higher for black births; in 1976 the ratio for this group was 11 percent higher than for all other births (503.0 compared with 451.5).

Live-Birth Order, Age of Mother, and Race

Out-of-wedlock birth ratios for first births have continued to be substantially higher than ratios for second and higher order births (table 7). In 1976, for example, the ratio for all first births was 210.7, or an average of more than two times the ratio for any other birth order (range from 94.6 to 129.2). In other words, more than 20 percent of all first births were illegitimate in 1976 compared with 9-13 percent of second and higher order births.

During the years 1970-76 the illegitimacy ratio for first births increased by 23 percent (171.3 to 210.7); the ratios for second and higher birth orders increased considerably more—some by more than 50 percent. Regardless of birth order, illegitimacy ratios for black births are considerably greater than for white births.

The observations made earlier in discussing illegitimacy rates by live-birth order and race, concerning the large racial differential in out-of-wedlock childbearing, apply also to illegitimacy ratios: the differential is due primarily to the far greater levels of out-of-wedlock childbearing for higher order births among black women than among white women.

Illegitimacy ratios by age of mother, live-birth order, and race have been estimated for the United States for 1975 as shown in table H. (Frequencies are shown in table 8.) As would be expected, the ratios are highest for first births to very young mothers. First-birth ratios decline sharply after the teenage years. Ratios for births to women under 20 are high for all birth orders. The lowest ratios observed are for second births to mothers 25-29 and 30-34 years old.

State of Residence

Ratios of out-of-wedlock births for States and the rank order for 1969-71 are shown in table 9. If the level of childbearing by unmarried women as measured by the illegitimacy rate is positively associated with the level of out-of-wedlock childbearing as measured by the illegitimacy ratio, then the variation in ratios by place of residence should be similar to the variation

Table H. Estimated ratios of births to unmarried women by age of mother, live-birth order, and race: United States, 1975

[Ratios are out-of-wedlock births per 1,000 total live births in specified group]

Age of mother and race	All births	Live-birth order					
		1st birth	2d birth	3d birth	4th birth	Birth of 5th or higher order	Not stated
All races ¹	142.5	206.3	89.0	90.6	103.8	123.4	195.6
Under 15 years.....	870.1	876.8	*	-	-	-	*
15-19 years	382.1	401.9	300.3	355.7	397.7	*	387.0
20-24 years	122.5	123.7	100.1	154.0	214.4	239.7	148.3
25-29 years	53.6	46.0	34.4	60.3	99.5	150.5	77.3
30-34 years	52.7	52.9	30.3	37.6	55.7	109.7	86.6
35-39 years	70.2	73.4	44.6	42.3	56.5	97.9	107.3
40 years and over	82.3	113.0	77.6	64.5	56.5	95.5	-
White.....	73.0	119.6	34.3	35.8	43.3	55.8	122.5
Under 15 years.....	709.6	695.6	-	-	-	-	*
15-19 years	229.0	253.7	112.7	108.9	148.1	-	317.2
20-24 years	60.9	73.4	41.5	60.7	87.3	98.0	83.1
25-29 years	26.2	28.8	16.0	28.3	44.8	70.3	39.6
30-34 years	27.0	36.9	16.3	19.6	27.3	50.9	34.9
35-39 years	38.6	55.2	27.0	22.3	30.2	49.7	-
40 years and over	45.9	69.1	46.7	39.2	33.4	48.0	-
Black	487.9	648.2	411.1	360.0	339.5	308.3	457.3
Under 15 years.....	984.3	993.9	*	-	-	-	*
15-19 years	768.7	822.8	657.6	604.2	576.4	*	524.8
20-24 years	429.8	465.1	402.2	416.4	434.0	395.5	444.1
25-29 years	268.4	246.3	222.4	281.8	314.8	331.1	322.3
30-34 years	241.0	224.7	179.6	210.2	239.6	299.5	202.4
35-39 years	238.9	171.1	147.5	206.8	256.3	275.3	*
40 years and over	231.0	*	*	243.9	219.3	239.6	-

¹Includes races other than white and black.

in rates (table 4). Rank-order correlation coefficients were computed to determine the relationship between the illegitimacy rates and ratios in 39 reporting areas for 1969-71. For all races combined there was a positive correlation of 0.93 between these two measures. The correlation for the white group was 0.80 while the correlation for the black group was only 0.55. The latter was reduced considerably by the erratic rankings of four States (New Hampshire, North Dakota, South Dakota, and Wyoming), each of which had fewer than 100 total black births in each of the years 1969-71. When the rank-order correlation coefficient was recomputed with these States excluded, the correla-

tion was increased to 0.69. With the exception of the four States just listed, only a few States had marked differences in their rankings.

There has been only a moderate change in the rankings of the States with respect to the illegitimacy ratio between 1960 and 1969-71. Rank-order correlation coefficients were computed for the relationship among illegitimacy ratios for the 27 States and the District of Columbia that reported legitimacy status in both 1960 and 1969-71. For all births there was a positive correlation of 0.87 between the ratios for these two time periods. For white births the correlation was 0.63. Measures for black births could not be compared since the

1960 ratios referred to ratios for all other births rather than for black births.

Ratios of out-of-wedlock births by State and race for selected years from 1940 through 1976 are shown in table 10. Ratios by age of mother and race for each reporting State for 1975 are shown in table 11.

Metropolitan-Nonmetropolitan Residence

In 1975 the distribution of out-of-wedlock births by residence in metropolitan and non-metropolitan counties was somewhat more heavily weighted to metropolitan residence than was the distribution of births to married women. That is, 67 percent of illegitimate births and 60 percent of legitimate births occurred to residents of metropolitan counties.

Illegitimacy ratios for births to women residing in metropolitan counties have tended to be higher than ratios for births to nonmetropolitan county residents. In 1975 the ratios averaged 33 percent higher for metropolitan counties (157.6 compared with 118.4). The differential by type of residence was greatest for mothers aged 20-24 years (57 percent) and then declined with each successive age group through 35-39 years of age. Detailed ratios by age of mother and race are shown in table 12.

Standard Metropolitan Statistical Areas and Cities

Ratios of out-of-wedlock births by age of mother and race have been computed for the 25 largest standard metropolitan statistical areas (SMSA's) and for all cities with populations of 100,000 or more in the States reporting legitimacy status in 1975. A comparison of the ratios for all metropolitan counties (table 12), the total of 25 SMSA's (table 13), and the total of the 101 large cities^d showed that regardless of race the proportion of out-of-wedlock births was highest for the large cities. Overall, 24.5 percent of all births to residents

^dData for the 101 cities are available upon request to the Division of Vital Statistics, NCHS.

of the 101 cities were illegitimate compared with 17.6 percent of births to residents of the largest SMSA's and 15.8 percent of births to residents of all metropolitan counties. This same relationship existed for both white and black births. When individual central cities were compared with the SMSA's of which they are a part, the illegitimacy ratios for the central cities were consistently higher than those for the SMSA's regardless of race.

There was considerable variation in the proportions of births that were out of wedlock from one SMSA to another. For all births, the percent illegitimate varied from a high of 30.5 percent for the Memphis SMSA to a low of 9.9 percent for the Pittsburgh SMSA. Among white births the proportions ranged from 10.8 percent for the San Antonio SMSA to 3.5 percent for the Birmingham SMSA. The percents for black births ranged from 61.3 percent (St. Louis SMSA) to 39.0 percent (San Antonio SMSA).

It is evident that a very large proportion of births to residents of large cities and SMSA's are illegitimate. These births are particularly likely to need special health and social services. For those people in the health professions who must provide immediate care to a mother and her child there is little reassurance in knowing that the risk of having a child out of wedlock has declined in recent years. Even if birth rates for unmarried women continue to decline gradually or to level off, there will probably be larger and larger numbers of mothers and illegitimate children to care for, in the next few years at least, simply because the number of unmarried women is rising rapidly.

CHARACTERISTICS OF UNMARRIED MOTHERS

Age of Mother

Out-of-wedlock childbearing is becoming increasingly concentrated among teenage mothers. According to national estimates, more than 52 percent of all illegitimate infants born in 1975 were to mothers under 20 years of age (table J). In 1970, 50.1 percent of illegitimate births occurred to mothers in this age group. The

Table J. Estimated percent distribution of births to unmarried women by age of mother, according to live-birth order and race: United States, 1975

[Based only on records for which live-birth order is stated. Percents may not add to totals because of rounding]

Age of mother and race	All births	Live-birth order	
		1st birth	Birth of 2d or higher order
All races ¹	100.0	100.0	100.0
Under 15 years	2.5	3.9	0.1
15-19 years	49.7	66.7	22.1
20-24 years	29.9	23.5	40.5
25-29 years	11.2	4.6	22.0
30-34 years	4.4	1.1	9.8
35 years and over	2.3	0.4	5.6
White	100.0	100.0	100.0
Under 15 years	1.9	2.6	-
15-19 years	50.4	64.9	15.5
20-24 years	29.2	25.3	39.1
25-29 years	11.4	5.4	26.0
30-34 years	4.6	1.4	12.4
35 years and over	2.5	0.5	7.2
Black	100.0	100.0	100.0
Under 15 years	2.9	5.0	0.2
15-19 years	49.6	68.8	25.8
20-24 years	30.3	21.5	41.3
25-29 years	10.9	3.7	19.8
30-34 years	4.2	0.8	8.4
35 years and over	2.2	0.2	4.7

¹Includes races other than white and black.

corresponding proportion in 1965 was 44.4 percent (table 2).

The increasing concentration of illegitimacy in the teenage years is particularly evident for white unmarried mothers. In this group, 52.3 percent were teenagers in 1975 compared with 46.7 percent in 1970. The proportion of black unmarried mothers who were teenagers was 52.5 percent in 1975. It had been 53.3 percent in 1970.

Overall, out-of-wedlock births are more heavily concentrated among young mothers than are births to married women. Of illegitimate births in 1975, 82.0 percent occurred to mothers under 25 years of age, while only 49.0 percent of *legitimate* births occurred to mothers in this age group.

In the teenage years, illegitimacy presents particular challenges with respect to the mother's and child's health and the mother's ability to cope with the situation economically, emotionally, and socially. As will be seen in later sections of this report, teenage mothers are more likely to give birth to infants of low birth weight, are less likely to have had prenatal care, and are less likely to have completed a high school education.

Live-Birth Order

More than 60 percent of all out-of-wedlock births in 1975 were first births (table K). The preponderance of first births was even more evident for white infants (70.3 percent) than

Table K. Estimated percent distribution of births to unmarried women by live-birth order, according to age of mother and race: United States, 1975

[Based only on records for which live-birth order is stated. Percents may not add to totals because of rounding]

Age of mother and race	All births	Live-birth order	
		1st birth	Birth of 2d or higher order
All races ¹	100.0	61.8	38.3
Under 15 years	100.0	98.1	1.9
15-19 years	100.0	83.0	17.1
20-24 years	100.0	48.4	51.7
25-29 years	100.0	25.1	74.9
30-34 years	100.0	15.4	84.6
35 years and over	100.0	9.7	91.3
White	100.0	70.3	29.6
Under 15 years	100.0	97.1	-
15-19 years	100.0	90.9	9.1
20-24 years	100.0	60.6	39.6
25-29 years	100.0	33.0	67.5
30-34 years	100.0	21.2	78.8
35 years and over	100.0	13.0	84.8
Black	100.0	55.5	44.5
Under 15 years	100.0	97.1	2.9
15-19 years	100.0	76.9	23.1
20-24 years	100.0	39.3	60.7
25-29 years	100.0	18.7	81.3
30-34 years	100.0	10.6	88.5
35 years and over	100.0	5.7	98.1

¹Includes races other than white and black.

for black infants (55.5 percent). As would be expected, the chances of an illegitimate birth being the mother's first child declined sharply after the teenage years. Of all unwed mothers under 20 years of age, 83.7 percent gave birth to their first child. From this level the proportion declined to 9.7 percent for mothers aged 35 years and over. The corresponding decline by age for white mothers was from 91.1 to 13.0 percent, and for black mothers from 78.0 to 5.7 percent.

Educational Attainment of the Mother

A comparison of the educational attainment of mothers (table L) shows that, regardless of race, unmarried mothers are far less likely to have completed high school than are married mothers. These data refer to births occurring to residents of the 33 States and the District of Columbia that reported both legitimacy status and educational attainment on the birth certificate in 1975. Among all races 76.0 percent of married mothers compared with only 40.3 percent of unmarried mothers had completed high school. The corresponding proportions for white mothers were 77.3 percent for married women and 40.2 percent for unmarried women. Among black mothers 67.1 percent of married mothers compared with 40.2 percent of unmarried mothers had completed high school.

Concomitantly, unwed mothers were about twice as likely as married mothers to have had

only an elementary school education. The proportion of unmarried mothers who had completed 9-11 years of school was also about 2½ times greater than this percent for married mothers. This particularly large differential by marital status probably occurs because unmarried mothers, heavily concentrated as they are in the teenage years, are very likely to leave high school prematurely as a result of their pregnancies. Since unwed mothers are concentrated in the age group under 20 years, they are less likely than married mothers to have had an opportunity to complete high school. However, even when both age of mother and race are held constant, it is seen that unwed mothers were more likely than married mothers to have completed less than 12 years of schooling (table M). The differential was fairly small at ages 17, 18, and 19 and then increased steadily at ages 20 and over. By age 24 the mothers of illegitimate births were almost three times more likely than mothers of legitimate births to have less than a high school education.

Table N and figure 3 show the percent of births in 1975 that were out of wedlock by years of school completed by mother, age of mother, and race. Figure 3 shows that there was a consistent pattern, although not one of steady increase or decrease, in the proportions of births illegitimate within each age group for successive categories of educational attainment. Regardless of age of mother, the percent of births to unmarried mothers increased from 0-8 years to 9-11 years of schooling and then declined for births to mothers who completed

Table L. Percent distribution of live births by educational attainment of mother, according to marital status of mother and race: total of 33 reporting States and the District of Columbia, 1975

[Based only on records for which educational attainment is stated]

Years of school completed by mother	All races ¹		White		Black	
	Married	Unmarried	Married	Unmarried	Married	Unmarried
Total.....	100.0	100.0	100.0	100.0	100.0	100.0
0-8 years.....	5.1	10.6	4.8	12.1	5.8	9.7
9-11 years.....	18.9	49.1	17.9	47.7	27.1	50.1
12 years.....	46.4	33.0	46.9	33.0	45.1	32.9
13-15 years.....	16.9	6.4	17.3	6.1	14.4	6.5
16 years or more.....	12.7	0.9	13.1	1.1	7.6	0.8

¹Includes races other than white and black.

Table M. Percent of live births to mothers who completed less than 12 years of school, by marital status of mother, age of mother, and race: total of 33 reporting States and the District of Columbia, 1975

[Based only on records for which educational attainment is stated]

Age of mother	All races ¹		White		Black	
	Married	Unmarried	Married	Unmarried	Married	Unmarried
All ages	24.0	59.7	22.8	59.8	32.9	59.7
15 years	99.1	99.5	99.0	99.6	99.6	99.5
16 years	97.2	97.9	97.2	98.4	97.0	97.5
17 years	83.7	83.9	84.0	85.8	80.0	82.5
18 years and over	21.0	46.0	19.7	46.2	30.6	45.8
18 years	55.4	56.4	55.6	57.8	53.5	55.3
19 years	39.8	44.1	39.8	45.0	39.0	43.3
20 years	31.1	41.1	30.6	41.5	33.5	40.7
21 years	24.9	40.4	24.0	41.5	30.2	39.7
22 years	20.5	40.8	19.5	41.3	27.2	40.3
23 years	17.2	40.7	16.0	40.7	25.5	40.7
24 years	15.1	41.8	13.9	41.9	23.6	41.6
25-29 years	12.9	43.3	11.7	41.9	23.4	44.1
30-34 years	17.4	52.8	15.6	50.0	32.7	55.4
35-39 years	28.0	62.4	25.2	58.6	45.2	65.0
40 years and over	39.0	69.8	34.3	63.0	58.4	73.5

¹Includes races other than white and black.

high school. With only one exception, the percents were highest for births to mothers who completed 9-11 years. The next highest proportion illegitimate was for births to mothers with an elementary school education or less.

The difference in the proportions for 0-8 years and 9-11 years of education declined with each successive age. This might be expected because with increasing age a premarital pregnancy is less likely to disrupt a woman's secondary school education.

The proportions of births that were out of wedlock were higher for births to mothers with 13-15 years of education than for mothers who were high school graduates among mothers 19-21 years of age. Again, a likely explanation for these women is that premarital pregnancies occurring while they were in college may well have caused them to leave college before graduation. For older mothers the proportions illegitimate declined steadily with each successive category of educational attainment.

Increased education of the mother is apparently not directly or consistently associated with lower proportions of births that are illegiti-

mate for mothers at any age. This lack of association results from the complex relationship between age of mother and risk of premarital pregnancy, and the likelihood that such a pregnancy will cause the end, at least temporarily, of the mother's formal education.

The relationships within each racial group were similar to those for all births except that the percents for black births were considerably higher at each educational attainment and age group than for white births.

EDUCATION AS A CONTROL FOR SOCIOECONOMIC STATUS

It has already been shown that the differentials in out-of-wedlock childbearing between white and black women are large. This is true regardless of the measure of illegitimacy that is analyzed. In various sections above, a number of hypotheses have been suggested to account for these differences. In a paper on family formation in the black population, Zelnik and Kantner suggest other factors that

Table N. Percent of live births that are to unmarried women, by educational attainment of mother, age of mother, and race: total of 33 reporting States and the District of Columbia, 1975

Years of school completed by mother and race ¹	All ages	Age of mother											
		15 years	16 years	17 years	18 years	19 years	20 years	21 years	22 years	23 years	24 years	25-29 years	30 years and over
Total ²	14.7	70.9	56.4	43.8	34.8	26.3	19.5	14.7	11.4	8.9	7.4	5.3	5.9
White.....	7.1	49.7	36.4	26.1	19.9	14.3	9.8	7.0	5.3	4.0	3.3	2.4	2.8
Black.....	50.0	94.2	89.3	82.4	72.8	63.0	53.7	47.2	41.6	36.2	32.9	27.5	24.8
0-8 years.....	26.4	63.8	45.8	33.5	29.3	26.9	22.8	21.2	19.7	18.3	16.6	14.5	14.2
White.....	15.9	43.2	30.4	20.6	19.4	17.9	15.3	14.4	12.4	12.1	10.6	9.1	8.5
Black.....	62.3	92.7	82.1	77.1	68.0	64.7	55.1	51.5	53.1	48.1	47.4	42.3	35.9
9-11 years.....	30.7	73.5	57.9	44.6	35.8	28.4	24.2	21.9	20.4	18.7	18.3	16.2	14.4
White.....	16.8	52.5	37.3	27.0	20.5	15.5	12.3	10.9	10.0	8.9	8.7	7.7	6.9
Black.....	64.7	94.5	90.1	83.1	73.8	65.2	58.8	54.5	50.9	47.1	45.9	41.4	33.0
12 years.....	10.8	54.4	49.7	43.1	33.6	23.8	16.3	11.9	9.2	7.4	6.4	5.2	4.8
White.....	5.1	28.6	25.2	23.7	18.7	12.8	8.0	5.5	4.1	3.3	2.8	2.3	2.3
Black.....	42.1	95.0	87.0	80.2	71.9	60.6	50.6	44.7	38.9	33.4	30.3	26.2	21.8
13-15 years.....	6.1	-	34.6	43.3	49.6	33.0	20.6	12.2	7.5	5.1	3.9	2.8	2.7
White.....	2.6	-	15.0	19.6	28.7	17.2	10.2	5.4	3.4	2.2	1.6	1.3	1.3
Black.....	31.1	-	*	83.6	73.4	63.6	51.9	40.7	32.4	27.3	24.2	18.6	16.0
16 years or more.....	1.2	-	-	-	-	17.3	14.2	10.2	6.8	3.3	1.9	0.8	0.8
White.....	0.6	-	-	-	-	3.4	5.9	4.4	3.7	1.4	0.8	0.5	0.5
Black.....	9.2	-	-	-	-	*	39.1	33.0	23.8	18.6	13.3	6.5	4.3

¹Total for years of school completed by mother includes races other than white and black.

²Figures for educational attainment not stated are included in totals but are not shown separately.

may account for the persistently higher level of illegitimacy among black than among white women.²⁷ These include differences between the black and white populations in the severity of sanctions against illegitimacy and the raising of a child born out of wedlock. Zelnik and Kantner point out that black girls have fewer opportunities for independence than white girls; motherhood is thus enhanced as a way for black girls to achieve independence from parental control. Much of a speculative nature has been written on these matters. It is very difficult, however, to quantify the effect of such factors or to determine their impact on the racial differential in illegitimacy. It has also been suggested that differences in socioeconomic status are the basis of much of the racial differential and that if it were possible to control for socioeconomic status much of the differential would disappear. The educa-

tional attainment of the mother is a measure of socioeconomic status that can be used to test this hypothesis.

Percent Out of Wedlock by Educational Attainment of Mother

Data in table N can be used to approximate the incidence of illegitimacy according to the mother's educational attainment and age, by race. Overall, the percent illegitimate in 1975 for black births was 50 percent, or 7 times the proportion for white births, 7.1 percent. The data in this table also show that while the proportion illegitimate among black births was consistently higher than the comparable proportion for white births, regardless of educational attainment or age of mother, the racial differential (the ratio of the black

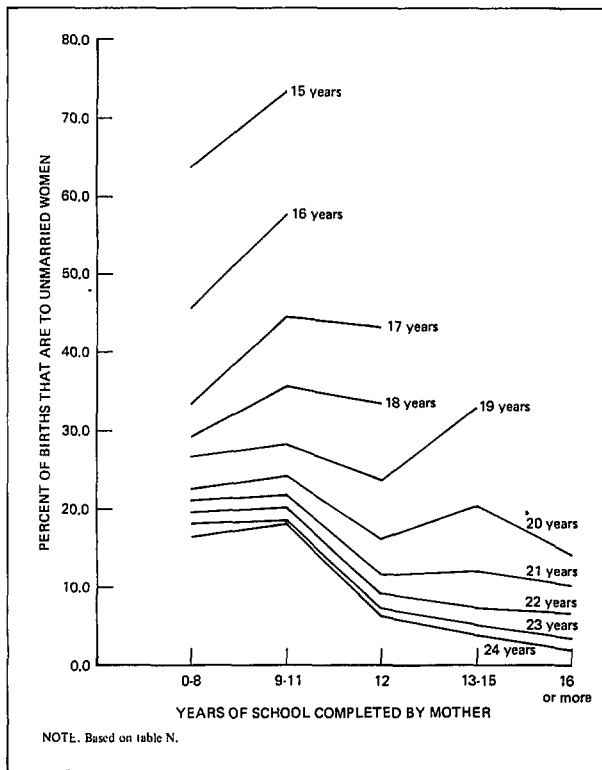


Figure 3. Percent of live births that are to unmarried women, by years of school completed by mother and age of mother: total of 33 reporting States and the District of Columbia, 1975

to the white measure) was considerably less at the younger ages and at the lower educational-attainment categories. Most illegitimate births occur to mothers in these groups. In order to determine whether the large overall racial differential might be the result of differences between the distributions of black and white births by educational attainment and age of mother, the standardized proportions illegitimate were computed to eliminate the influence of these differences. (See appendix I for a description of the standardization procedure.)

The standardized proportions illegitimate for black and white births were computed using as the standard the 1975 distribution of births of all races by educational attainment and age of mother occurring in the 33 States and the District of Columbia that reported both educational attainment and legitimacy status on the birth record. The standardized percents were

39.4 for black births and 8.0 for white births. The adjusted racial differential was 4.9, considerably reduced from the unadjusted differential of 7.0. This reflects the fact just noted, that for the young, poorly educated women who are most likely to bear illegitimate children the racial differential in out-of-wedlock childbearing is somewhat lower than it is overall. Since it is in these same categories that relatively more black than white births occur, standardization has the effect of diminishing the overall racial differential.

Out-of-Wedlock Birth Rates by Educational Attainment of Mother

It is possible that the effect of educational attainment on the incidence of illegitimacy as measured by the proportion of births that are illegitimate may differ from that measured by the illegitimacy rate. The proportion illegitimate is influenced both by levels of marital fertility (in the denominator) and by illegitimate or non-marital fertility (in the numerator). The ideal situation would be to compare illegitimacy rates by mother's educational attainment and race. Unfortunately it is not possible to do so on an annual basis because the requisite population denominators by educational attainment are not available. However, it is possible to make estimates of these rates for census years. Such rates for 1970 are shown in table O.

There was a fairly consistent pattern in the rates by age within each educational-attainment category. That is, the estimated illegitimacy rate was generally highest at ages 20-24 years and then declined for each successively older age group. On the average and for women aged 15-19 years the illegitimacy rates were highest for women who completed exactly 12 years of schooling. Rates for women 20-24 and 25-34 years of age were highest for those with 9-11 years of education. The highest rates for women 35-44 years of age were observed for those with 0-8 years of schooling. Rates for women with some college were sharply lower for all age groups.

These patterns for the out-of-wedlock birth rate differ in some respects from those just

Table O. Estimated birth rates for unmarried women by educational attainment of mother, age of mother, and race: United States, 1970

[Rates are live births per 1,000 unmarried women in specified group. See appendix I for description of procedure used to estimate rates]

Years of school completed by mother and race ¹	15-44 years ²	Age of mother			
		15-19 years	20-24 years	25-34 years	35-44 years ³
Total ⁴	25.9	22.7	38.4	29.7	7.4
White ⁴	13.6	11.0	22.3	16.2	4.0
Black ⁴	96.5	99.2	137.0	84.0	21.6
0-8 years.....	26.4	17.3	55.4	39.2	12.7
White	12.3	7.2	32.0	22.2	6.7
Black.....	73.3	58.8	117.6	79.6	26.5
9-11 years.....	29.2	21.8	120.6	65.1	12.1
White	12.9	9.6	64.9	33.5	6.3
Black.....	112.4	102.7	229.7	122.2	26.8
12 years.....	32.4	32.5	49.6	27.8	5.2
White	19.7	18.9	31.3	17.1	3.3
Black.....	110.8	145.6	144.3	77.7	16.4
13-15 years.....	13.3	13.5	14.9	14.5	2.8
White	9.3	8.5	10.6	9.6	1.9
Black.....	55.2	70.5	65.6	45.7	9.2
16 years or more	4.4	-	7.6	4.0	1.0
White	3.7	-	5.8	3.2	0.6
Black.....	17.2	-	35.4	15.2	-

¹Total for years of school completed by mother includes races other than white and black.

²Rates computed by relating total births, regardless of age of mother, to unmarried women aged 15-44 years.

³Rates computed by relating births to mothers aged 35 and over to unmarried women aged 35-44 years.

⁴Rates for ages 15-44, 15-19, and 20-24 differ from rates previously published and elsewhere in this report because population denominators are 1970 census figures rather than 3-year averages of Current Population Survey estimates; see appendixes I and II.

noted for the proportion of all births that are illegitimate. The percent illegitimate was consistently highest for births to teenage women in each educational-attainment category. Additionally, the proportions illegitimate were generally highest for births to women with 9-11 years of schooling, regardless of age, while there was no comparably consistent pattern in the illegitimacy rates.

Standardized out-of-wedlock birth rates by educational attainment, age of mother, and race were computed to determine whether differences in the distribution of black and white unmarried women by educational attainment would tend to influence the observed racial differential. The standardized rates were computed using as the standard the distribu-

tion of all unmarried women, regardless of race, by age and educational attainment, according to the 1970 census.

The unadjusted rates were 96.5 for black women and 13.6 for white women, a differential of 7.1; the corresponding standardized rates were 90.4 and 13.7, a differential of 6.6. Thus there was only a very slight reduction in the racial differential when the rates were standardized for differences in the educational attainment of black and white women. This finding reflects the fact that the racial differential is highest for women 15-19 years old, regardless of educational attainment, and is especially great for women with 9-11 years of schooling. Teenage women constitute about half of all unmarried women 15-44 years of age

(the denominator of the illegitimacy rate), and unmarried teenage women with 9-11 years of schooling contribute nearly one-third of all the out-of-wedlock births (the numerator of the rate). Thus standardization has little effect on the overall racial differential.

It is apparent that the risk of illegitimacy as measured by the illegitimacy rate declines with the increasing educational attainment of the mother; this is true for both black and white women. However, controlling for socioeconomic status, as was done here using the mother's educational attainment, evidently has virtually no effect on the racial differential. Other evidence based on data for poverty and nonpoverty areas of large cities also points to a persistent racial differential in illegitimacy even when the poverty status of area of residence is accounted for.²⁸ There continues to be a gap in the incidence of illegitimacy, regardless of the measure used, between the black and white populations.

HEALTH ASPECTS OF CHILD-BEARING BY UNMARRIED WOMEN

Unmarried mothers are in many ways at a disadvantage with respect to raising a child compared with married mothers. First, in the majority of cases they are very young: more than 52 percent were under 20 years of age in 1975, and 28.5 percent were 17 years of age and under. They may not be fully mature physically or emotionally. More likely than not they have not completed high school, and the chances of their doing so after the birth of a child are slim, particularly if they keep the child. A 1971 study of a national sample of teenage women showed that among those with an illegitimate first birth, 86 percent had kept the babies and were still living with them when surveyed.¹⁰ Such women are less prepared to provide for a child's growth and development than are married mothers, among whom only 13.4 percent were teenagers in 1975.

Data from other studies indicate that "there are indeed differences in the life chances of legitimate and illegitimate children."²⁹ Using recent California data, Beth Berkov and June Sklar found a higher risk of an illegitimate

child's dying in the first year of life. They found a declining level of adoption of out-of-wedlock children, a pattern of less subsequent marriage among unwed mothers and fewer stable marriages among those who do marry. (See also references 30 and 31.) Although mortality rates for infants under 28 days old (neonatal period) were higher than rates for infants of 28 days to 1 year of age (postneonatal period), the differential by legitimacy status was considerably greater in the postneonatal period, indicating, as the authors put it, that "... once outside the hospital, the children are exposed to economic and social conditions that negate [the] advances [in prenatal, obstetrical, and neonatal intensive care] and reduce their later life chances." There is also evidence that the incidence of childbearing by unmarried women is higher among poverty groups than among higher income populations.²⁸

In the sections that follow, four health factors in childbearing are discussed as they relate to illegitimacy: low birth weight, prenatal care, attendant at birth, and fetal death. It is shown here that for each factor except attendant at birth, the child born out of wedlock is at a definite disadvantage compared with the child born to a married woman.

Low Birth Weight

The incidence of low-birth-weight babies, that is, those born weighing 2,500 grams (5 pounds 8 ounces) or less, has been directly related to a number of factors, including maternal nutrition, health, poverty status, and access to prenatal care.^{28,32} These are considered the principal variables determining the incidence of low birth weight in addition to any possible genetic factors. The relationship between low birth weight and problems in the infant's subsequent growth and development have been well documented.³³

There are wide differences between legitimate and illegitimate infants in the incidence of low birth weight. These differences persist even when the data are controlled for race, age of mother, educational attainment of mother, month of pregnancy prenatal care began, and live-birth order. Overall, the proportion of low-weight births among illegitimate infants was about twice as high as the

comparable proportion for legitimate babies (12.9 percent compared with 6.5 percent—table P).

There are striking differences in the incidence of low birth weight between white and black infants. Among births occurring to residents of the legitimacy reporting area in 1975, 13.2 percent of black infants weighed less than 2,501 grams compared with 6.3 percent of white infants. Legitimacy status is more critical with respect to the incidence of low birth weight for white than for black infants. Among white births 10.0 percent of illegitimate babies were of low birth weight, about two-thirds more than the comparable proportion for legitimate babies, 6.0 percent. In contrast 15.0 percent of black illegitimate babies were of low birth weight, about one-third more than the proportion of low-weight legitimate infants, 11.5 percent. The levels of low birth weight are high for black babies, regardless of legitimacy status.

The proportion of low-birth-weight infants is substantially higher among babies born to young mothers, both married and unmarried (table P). The incidence of low birth weight for births to 15-year-olds, for example, was 13.0 percent in 1975, more than two-thirds higher than the average of 7.5 percent for all births. Infants born to unmarried mothers, however, even at the youngest ages, were more likely to be of low weight than were babies born to married mothers. This may result from the greater likelihood that a young unmarried girl who is pregnant will attempt to conceal this fact for as long as possible; she may not maintain adequate nutrition for her condition, and she may resort to dieting to keep her weight down.

Both legitimate and illegitimate infants born to mothers in their twenties were less likely to be of low birth weight. There was a steady decline in the incidence of low birth weight for legitimate babies through ages 25-29.

Table P. Percent low birth weight, by marital status of mother, age of mother, and race: total of 38 reporting States and the District of Columbia, 1975

[Low birth weight is 2,500 grams or less]

Marital status and race	All ages	Age of mother											
		Under 15 years	15-17 years			18-19 years		20-24 years	25-29 years	30-34 years	35 years and over		
			Total	15 years	16 years	17 years	Total					18 years	19 years
Total													
All races ¹	7.5	14.9	11.1	13.0	11.6	10.3	9.3	9.7	9.0	7.1	6.1	6.8	8.5
White.....	6.3	12.0	9.0	10.6	9.5	8.3	7.6	8.0	7.4	6.0	5.4	6.0	7.5
Black.....	13.2	16.9	15.4	16.2	15.3	15.1	14.4	14.4	14.3	12.8	11.3	12.1	13.1
Married													
All races ¹	6.5	12.6	9.1	11.2	9.9	8.4	8.0	8.3	7.7	6.4	5.7	6.4	8.0
White.....	6.0	12.4	8.5	10.7	9.3	7.8	7.2	7.5	7.0	5.8	5.3	5.9	7.3
Black.....	11.5	14.2	14.6	17.0	15.8	13.7	13.4	13.8	13.1	11.5	10.3	10.9	11.9
Unmarried													
All races ¹	12.9	15.3	13.2	13.8	13.0	13.0	12.6	12.5	12.7	12.4	12.4	14.2	14.7
White.....	10.0	11.8	10.0	10.4	10.0	9.8	9.7	9.8	9.5	9.6	10.2	11.8	12.1
Black.....	15.0	17.0	15.5	16.1	15.2	15.5	14.8	14.6	15.1	14.6	14.2	16.0	16.7

¹Includes races other than white and black.

Among illegitimate infants the levels of low birth weight declined slightly through ages 20-24 and then increased for births to mothers 35 and over to nearly the same level as that for births to young teenagers. The gap in birth weight between legitimate and illegitimate infants generally increased with age, as data in table P show for births in 1975.

The relationships of low birth weight to age of mother and legitimacy status within each racial group were similar to the pattern just described, although not as consistent as for all births combined. As mentioned earlier, however, the incidence of low birth weight was nearly always higher for black than for white births.

Educational attainment of mother.—Babies born to unmarried mothers were more likely to be of low birth weight than were infants born to married mothers, even when the educational attainment of the mother was held constant. That is, within the same educational-attainment-of-mother category, the incidence of low birth weight was higher for illegitimate than for legitimate babies. This was true, without exception, regardless of race or live-birth order, according to data from 33 States and the District of Columbia that reported both educational attainment and legitimacy status in 1975 (table Q). For example, among births to mothers with only an elementary school education the proportion of low birth weight for

Table Q. Percent low birth weight by marital status of mother, live-birth order, educational attainment of mother, and race: total of 33 reporting States and the District of Columbia, 1975

[Low birth weight is 2,500 grams or less]

Live-birth order and years of school completed by mother	All races ¹		White		Black	
	Married	Unmarried	Married	Unmarried	Married	Unmarried
<u>All births²</u>						
All years of school ³	6.5	12.8	5.9	9.9	11.4	15.0
0-8 years	9.0	14.3	8.5	11.8	12.6	16.7
9-11 years	8.6	13.3	7.9	10.2	12.6	15.6
12 years	6.1	11.7	5.6	9.0	11.0	13.7
13-15 years	5.5	11.5	5.0	9.7	10.4	12.9
16 years or more	4.9	10.9	4.5	7.7	9.3	14.1
<u>1st birth</u>						
All years of school ³	6.6	11.9	6.1	9.4	11.9	14.2
0-8 years	9.3	14.2	9.0	11.4	14.5	17.0
9-11 years	8.4	12.4	8.0	9.7	13.4	14.8
12 years	6.3	10.7	5.9	8.5	11.7	12.8
13-15 years	5.8	10.5	5.3	8.9	11.3	11.9
16 years or more	5.3	10.1	4.9	8.0	10.5	12.6
<u>Birth of 2d or higher order</u>						
All years of school ³	6.4	14.3	5.8	11.2	11.1	15.9
0-8 years	8.9	14.5	8.3	12.3	12.3	16.4
9-11 years	8.7	14.9	7.9	11.5	12.4	16.6
12 years	6.0	13.2	5.4	10.2	10.7	14.6
13-15 years	5.2	13.6	4.7	11.8	9.9	14.5
16 years or more	4.5	13.1	4.2	6.1	8.2	18.0

¹Includes races other than white and black.

²Figures for live-birth order not stated are included in totals but are not shown separately.

³Figures for years of school completed not stated are included in totals but are not shown separately.

illegitimate babies was 14.3 percent compared with 9.0 percent for legitimate infants. Similarly, among births to mothers who had completed college, 10.9 percent of the illegitimate babies weighed less than 2,501 grams compared with 4.9 percent of the legitimate infants.

The gap between legitimate and illegitimate babies tended to widen as educational attainment of the mother increased, beginning with births to mothers with some high school education. Thus, for example, the level of low birth weight among out-of-wedlock infants born to mothers with 9-11 years of schooling was 55 percent higher than that for infants born to married women, while for births to college graduate mothers, it was 122 percent higher for illegitimate babies. These patterns held for both white and black births and for both first and higher order births. However, as has already been noted, black babies were far more likely to be of low birth weight than were white infants, even within the same educational-attainment category (figure 4). Moreover, the incidence of low birth weight for white *illegitimate* infants was consistently lower than that for black *legitimate* babies within each educational-attainment category for total and for first births.

Prenatal care.—The influence of prenatal care on birth weight is not necessarily a direct one. That is, it is possible, as some studies have suggested,³⁴ that it is the educational attainment of the mother that determines when the mother will seek care, and this in turn has an impact on the outcome of the pregnancy.

Babies whose married mothers sought prenatal care early in their pregnancies were less likely to be of low birth weight than those whose mothers sought care late in pregnancy or not at all, according to data for 33 States and the District of Columbia that reported this information in 1975 (table R). This was generally true for both white and black infants.

The influence of the month of pregnancy that prenatal care began on low birth weight for out-of-wedlock births was quite different. For illegitimate births the percent of low birth weight *declined* as the month prenatal care began advanced. However, a tabulation showing only those out-of-wedlock births that were

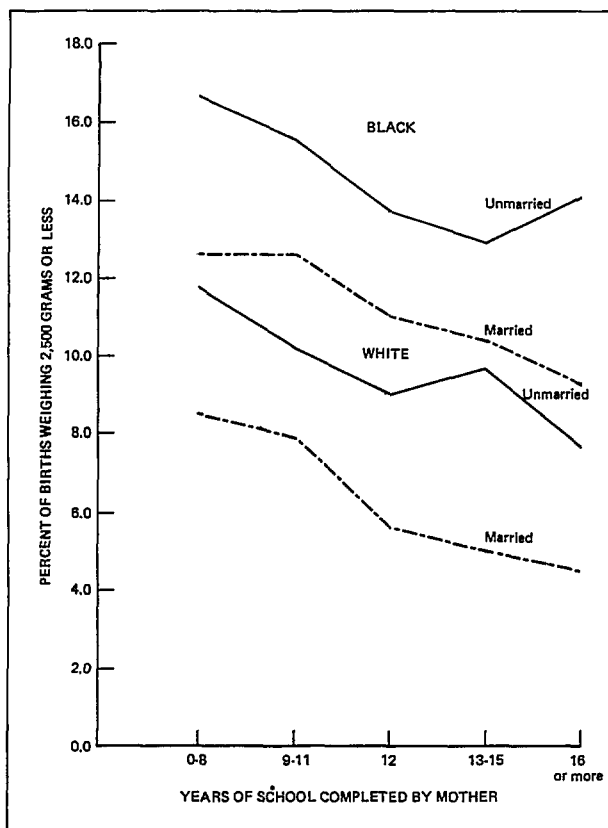


Figure 4. Percent low birth weight by marital status of mother, years of school completed by mother, and race: total of 33 reporting States and the District of Columbia, 1975

full term (a gestation of 37 weeks or longer) indicates that for these infants, early initiation of prenatal care *was* associated with lower proportions of low-weight infants. Premature low-weight out-of-wedlock infants are evidently more heavily represented in the earlier care than in the later care categories, and it is this fact that caused the anomalous finding just noted.

Prenatal Care

There are many factors supporting the potential value of prenatal care begun in early pregnancy, and there is evidence associating the absence of medical supervision with a considerable increase in the risk of an unfavorable outcome of pregnancy.³⁴⁻³⁸

According to data from 33 States and the District of Columbia (table S), in 1975 unmarried women began prenatal care later in pregnancy and made fewer prenatal visits than did married women. Almost 4 times more unmarried than married women began prenatal care late in pregnancy (in the third trimester) or had no care at all (16.2 percent compared with 4.3 percent).

According to data in table S, unwed mothers were far more likely to have received late or no

prenatal care than were married mothers regardless of race. For white infants, 18.9 percent of the unmarried mothers compared with only 3.9 percent of the married mothers began prenatal care in the last trimester or had no care at all. The comparable proportions for black infants were 13.6 percent for unmarried mothers and 7.5 percent for married mothers. If the comparison is restricted to the proportion of mothers who received no care at all (the incidence of low birth weight in this group

Table R. Percent low birth weight by month of pregnancy prenatal care began, marital status of mother, and race: total of 33 reporting States and the District of Columbia, 1975

[Low birth weight is 2,500 grams or less]

Month of pregnancy prenatal care began	All races ¹		White		Black	
	Married	Unmarried	Married	Unmarried	Married	Unmarried
Total.....	6.5	12.8	6.0	10.0	11.5	15.1
1st and 2d month	5.9	12.5	5.5	9.2	10.8	14.9
3d month.....	6.2	12.2	5.7	9.2	11.2	14.3
4th-6th month	7.5	12.2	6.7	9.3	11.6	14.5
7th-9th month	7.4	10.8	6.8	8.9	10.9	13.4
No prenatal care	15.8	25.3	14.3	21.5	22.5	29.4
Not stated.....	8.4	15.4	7.5	13.4	13.3	16.6

¹Includes races other than white and black.

Table S. Total number and percent distribution of live births by month of pregnancy prenatal care began, according to marital status of mother and race: total of 33 reporting States and the District of Columbia, 1975

[Figures for month of pregnancy prenatal care began not stated are distributed]

Month of pregnancy prenatal care began	All races ¹		White		Black	
	Married	Unmarried	Married	Unmarried	Married	Unmarried
Number of live births.....	1,536,221	256,449	1,350,866	104,840	148,397	144,749
	Percent distribution					
Total.....	100.0	100.0	100.0	100.0	100.0	100.0
1st and 2d month.....	48.4	21.9	49.8	20.3	37.9	23.2
3d month.....	28.3	21.6	28.6	21.1	26.0	22.2
4th-6th month	19.0	40.3	17.8	39.7	28.7	41.0
7th-9th month	3.5	11.9	3.1	14.2	5.8	9.8
No prenatal care.....	0.9	4.3	0.8	4.7	1.7	3.8

¹Includes races other than white and black.

averaging about 20 percent), it is seen that unmarried mothers were less likely to secure care than were married mothers. Overall, 4.3 percent of all unwed mothers compared with 0.9 percent of the married mothers failed to receive any prenatal care. The relationships by legitimacy status for white and black births were comparable to those for total births.

Compared with married mothers, unmarried mothers were more likely not only to begin prenatal care later in pregnancy but also to make fewer visits for prenatal care (table T). In 1975, overall, married mothers had 10.0 visits for prenatal care compared with 7.4 visits for unmarried mothers. The differential by legitimacy status was observed for both white and black births and for each category of month prenatal care began. In other words, the amount of prenatal care received by an unmarried mother was less than that received by a married mother, regardless of race or of what point in her pregnancy she first sought care.

Attendant at Birth and Place of Delivery

Nearly the same proportion of illegitimate as of legitimate births occurred in hospitals in 1975. In that year 99.0 percent of births to married women and 98.4 percent of out-of-wedlock births were delivered in hospitals. These figures indicate considerable improvement in the proportions of hospital deliveries of illegitimate

births since 1964, when only 89.1 percent of these infants were delivered in hospitals. The proportion changed little for legitimate babies; it was 97.7 percent in 1964.

In most States there was also very little difference between the proportions of hospital deliveries for legitimate and for illegitimate births. There was only one State, Alaska, in which less than 95 percent of all illegitimate births were delivered in hospitals in 1975 (the proportion was 92.6 percent); the comparable proportion for legitimate births in Alaska was 97.2 percent. This represents a considerable change from the situation in 1964.⁸ In that year, in Mississippi, for example, only about half (51.0 percent) of the out-of-wedlock infants were delivered in hospitals. By 1975 this proportion had increased to 95.5 percent. Similarly, in Alabama, only 56.4 percent of illegitimate births occurred in hospitals in 1964 whereas by 1975 this proportion had risen to 95.2 percent. The percents of hospital births increased considerably in several other States, mostly in the South, but not by as much as in Mississippi or Alabama. (These data are available upon request to the Division of Vital Statistics, NCHS.)

The increase in hospital deliveries has been accompanied by a concomitant decline in midwife-attended births outside of hospitals, particularly for births of black and other races in the South. In Mississippi, where 46.2 percent of illegitimate births of black and other races

Table T. Median number of prenatal visits by month of pregnancy prenatal care began, marital status of mother, and race: total of 32 reporting States and the District of Columbia, 1975

[Refers only to births for which prenatal care was received. Figures for number of prenatal visits not stated are distributed]

Month of pregnancy prenatal care began	All races ¹		White		Black	
	Married	Unmarried	Married	Unmarried	Married	Unmarried
Total ²	10.0	7.4	10.1	7.8	8.7	7.2
1st and 2d month	11.0	9.8	11.0	10.2	10.5	9.6
3d month.....	9.8	8.8	9.9	9.2	9.1	8.4
4th-6th month	7.7	6.6	7.8	7.0	6.7	6.2
7th-9th month	3.7	3.3	3.9	3.6	3.2	3.1

¹Includes races other than white and black.

²Includes births for which prenatal care was received, but for which month of pregnancy care began was not stated. Medians are not computed for this group separately.

were delivered by midwives in 1964, only 3.2 percent were attended by midwives in 1975. The largest proportion of such deliveries in 1975 was for out-of-wedlock births to Alaskan residents of other than white race (7.3 percent).

Differentials in the Incidence of Fetal Deaths

Another measure of the differences in apparent health status of and in prenatal care received by married and unmarried women is the relative frequency of fetal death. The World Health Organization has defined a fetal death as any termination of pregnancy other than a live birth, and, as such, statistics on fetal deaths include induced abortions as well as stillbirths and miscarriages. In practice, however, very few if any induced abortions are included in fetal death statistics since the latter are based on registered fetal deaths occurring after 20 weeks of gestation.

Data on fetal deaths are characterized by a substantial degree of underreporting.²⁶ In addition there may be differences in reporting by legitimacy status or race, but the extent of these differences is not known.

A sizable reduction has occurred in the levels of reported fetal deaths to married and unmarried women of both major color groups since 1965, in contrast to the relatively unchanged proportions of fetal deaths in the previous 10 years (table U and figure 5). Overall, the incidence of fetal deaths among married women declined from 14.6 fetal deaths per 1,000 live births in 1965 to 10.2 in 1975, a decline of 30 percent. The ratio for unmarried women declined from 25.5 to 15.9, a reduction of 38 percent.

In recent years the differential by legitimacy status in the fetal death ratio has declined somewhat. There had been virtually no change in this differential in the 1960-73 period. In 1965, for example, the ratio for unmarried

Table U. Fetal death ratios by marital status of mother and color: reporting States, 1960, 1965, and 1970-75

[Ratios are fetal deaths per 1,000 live births in specified group. Fetal deaths include only those with stated or presumed period of gestation of 20 weeks or more]

Color and year	Total	Married	Unmarried
<u>Total</u>			
1975	11.0	10.2	15.9
1974	11.7	10.9	17.0
1973	12.6	11.6	19.5
1972	13.1	12.1	19.9
1971	13.8	13.0	20.6
1970	14.1	13.2	22.3
1965	15.5	14.6	25.5
1960	15.8	15.1	27.4
<u>White</u>			
1975	9.6	9.3	13.5
1974	10.3	10.0	14.6
1973	10.9	10.5	17.1
1972	11.4	11.0	17.0
1971	12.2	11.9	17.7
1970	12.5	12.0	19.7
1965	13.3	13.0	20.8
1960	13.8	13.6	22.9
<u>All other</u>			
1975	16.7	16.0	17.4
1974	17.9	17.4	18.4
1973	19.7	18.7	21.0
1972	20.6	19.8	21.7
1971	21.1	20.4	22.4
1970	22.1	20.9	24.3
1965	25.8	24.7	28.5
1960	26.2	25.2	29.6

NOTE: Reporting area in each year includes all States reporting both live births and fetal deaths by legitimacy status. In 1975 this reporting area included 38 States.

women, 25.5, was 75 percent higher than the ratio for married women, 14.6. By 1975 the ratio for unmarried women, 15.9, was 56 percent greater than that for married women, 10.2. Most of the differential in fetal death ratios by legitimacy status is observed for the white population. In 1975 the ratio for white unmarried women was 45 percent higher than that for white married women, while the ratio for unmarried women of black and other races was just 9 percent greater than the ratio for married women of black and other races.

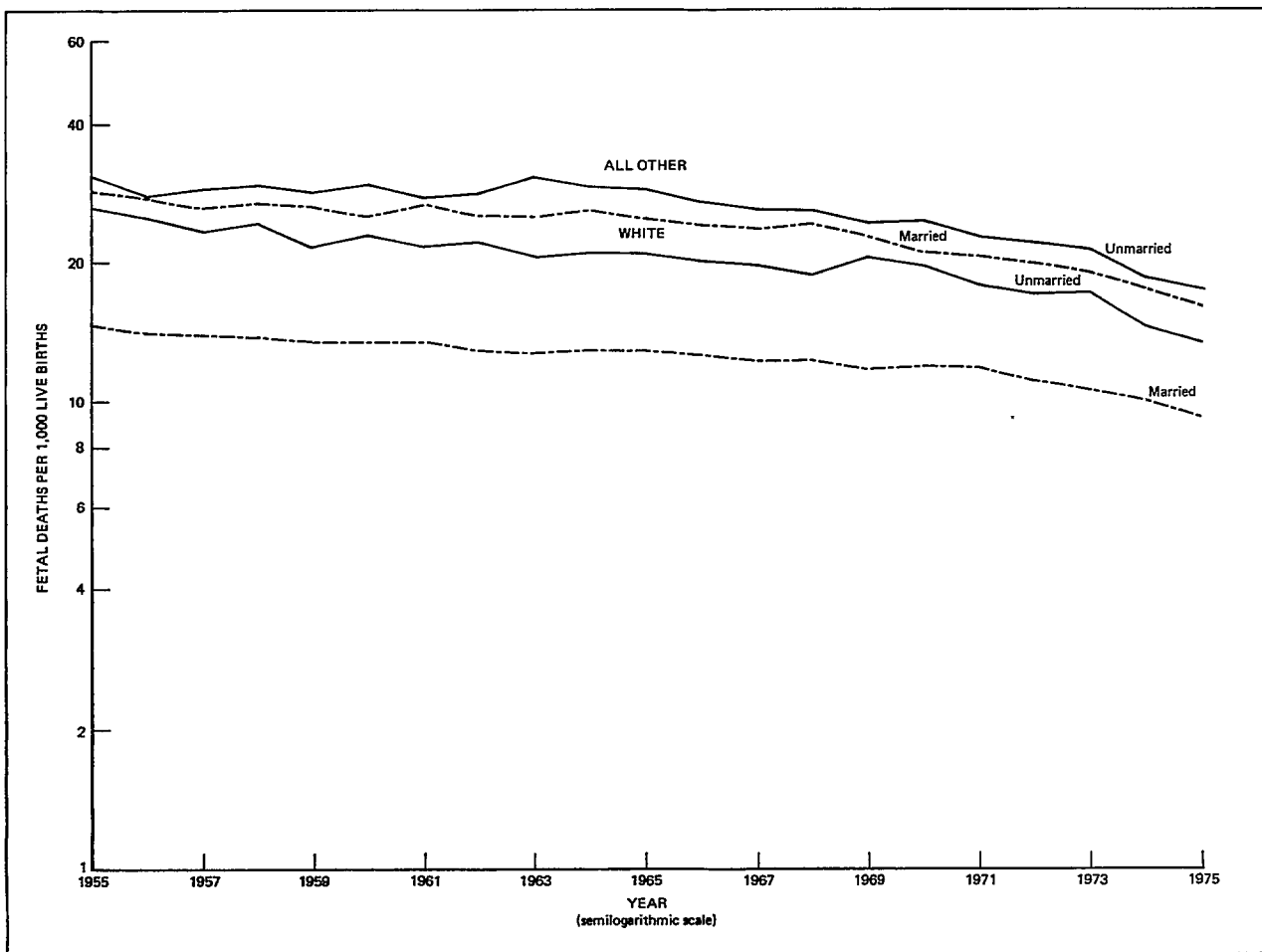


Figure 5. Fetal death ratios by marital status of mother and color: reporting States, 1955-75

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Table 1. Estimated birth rates for unmarried women by age of mother for the United States, 1940-76; and by age of mother and race for the United States, 1940, 1950, and 1955-76

[Rates are live births per 1,000 unmarried women in specified age group]

Race and year	15-44 years ¹	Age of mother							40-44 years ²
		15-19 years			20-24 years	25-29 years	30-34 years	35-39 years	
		Total	15-17 years	18-19 years					
ALL RACES									
1976 ³	24.7	24.0	19.3	32.5	32.2	27.5	17.8	8.9	2.5
1975 ³	24.8	24.2	19.5	32.8	31.6	28.0	18.1	9.1	2.6
1974 ³	24.1	23.2	19.0	31.4	30.9	28.4	18.6	10.0	2.6
1973 ³	24.5	22.9	18.9	30.6	31.8	30.0	20.5	10.8	3.0
1972 ³	24.9	22.9	18.6	31.0	33.4	31.1	22.8	12.0	3.1
1971 ⁴	25.6	22.4	17.6	31.7	35.6	34.7	25.3	13.3	3.5
1970 ⁴	26.4	22.4	17.1	32.9	38.4	37.0	27.1	13.6	3.5
1969 ⁴	24.8	20.4	15.2	30.8	37.3	37.9	27.0	13.6	3.6
1968 ⁴	24.3	19.7	14.7	29.6	37.2	38.3	27.8	14.8	3.8
1967 ⁵	23.7	18.5	13.8	27.6	38.1	41.1	28.9	15.3	4.0
1966 ⁴	23.3	17.5	13.1	25.6	39.0	45.1	32.7	16.3	4.1
1965 ⁴	23.4	16.7	--	--	39.6	49.1	37.2	17.4	4.5
1964 ⁴	23.0	15.9	--	--	39.5	49.9	35.9	16.3	4.4
1963 ⁴	22.5	15.3	--	--	39.9	48.8	33.1	16.1	4.3
1962 ⁴	21.9	14.8	--	--	40.7	46.6	29.6	15.6	4.1
1961 ⁴	22.7	16.0	--	--	41.4	46.4	28.2	15.4	3.9
1960 ⁴	21.6	15.3	--	--	39.7	45.1	27.8	14.1	3.6
1959 ⁴	21.9	15.5	--	--	40.2	44.1	28.1	14.1	3.3
1958 ⁴	21.2	15.3	--	--	38.2	40.5	27.5	13.3	3.2
1957 ⁴	21.0	15.8	--	--	37.3	36.8	26.8	12.1	3.1
1956 ⁴	20.4	15.6	--	--	36.4	35.6	24.6	11.1	2.8
1955.....	19.3	15.1	--	--	33.5	33.5	22.0	10.5	2.7
1954 ⁴	18.7	14.9	--	--	31.4	31.0	20.4	10.3	2.5
1953 ⁴	16.9	13.9	--	--	28.0	27.6	17.3	9.0	2.4
1952 ⁴	15.8	13.5	--	--	25.4	24.8	15.7	8.2	1.9
1951 ⁴	15.1	13.2	--	--	23.2	22.8	14.6	7.6	2.2
1950.....	14.1	12.6	--	--	21.3	19.9	13.3	7.2	2.0
1949.....	13.3	12.0	--	--	21.0	18.0	11.4	6.8	1.9
1948.....	12.5	11.4	--	--	19.8	16.4	10.0	5.8	1.6
1947.....	12.1	11.0	--	--	18.9	15.7	9.2	5.6	1.8
1946.....	10.9	9.5	--	--	17.3	15.6	7.3	4.4	1.8
1945.....	10.1	9.5	--	--	15.3	12.1	7.1	4.1	1.6
1944.....	9.0	8.8	--	--	13.1	10.1	7.0	4.0	1.3
1943.....	8.3	8.4	--	--	11.4	8.8	6.7	3.8	1.3
1942.....	8.0	8.2	--	--	11.0	8.4	6.3	3.8	1.2
1941.....	7.8	8.0	--	--	10.5	7.8	6.0	3.7	1.4
1940.....	7.1	7.4	--	--	9.5	7.2	5.1	3.4	1.2
WHITE									
1976 ³	12.7	12.4	9.9	17.0	16.0	14.4	10.2	5.5	1.4
1975 ³	12.6	12.1	9.7	16.6	15.7	15.1	10.0	5.4	1.5
1974 ³	11.8	11.1	8.9	15.4	15.2	14.9	9.6	5.5	1.5
1973 ³	11.9	10.7	8.5	15.0	15.6	16.1	10.7	5.9	1.7
1972 ³	12.0	10.5	8.1	15.1	16.7	16.6	12.1	6.4	1.6
1971 ⁴	12.5	10.3	7.4	15.9	18.8	18.6	13.3	7.2	1.9
1970 ⁴	13.9	10.9	7.5	17.6	22.5	21.1	14.2	7.6	2.0
1969 ⁴	13.4	9.9	6.6	16.6	23.0	22.5	15.1	7.6	2.0
								35-44 ⁶	
1968 ⁴	13.1	9.7	6.2	16.6	23.0	22.1	15.0	4.7	
1967 ⁵	12.5	8.9	5.6	15.3	23.0	22.7	14.0	4.7	
1966 ⁴	11.9	8.5	5.4	14.1	22.6	23.4	15.7	4.9	
1965 ⁴	11.6	7.9	--	--	22.0	24.3	16.6	4.9	

See footnotes at end of table.

Table 1. Estimated birth rates for unmarried women by age of mother for the United States, 1940-76; and by age of mother and race for the United States, 1940, 1950, and 1955-76-Con.

[Rates are five births per 1,000 unmarried women in specified age group]

Race and year	15-44 years ¹	Age of mother							
		15-19 years			20-24 years	25-29 years	30-34 years	35-39 years	40-44 years ²
		Total	15-17 years	18-19 years					
								35-44 ⁶	
<u>WHITE—Con.</u>									
1964 ⁴	11.0	7.4	---	---	21.1	24.0	15.9	4.8	
1963 ⁴	10.5	7.0	---	---	20.7	21.9	14.2	4.6	
1962 ⁴	9.8	6.5	---	---	19.9	19.8	12.6	4.3	
1961 ⁴	10.0	7.1	---	---	19.7	19.4	11.3	4.2	
1960 ⁴	9.2	6.6	---	---	18.2	18.2	10.8	3.9	
1959 ⁴	9.2	6.5	---	---	18.3	17.6	10.7	3.6	
1958 ⁴	8.8	6.3	---	---	17.3	15.8	10.8	3.4	
1957 ⁴	8.6	6.4	---	---	16.6	14.6	10.5	3.0	
1956 ⁴	8.3	6.2	---	---	16.3	14.0	9.2	3.0	
1955	7.9	6.0	---	---	15.0	13.3	8.6	2.8	
1950	6.1	5.1	---	---	10.0	8.7	5.9	2.0	
1940	3.6	3.3	---	---	5.7	4.0	2.5	1.2	
<u>ALL OTHER</u>									
1976 ³	78.1	84.6	69.0	112.4	103.1	76.8	44.3	18.8	6.9
1975 ³	80.4	88.1	72.0	117.4	103.8	75.3	48.7	20.1	7.0
1974 ³	81.5	88.8	74.3	115.9	104.3	78.8	51.6	23.3	6.7
1973 ³	84.2	89.7	76.5	114.6	108.9	82.4	56.4	26.2	7.2
1972 ³	86.9	92.7	78.1	120.6	113.1	84.5	56.3	29.0	8.2
1971 ⁴	90.6	92.4	75.7	126.5	121.0	93.3	65.7	32.2	10.4
1970 ⁴	89.9	90.8	73.3	126.5	121.0	93.8	69.8	32.0	10.7
1969 ⁴	84.8	84.2	67.3	118.9	115.4	93.9	69.0	33.3	10.4
								35-44 ⁶	
1968 ⁴	85.1	82.1	66.4	115.4	116.4	100.0	75.8	24.6	
1967 ⁵	88.3	80.0	64.1	114.5	126.2	113.5	92.1	28.4	
1966 ⁴	92.1	77.4	61.2	113.3	137.0	138.0	113.3	33.3	
1965 ⁴	97.4	77.1	---	---	147.8	161.0	131.9	38.7	
1964 ⁴	97.2	75.5	---	---	158.2	164.9	127.0	34.4	
1963 ⁴	97.2	75.3	---	---	156.3	168.9	120.8	34.4	
1962 ⁴	97.6	75.5	---	---	158.5	171.3	113.2	35.5	
1961 ⁴	101.0	78.8	---	---	165.8	171.3	111.0	37.4	
1960 ⁴	98.3	76.5	---	---	166.5	171.8	104.0	35.6	
1959 ⁴	100.8	80.8	---	---	167.8	168.0	106.5	34.9	
1958 ⁴	97.8	80.4	---	---	153.2	161.2	110.5	32.5	
1957 ⁴	95.3	81.4	---	---	147.7	142.6	115.1	30.3	
1956 ⁴	92.1	79.6	---	---	143.5	132.7	113.7	27.0	
1955	87.2	77.6	---	---	133.0	125.2	100.9	25.3	
1950	71.2	68.5	---	---	105.4	94.2	63.5	20.0	
1940	35.6	42.5	---	---	46.1	32.5	23.4	9.3	
<u>Black</u>									
1976 ³	83.2	91.6	74.6	121.6	109.3	81.1	45.9	19.0	7.0
1975 ³	85.6	95.1	77.7	126.8	109.9	78.1	51.0	20.3	7.2
1974 ³	86.6	95.1	79.4	124.9	111.2	82.5	52.3	24.2	6.7
1973 ³	89.5	96.0	81.9	123.0	117.2	86.0	58.1	27.4	7.7
1972 ³	92.2	98.8	82.9	129.8	122.0	89.7	57.7	30.2	8.5
1971 ⁴	96.5	99.1	80.9	136.3	131.1	100.4	69.0	32.7	9.4
1970 ⁴	95.5	96.9	77.9	136.4	131.5	100.9	71.8	32.9	10.4
1969 ⁴	90.0	90.3	72.0	128.4	125.3	99.5	70.1	34.3	10.1

¹Rates computed by relating total out-of-wedlock births, regardless of age of mother, to unmarried women aged 15-44 years.

²Rates computed by relating births to unmarried mothers aged 40 years and over to unmarried women aged 40-44 years.

³Based on 100 percent of births in selected States and on a 50-percent sample of births in all other States; see appendix I.

⁴Based on a 50-percent sample of births.

⁵Based on a 20- to 50-percent sample of births.

⁶Rates computed by relating births to unmarried mothers aged 35 years and over to unmarried women aged 35-44 years.

Table 3. Illustrative estimated birth rates for unmarried women computed with separated women in the denominator, by age of mother and race: United States, 1970-75

[Rates are live births per 1,000 unmarried women in specified age group]

Race and year	15-44 years ¹	Age of mother					
		15-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40-44 years ²
<u>ALL RACES</u>							
1975.....	22.7	24.0	29.4	23.2	13.9	6.9	2.1
1974.....	22.2	23.1	28.7	23.1	14.1	7.6	2.1
1973.....	22.5	22.7	29.5	24.2	15.4	8.2	2.4
1972.....	23.0	22.8	30.8	25.2	17.2	9.2	2.5
1971.....	23.8	22.3	33.1	28.1	19.4	10.4	2.9
1970.....	24.6	22.3	36.1	29.9	21.0	10.5	2.9
<u>WHITE</u>							
1975.....	11.8	12.0	14.8	12.9	8.3	4.3	1.2
1974.....	11.1	11.0	14.4	12.7	8.0	4.5	1.3
1973.....	11.2	10.7	14.8	13.6	9.0	4.8	1.4
1972.....	11.4	10.4	15.7	14.2	10.1	5.4	1.4
1971.....	12.0	10.2	17.8	16.0	11.3	6.1	1.7
1970.....	13.2	10.9	21.4	18.0	12.0	6.5	1.8
<u>ALL OTHER</u>							
1975.....	66.9	87.4	91.3	54.9	28.4	12.9	4.3
1974.....	66.9	88.1	89.4	55.0	29.6	14.6	4.2
1973.....	68.6	88.7	91.9	56.6	30.7	16.2	4.6
1972.....	71.3	91.9	95.4	57.2	32.9	18.0	5.3
1971.....	74.5	91.6	103.3	63.2	38.1	20.1	6.4
1970.....	74.3	90.0	105.9	62.6	41.7	19.5	6.6
<u>Black</u>							
1975.....	70.0	94.1	95.3	55.9	28.7	12.6	4.4
1974.....	70.1	94.4	93.9	56.1	29.0	14.7	4.2
1973.....	72.0	94.9	97.8	57.8	30.9	16.4	4.9
1972.....	74.9	98.0	102.0	58.9	33.0	18.4	5.5
1971.....	78.6	98.1	110.7	66.1	38.9	20.2	5.9
1970.....	77.9	95.9	113.6	65.1	42.0	19.5	6.4

¹Rates computed by relating total out-of-wedlock births, regardless of age of mother, to unmarried women aged 15-44 years.

²Rates computed by relating births to unmarried mothers aged 40 years and over to unmarried women aged 40-44 years.

Table 4. Ranking of 39 reporting areas according to birth rates for unmarried women, by race, 1969-71 average

[Rates are live births per 1,000 unmarried women aged 15-44 years residing in area for specified group]

Area	All races ¹		White		Black	
	Rank	Rate	Rank	Rate	Rank	Rate
39 reporting areas.....	...	26.2	...	12.9	...	96.5
Alabama.....	6	36.4	39	8.3	27	85.1
Alaska.....	9	33.0	6.5	17.2	35	67.1
Arizona.....	14	27.8	1	19.4	7	118.8
Arkansas.....	8	34.7	30	10.8	17	102.2
Colorado.....	26	19.8	5	17.3	24	89.5
Delaware.....	5	37.2	17	14.1	2	133.4
District of Columbia.....	1	59.1	26	12.1	30	82.7
Florida.....	7	36.1	14	14.4	8	118.4
Hawaii.....	19	23.1	3	18.7	38	35.0
Illinois.....	11	31.4	24	12.5	5	126.0
Indiana.....	22	22.0	11	14.6	22	90.9
Iowa.....	36	16.2	14	14.4	14	107.1
Kansas.....	34	16.5	27	11.8	26	88.6
Kentucky.....	20.5	22.9	14	14.4	16	103.2
Louisiana.....	4	38.7	31.5	10.4	28	84.2
Maine.....	29	18.1	4	17.8	37	45.2
Michigan.....	16	26.7	12	14.5	19	101.3
Minnesota.....	31	17.2	9	15.0	6	123.4
Mississippi.....	2	54.0	36.5	9.3	15	103.5
Missouri.....	15	27.3	21.5	12.9	10	110.9
Nebraska.....	28	18.5	18	14.0	4	126.9
New Hampshire.....	38	13.1	20	13.0	34	77.9
New Jersey.....	20.5	22.9	38	8.9	12	108.6
North Carolina.....	10	32.3	35	9.8	33	80.7
North Dakota.....	35	16.4	21.5	12.9	3	*133.3
Oklahoma.....	18	23.3	19	13.5	21	92.7
Oregon.....	33	16.9	8	15.3	25	88.7
Pennsylvania.....	27	19.1	34	10.1	23	90.4
Rhode Island.....	37	13.9	33	10.3	9	111.6
South Carolina.....	3	39.7	31.5	10.4	31	82.4
South Dakota.....	25	20.1	25	12.4	39	*24.5
Tennessee.....	12	30.4	29	11.3	20	97.0
Texas.....	17	25.3	16	14.3	29	84.1
Utah.....	39	10.2	36.5	9.3	18	102.1
Virginia.....	13	28.3	28	11.6	32	81.6
Washington.....	24	20.3	6.5	17.2	13	107.7
West Virginia.....	30	17.4	10	14.7	36	58.5
Wisconsin.....	32	17.0	23	12.7	11	110.8
Wyoming.....	23	21.3	2	18.8	1	201.3

¹Includes races other than white and black.

Table 5. Number of live births to unmarried women by race: each reporting State and the District of Columbia, 1940, 1950, 1960, 1965, and 1969-76—Con.

[Refers only to out-of-wedlock births occurring within the reporting area to residents of the area]

Area and race	1976 ¹	1975 ¹	1974 ¹	1973 ¹	1972 ¹	1971 ²	1970 ²	1969 ²	1965 ²	1960 ²	1950	1940
Virginia.....	10,653	10,208	9,670	9,399	9,596	9,846	9,906	8,804	8,688	7,552	5,510	4,211
White.....	3,211	2,986	2,774	2,685	2,544	2,872	3,104	2,926	2,426	1,812	1,348	1,100
All other.....	7,442	7,222	6,896	6,714	7,052	6,974	6,802	5,878	6,262	5,740	4,162	3,111
Black.....	7,407	7,192	6,870	6,704	7,030	6,952	6,776	5,860	--	--	--	--
Washington.....	5,428	5,079	4,698	4,271	4,020	4,620	5,528	5,268	3,172	1,866	973	437
White.....	4,188	3,935	3,607	3,245	3,072	3,620	4,454	4,338	2,616	1,522	803	370
All other.....	1,240	1,144	1,091	1,026	948	1,000	1,074	930	556	344	170	67
Black.....	771	722	652	650	596	648	700	626	--	--	--	--
West Virginia.....	2,928	2,782	2,556	2,508	2,544	2,684	1,880	2,110	2,542	2,346	2,434	2,084
White.....	2,381	2,251	2,026	1,990	2,038	2,140	1,522	1,666	1,958	1,788	1,896	1,781
All other.....	547	531	530	518	506	544	358	444	584	558	538	303
Black.....	545	525	526	518	504	544	350	444	--	--	--	--
Wisconsin.....	7,090	7,078	6,687	6,174	6,070	5,980	5,886	5,636	4,074	2,506	1,473	1,100
White.....	4,721	4,726	4,386	4,092	3,950	3,956	4,464	3,988	3,012	1,856	1,253	1,009
All other.....	2,369	2,352	2,301	2,082	2,120	2,024	1,422	1,648	1,062	650	220	91
Black.....	2,174	2,138	2,133	1,910	1,960	1,872	1,322	1,514	--	--	--	--
Wyoming.....	519	488	453	457	477	456	430	470	294	196	95	--
White.....	443	423	395	388	409	404	372	388	248	162	75	--
All other.....	76	65	58	69	68	52	58	82	46	34	20	--
Black.....	30	26	28	33	26	16	24	24	--	--	--	--

¹Based on 100 percent of births in selected States and on a 50-percent sample of births in all other States; see appendix I.

²Based on a 50-percent sample of births.

³Figures for 1965-72 include an unknown number of out-of-wedlock births erroneously allocated to this area because of incomplete residence reporting; see appendix I.

Table 6. Estimated ratios of births to unmarried women by age of mother and race: United States, 1940 and 1950-76—Con.

[Ratios are out-of-wedlock live births per 1,000 total live births in specified group. Alaska included beginning 1959 and Hawaii, 1960]

Race and year	All ages	Age of mother											
		Under 15 years	15-19 years					20-24 years	25-29 years	30-34 years	35-39 years	40 years and over	
			Total	15 years	16 years	17 years	18 years						19 years
ALL OTHER													
1976 ¹	451.5	989.2	769.9	949.3	902.8	833.4	728.8	630.7	425.3	239.2	194.8	209.5	226.2
1975 ¹	441.7	990.9	747.2	943.2	886.8	806.5	704.7	601.1	399.5	226.8	195.3	203.1	211.4
1974 ¹	427.3	976.5	717.1	933.0	860.9	773.5	670.2	564.0	372.3	219.7	196.8	208.5	209.1
1973 ¹	416.9	968.1	690.6	911.9	835.4	752.6	627.5	537.5	358.9	217.5	194.4	201.5	199.7
1972 ¹	402.6	958.8	678.0	911.8	829.1	729.9	624.6	518.8	343.2	206.6	190.2	192.0	188.5
1971 ²	373.3	953.3	651.7	891.4	817.8	716.3	595.0	493.9	316.4	193.4	177.3	185.4	182.3
1970 ²	349.3	941.9	613.5	872.2	782.4	677.7	554.0	461.7	295.0	180.6	172.8	168.8	169.1
1969 ²	325.1	913.9	574.0	846.1	748.9	636.1	517.2	425.2	275.0	170.8	166.4	168.6	158.7
1968 ²	312.0	907.7	549.7	836.3	722.3	611.7	492.2	398.6	264.0	168.0	155.3	157.2	156.5
1967 ³	293.8	891.6	521.1	800.3	699.9	574.1	464.3	376.3	253.2	164.4	151.5	155.3	133.0
1966 ²	276.5	878.8	500.9	790.0	681.9	548.1	443.8	361.3	237.2	167.5	147.7	145.9	137.2
1965 ²	263.2	864.0	492.0	781.5	659.7	545.2	429.4	349.4	229.9	162.8	149.0	148.8	140.1
1964 ²	245.0	856.0	468.3	759.1	651.8	517.2	404.5	331.5	220.4	155.0	140.7	136.2	125.2
1963 ²	235.5	852.4	455.6	740.1	607.5	502.3	409.4	326.8	213.9	151.2	138.3	133.8	134.6
1962 ²	227.8	842.0	439.3	724.3	607.8	490.9	390.6	316.9	212.5	147.2	134.6	136.6	120.7
1961 ²	223.4	816.5	439.2	716.4	592.2	489.1	396.5	319.5	209.4	143.5	132.0	129.9	126.7
1960 ²	215.8	822.4	421.5	700.7	577.8	469.3	376.2	306.2	199.6	141.3	129.9	127.7	116.8
1959 ²	218.0	808.8	426.5	701.6	582.4	479.7	377.2	306.2	202.3	143.4	133.4	130.1	124.4
1958 ²	212.3	825.0	419.0	702.1	569.4	459.9	375.8	301.9	194.2	141.6	130.9	127.1	119.7
1957 ²	206.7	811.7	409.1	689.5	563.7	449.0	360.5	288.7	190.5	135.9	125.6	127.6	117.4
1956 ²	204.0	798.4	404.8	675.2	564.0	453.2	357.7	282.8	189.7	136.0	123.4	116.7	111.6
1955	202.4	800.6	406.6	671.8	549.1	455.3	363.1	292.8	189.4	133.4	119.9	117.1	108.6
				15-17		18-19							
1954 ²	198.5	797.7	399.8		516.4		318.1		184.6	127.2	119.7	113.7	94.8
1953 ²	191.1	779.9	389.0		501.0		309.6		177.3	122.1	108.7	108.7	103.4
1952 ²	183.4	783.8	384.1		513.7		290.9		163.7	116.2	106.5	99.9	79.3
1951 ²	182.8	771.4	365.5		472.5		289.1		162.6	117.4	109.4	102.5	98.5
1950	179.6	745.8	358.4		475.7		275.1		159.0	114.7	102.4	98.5	92.9
1940	168.3	751.2	344.4	--	--	--	--	--	136.4	88.3	80.1	75.3	77.4
Black													
1976 ¹	503.0	990.8	797.1	956.0	917.0	857.6	761.1	663.1	460.6	284.9	239.9	251.2	252.8
1975 ¹	487.9	984.3	768.7	947.7	896.4	826.0	726.2	627.9	429.8	268.4	241.0	238.9	231.0
1974 ¹	470.9	973.8	737.1	937.2	875.4	790.5	689.9	588.4	400.9	261.7	237.8	241.1	226.7
1973 ¹	457.5	964.3	709.8	914.6	849.2	769.8	648.5	560.7	386.3	257.0	233.4	229.0	231.8
1972 ¹	439.1	964.3	695.7	916.3	839.0	743.5	644.2	537.5	369.5	240.5	221.9	216.3	220.2
1971 ²	405.3	949.9	669.3	897.8	826.3	732.2	611.9	513.2	338.8	221.3	204.5	207.0	185.2
1970 ²	375.8	934.8	627.4	883.0	785.8	688.9	570.0	477.7	312.8	202.7	196.4	186.0	183.4
1969 ²	348.7	917.3	586.6	851.0	754.6	645.3	530.6	438.6	290.2	190.2	176.4	174.1	170.9

¹Based on 100 percent of births in selected States and on a 50-percent sample of births in all other States; see appendix I.²Based on a 50-percent sample of births.³Based on a 20- to 50-percent sample of births.

Table 7. Estimated ratios of births to unmarried women by live-birth order and race: United States, 1964 and 1969-76

[Ratios are out-of-wedlock live births per 1,000 total live births in specified group]

Race and year	All births ¹	Live-birth order				
		1st birth	2d birth	3d birth	4th birth	Birth of 5th or higher order
<u>ALL RACES</u>						
1976	147.8	210.7	94.6	96.2	112.1	129.2
1975	142.5	206.3	89.0	90.6	103.8	122.8
1974	132.3	193.5	80.4	83.6	95.9	116.6
1973	129.8	186.4	76.0	78.2	88.3	108.7
1972	123.7	182.8	75.7	71.5	76.6	99.6
1971	112.9	174.2	72.1	62.7	68.2	89.7
1970	106.9	171.3	66.4	54.6	59.7	79.5
1969	100.2	165.0	62.4	49.6	53.8	70.3
1964	68.5	126.3	49.0	36.7	37.5	52.2
<u>WHITE</u>						
1976	76.8	124.4	37.2	39.1	48.3	59.8
1975	73.0	119.6	34.3	35.8	43.3	55.8
1974	65.4	108.3	29.5	32.1	40.2	50.1
1973	63.9	104.4	28.3	30.5	36.8	46.2
1972	60.4	101.1	28.3	27.2	31.6	40.5
1971	56.1	98.1	27.1	23.8	28.1	35.3
1970	56.6	103.0	26.5	21.3	24.7	30.9
1969	54.7	101.4	26.0	20.1	23.0	28.2
1964	33.9	75.8	19.3	13.4	14.2	15.6
<u>ALL OTHER</u>						
1976	451.5	597.7	375.5	333.9	325.8	297.9
1975	441.7	589.3	362.9	324.0	313.2	287.4
1974	427.3	574.7	345.6	310.2	301.8	282.7
1973	416.9	558.1	334.9	298.5	290.3	268.7
1972	402.6	551.7	334.3	285.2	263.6	250.3
1971	373.3	536.9	318.1	258.5	241.0	226.1
1970	349.3	515.3	295.4	235.9	220.8	207.7
1969	325.1	489.7	280.4	216.9	199.9	183.6
1964	245.0	439.8	244.6	184.8	161.8	146.6
<u>Black</u>						
1976	503.0	664.5	427.6	372.0	357.1	322.2
1975	487.9	648.2	411.1	360.0	339.5	308.3
1974	470.9	631.8	392.0	345.5	325.3	300.4
1973	457.5	614.1	379.9	330.9	313.5	284.8
1972	439.1	602.2	373.6	316.4	283.1	264.9
1971	405.3	584.1	352.9	282.5	259.2	237.9
1970	375.8	553.7	323.0	258.4	235.0	218.0
1969	348.7	525.0	305.9	236.4	213.9	192.1

¹Figures for live-birth order not stated are included in totals but are not shown separately.

NOTES: Data for 1972-76 are based on 100 percent of births in selected States and on a 50-percent sample of births in all other States; see appendix I.

Data for 1964 and 1969-71 are based on a 50-percent sample of births.

Table 8. Estimated number of live births to unmarried women, by age of mother, live-birth order, and race: United States, 1975

[Figures by age and order may not add to totals because of rounding]

Age of mother and race	All births	Live-birth order					
		1st birth	2d birth	3d birth	4th birth	Birth of 5th or higher order	Not stated
All races ¹	447,900	272,200	87,700	40,000	19,100	21,800	7,300
Under 15 years.....	11,000	10,500	200	-	-	-	300
15-19 years	222,500	181,500	31,200	5,300	700	100	3,800
20-24 years	134,000	63,900	39,800	19,000	6,900	2,500	2,000
25-29 years	50,200	12,400	12,300	11,200	7,100	6,500	700
30-34 years	19,800	3,000	3,200	3,500	3,100	6,700	300
35-39 years	8,100	800	800	900	1,100	4,400	100
40 years and over	2,300	200	200	200	200	1,600	0
White.....	186,400	128,600	28,200	12,800	6,200	7,000	3,500
Under 15 years.....	3,600	3,400	-	-	-	-	100
15-19 years	93,900	83,500	7,500	800	100	0	2,000
20-24 years	54,500	32,500	13,600	5,400	1,700	500	900
25-29 years	21,200	6,900	5,100	4,500	2,500	2,000	300
30-34 years	8,600	1,800	1,500	1,600	1,300	2,300	100
35-39 years	3,600	500	400	400	500	1,700	0
40 years and over	1,000	100	100	100	100	600	0
Black.....	249,600	136,400	57,100	26,100	12,200	14,100	3,700
Under 15 years.....	7,200	6,800	200	-	-	-	200
15-19 years	123,800	93,800	23,100	4,400	600	100	1,800
20-24 years	75,600	29,300	25,000	13,100	5,100	2,000	1,100
25-29 years	27,100	5,000	6,700	6,300	4,300	4,400	400
30-34 years	10,500	1,100	1,600	1,800	1,600	4,200	100
35-39 years	4,200	200	300	500	600	2,600	100
40 years and over	1,200	100	100	100	100	900	0

¹Includes races other than white and black.

Table 9. Ranking of 39 reporting areas according to ratios of births to unmarried women, by race, 1969-71 average

[Ratios are out-of-wedlock live births per 1,000 total live births in specified group]

Area	All races ¹		White		Black	
	Rank	Ratio	Rank	Ratio	Rank	Ratio
39 reporting areas .....	...	108.3	...	53.8	...	378.0
Alabama	7	138.7	38	30.2	22	358.6
Alaska.....	28	77.9	32	39.5	35	100.3
Arizona.....	16	100.6	5	72.8	19	379.1
Arkansas.....	9	125.9	33	38.5	15	390.9
Colorado.....	22	86.1	4	76.4	31	303.2
Delaware.....	3	151.5	16	59.0	1	503.1
District of Columbia.....	1	382.5	1	192.0	9	415.2
Florida.....	5	149.5	11	62.6	7	418.6
Hawaii.....	18	91.4	2	84.2	38	78.9
Illinois.....	8	133.6	19	55.5	4	445.6
Indiana.....	24	84.6	17.5	56.2	21	362.6
Iowa.....	36	68.0	12.5	60.8	6	428.8
Kansas.....	35	68.6	28	49.5	29	320.2
Kentucky.....	23	85.8	23	53.5	8	417.9
Louisiana.....	6	144.9	34	38.4	28	324.1
Maine.....	33	70.8	6	70.4	36	89.6
Michigan.....	14	109.4	12.5	60.8	20	367.7
Minnesota.....	27	78.1	8	68.6	5	443.2
Mississippi.....	2	183.0	37	32.0	26	347.1
Missouri.....	13	113.7	22	54.1	2	446.6
Nebraska.....	29	77.5	14	59.3	3	445.9
New Hampshire.....	38	56.8	17.5	56.2	34	166.7
New Jersey.....	15	106.1	31	43.5	14	392.4
North Carolina.....	10	124.3	36	36.1	24	351.9
North Dakota.....	37	66.7	20	54.6	39	26.1
Oklahoma.....	19	89.6	25	53.0	17	380.9
Oregon.....	31	76.5	7	69.7	16	382.6
Pennsylvania.....	17	95.1	26	51.1	11	403.6
Rhode Island.....	34	69.8	24	53.2	13	399.4
South Carolina.....	4	151.0	35	37.1	27	346.2
South Dakota.....	25	83.1	21	54.2	37	87.0
Tennessee.....	11	121.0	30	44.4	10	409.3
Texas.....	20	89.4	27	50.2	30	314.7
Utah.....	39	33.0	39	30.1	33	244.1
Virginia.....	12	114.7	29	46.3	23	358.1
Washington.....	21	88.4	3	76.8	25	348.0
West Virginia.....	30	76.8	10	64.1	18	379.7
Wisconsin.....	26	78.2	15	59.1	12	402.2
Wyoming.....	32	73.3	9	65.9	32	288.3

¹Includes races other than white and black.

Table 10. Ratios of births to unmarried women by race: each reporting State and the District of Columbia, 1940, 1950, 1960, 1965, and 1969-76—Con.

[Ratios are out-of-wedlock live births per 1,000 total live births in specified group. Refers only to out-of-wedlock births occurring within the reporting area to residents of the area]

Area and race	1976 ¹	1975 ¹	1974 ¹	1973 ¹	1972 ¹	1971 ²	1970 ²	1969 ²	1965 ²	1960 ²	1950	1940
Texas.....	123.6	122.7	117.8	120.2	112.9	99.9	87.4	80.9	72.7	51.5	33.7	29.7
White	72.2	69.9	66.0	67.3	61.0	54.6	49.9	46.1	40.3	23.3	14.6	16.2
All other	406.1	404.6	397.3	397.7	378.0	340.9	292.9	283.8	238.8	213.5	156.0	124.4
Black	428.7	423.9	414.1	412.4	391.2	351.6	301.1	289.1	—	—	—	—
Utah.....	32.0	30.4	26.6	29.8	32.6	31.7	36.0	31.3	23.9	15.6	9.6	7.0
White	29.2	28.1	23.6	27.4	29.6	29.3	32.2	28.6	22.4	13.7	9.2	6.6
All other	116.7	104.9	123.6	112.5	131.6	109.8	162.0	131.7	74.1	104.3	*34.7	*40.8
Black	245.2	171.4	194.0	275.9	236.1	202.4	229.2	310.8	—	—	—	—
Vermont.....	—	—	—	—	—	—	—	—	—	—	21.9	32.0
White	—	—	—	—	—	—	—	—	—	—	21.7	32.0
All other	—	—	—	—	—	—	—	—	—	—	400.0	—
Black	—	—	—	—	—	—	—	—	—	—	—	—
Virginia.....	153.6	147.0	137.4	132.2	129.0	120.7	116.2	107.2	97.6	79.1	67.2	75.5
White	61.8	57.0	51.7	49.2	44.7	46.0	47.0	46.0	36.2	25.3	22.2	27.5
All other	427.8	422.7	412.6	405.9	404.1	364.7	354.0	317.2	283.5	241.0	194.8	197.8
Black	459.8	451.6	437.5	428.9	423.9	379.5	367.5	326.7	—	—	—	—
Washington.....	102.9	100.4	94.3	90.1	83.7	84.0	91.6	89.1	60.1	28.6	17.4	17.1
White	87.7	85.6	79.5	74.9	69.5	71.3	79.7	79.0	52.9	24.7	14.9	15.0
All other	248.0	248.0	243.0	250.4	244.2	238.7	242.1	220.9	165.9	96.4	85.9	91.8
Black	393.6	385.1	381.3	393.5	376.3	363.6	362.3	319.7	—	—	—	—
West Virginia.....	107.2	104.1	96.8	95.4	90.6	90.2	63.5	76.5	79.2	59.4	48.2	49.1
White	91.1	88.1	80.6	79.1	76.1	75.2	53.7	63.3	64.3	47.6	40.0	44.2
All other	460.4	453.1	424.3	455.6	393.2	412.7	281.4	351.8	357.0	292.1	171.3	138.2
Black	505.1	491.1	455.0	493.8	430.8	459.5	297.6	381.4	—	—	—	—
Wisconsin.....	109.2	108.6	102.6	98.4	94.0	83.1	75.7	76.0	49.1	25.2	17.8	19.6
White	78.6	78.4	72.7	70.4	66.1	59.1	60.8	57.3	38.0	19.4	15.4	18.2
All other	489.6	483.4	475.3	452.2	439.1	404.6	326.6	364.8	282.3	163.7	145.5	134.2
Black	573.0	558.2	550.5	513.0	492.2	454.8	342.5	405.9	—	—	—	—
Wyoming.....	71.2	70.7	69.9	75.6	80.1	75.0	66.6	78.9	44.7	23.0	12.5	—
White	63.8	63.8	63.3	67.7	72.3	69.3	60.3	68.6	39.4	19.1	10.2	—
All other	219.7	237.2	239.7	224.0	229.7	209.7	200.0	273.3	162.0	118.1	88.9	—
Black	315.8	333.3	388.9	379.3	309.5	*216.2	307.7	342.9	—	—	—	—

¹Based on 100 percent of births in selected States and on a 50-percent sample of births in all other States; see appendix I.

²Based on a 50-percent sample of births.

³Figures for 1965-72 include an unknown number of out-of-wedlock births erroneously allocated to this area because of incomplete residence reporting; see appendix I.

Table 11. Ratios of births to unmarried women by age of mother and race: 38 reporting States and the District of Columbia, 1975

[Ratios are out-of-wedlock live births per 1,000 total live births in specified group. Refers only to out-of-wedlock births occurring within the reporting area to residents of the area]

Area and race ¹	All ages	Age of mother						
		Under 15 years	15-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40 years and over
Total.....	142.3	849.9	373.4	119.0	51.5	50.6	68.1	83.5
White.....	69.7	657.0	214.3	56.8	24.4	25.0	35.6	43.5
Black.....	490.2	974.6	759.6	423.6	264.5	236.5	237.2	235.6
Alabama.....	183.4	831.2	414.8	138.7	58.7	57.9	77.8	102.7
White.....	43.4	504.8	130.4	30.5	8.9	10.5	14.2	23.9
Black.....	448.6	951.0	735.9	354.7	216.1	188.9	174.0	168.8
Alaska.....	106.9	*1,000.0	351.5	91.6	32.4	32.9	62.5	115.4
White.....	63.0	*1,000.0	267.2	49.3	18.4	21.9	-	55.6
Black.....	83.0	-	155.6	117.6	-	-	-	-
Arizona.....	133.0	904.8	332.2	115.3	55.2	54.5	56.9	95.5
White.....	98.3	916.7	271.0	81.7	36.7	39.6	46.7	62.9
Black.....	445.2	909.1	686.5	408.8	226.8	211.5	45.5	166.7
Arkansas.....	164.7	813.0	365.8	114.1	60.2	65.3	100.5	155.6
White.....	55.2	562.5	152.9	33.0	18.4	13.9	36.8	23.4
Black.....	500.3	973.3	750.7	400.6	274.1	261.3	244.8	398.1
Colorado.....	96.0	750.0	284.9	88.2	34.2	24.3	45.4	63.0
White.....	84.0	708.3	259.4	75.5	29.8	21.8	39.1	58.0
Black.....	344.7	*933.3	598.7	318.5	172.3	96.8	220.0	*250.0
Delaware.....	184.3	920.0	496.5	167.7	60.3	56.7	72.3	103.4
White.....	72.8	*666.7	252.4	64.4	26.1	28.1	19.5	41.7
Black.....	584.9	954.5	862.6	517.5	290.8	260.9	350.0	*400.0
District of Columbia.....	484.7	961.5	832.5	511.2	255.2	182.0	201.6	200.0
White.....	111.1	*1,000.0	456.5	230.8	53.6	35.4	20.2	*111.1
Black.....	550.6	960.8	847.5	539.0	313.8	268.9	276.4	237.3
Florida.....	193.9	865.0	450.8	156.9	70.6	70.8	92.3	114.4
White.....	74.8	579.6	213.3	61.1	25.8	27.5	38.1	43.0
Black.....	544.0	987.7	793.8	462.9	303.9	269.1	257.8	287.4
Hawaii.....	124.5	1,000.0	371.0	122.2	58.5	52.3	32.9	62.5
White.....	103.0	*1,000.0	265.0	94.4	69.7	54.6	34.5	-
Black.....	94.7	-	285.7	88.9	43.5	-	-	-
Illinois.....	186.0	955.3	478.3	173.9	76.7	73.6	96.2	129.8
White.....	75.6	847.9	250.7	67.4	28.7	29.1	41.8	56.8
Black.....	599.9	998.2	840.9	565.0	389.8	352.7	339.9	367.1
Indiana.....	120.8	851.1	302.4	96.5	44.4	45.4	61.3	74.7
White.....	74.3	750.0	207.1	56.0	25.5	28.0	40.7	41.4
Black.....	513.1	971.6	768.0	456.8	297.8	238.4	244.3	289.2
Iowa.....	80.9	903.2	273.6	62.4	25.8	29.0	32.3	39.3
White.....	72.3	872.3	251.8	55.3	22.6	25.7	29.7	34.0
Black.....	482.1	1,000.0	799.2	412.9	242.2	234.4	156.3	*333.3

¹Total for each area includes races other than white and black.

Table 11. Ratios of births to unmarried women by age of mother and race: 38 reporting States and the District of Columbia, 1975—Con.

[Ratios are out-of-wedlock live births per 1,000 total live births in specified group. Refers only to out-of-wedlock births occurring within the reporting area to residents of the area]

Area and race ¹	All ages	Age of mother						
		Under 15 years	15-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40 years and over
Kansas	94.7	815.2	279.8	70.6	28.2	33.8	37.8	18.1
White.....	64.5	696.4	213.0	46.0	16.6	23.8	20.2	5.1
Black.....	479.2	1,000.0	714.3	392.8	271.5	245.0	290.3	*166.7
Kentucky.....	113.9	647.9	254.9	85.4	42.0	53.3	60.1	48.8
White.....	76.2	489.1	177.0	54.9	30.4	38.6	38.0	31.6
Black.....	520.2	1,000.0	820.3	423.8	233.3	261.4	321.7	266.7
Louisiana.....	204.6	852.2	428.3	168.9	86.1	86.6	109.4	126.3
White.....	55.5	532.6	165.7	40.8	16.0	14.4	35.7	49.3
Black.....	435.4	930.7	670.0	381.8	254.2	222.2	209.2	203.4
Maine.....	95.6	714.3	268.4	73.8	33.4	39.2	51.2	59.8
White.....	95.9	714.3	268.8	74.2	33.3	39.9	51.5	60.3
Black.....	96.8	-	*214.3	35.7	*125.0	-	-	-
Michigan.....	146.9	937.6	422.7	121.7	47.8	46.9	61.6	67.3
White.....	77.4	868.3	275.1	60.1	21.0	23.4	33.4	40.9
Black.....	477.9	979.7	780.8	426.8	243.6	206.4	203.9	181.3
Minnesota.....	91.3	909.1	375.7	78.7	29.2	23.0	30.3	27.0
White.....	77.0	864.9	342.8	65.6	22.6	17.7	26.8	20.0
Black.....	461.5	*1,000.0	787.5	433.2	251.0	145.6	181.8	*400.0
Mississippi.....	241.8	908.5	483.6	178.8	97.7	89.3	158.1	163.2
White.....	39.5	509.1	121.4	27.4	12.3	4.6	11.3	13.2
Black.....	465.1	957.6	700.5	369.7	263.2	219.9	275.8	230.8
Missouri.....	150.6	873.3	380.6	124.5	56.4	59.6	83.8	110.8
White.....	71.1	683.3	218.2	54.6	23.1	22.5	41.8	57.9
Black.....	585.4	1,000.0	848.0	533.0	349.1	331.2	354.5	347.8
Nebraska.....	88.5	926.8	313.8	72.2	31.3	27.8	39.2	31.0
White.....	64.0	869.6	244.3	53.7	21.6	18.1	27.1	23.6
Black.....	551.2	*1,000.0	840.0	469.3	320.4	284.0	280.0	*222.2
New Hampshire.....	78.1	*800.0	273.6	60.0	25.7	41.7	62.3	92.0
White.....	77.7	*800.0	272.7	60.1	25.5	40.9	57.6	82.4
Black.....	200.0	-	*428.6	*125.0	*55.6	*200.0	*500.0	-
New Jersey.....	156.7	951.1	531.1	172.1	59.5	50.6	57.7	64.4
White.....	73.3	886.6	306.5	90.7	31.9	27.9	34.6	33.1
Black.....	521.4	980.8	854.1	515.6	278.9	212.5	182.6	219.5
North Carolina.....	160.5	825.8	393.4	118.8	41.5	45.2	60.6	66.3
White.....	45.1	416.1	134.7	32.7	11.8	14.6	24.8	28.7
Black.....	428.4	994.4	731.2	315.9	162.0	163.5	142.9	122.0
North Dakota.....	79.3	*833.3	324.0	61.9	20.3	12.3	25.8	38.1
White.....	58.0	*750.0	270.0	43.7	10.4	9.3	21.7	38.8
Black.....	129.0	-	*315.8	120.0	-	-	-	-

¹Total for each area includes races other than white and black.

Table 11. Ratios of births to unmarried women by age of mother and race: 38 reporting States and the District of Columbia, 1975—Con.

[Ratios are out-of-wedlock live births per 1,000 total live births in specified group. Refers only to out-of-wedlock births occurring within the reporting area to residents of the area]

Area and race ¹	All ages	Age of mother						
		Under 15 years	15-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40 years and over
Oklahoma.....	112.8	771.4	268.4	82.4	35.9	43.3	77.9	74.1
White.....	62.5	647.1	172.4	40.6	19.2	22.1	44.3	60.6
Black.....	463.3	982.8	703.1	377.8	216.5	233.7	291.3	157.9
Oregon.....	100.5	818.2	300.4	87.5	39.7	37.0	57.0	56.8
White.....	90.6	796.6	277.9	78.1	35.2	35.1	53.2	49.1
Black.....	467.7	*1,000.0	773.1	418.6	271.6	163.9	*363.6	-
Pennsylvania.....	126.7	842.1	373.8	119.3	45.1	40.6	55.9	66.3
White.....	66.7	647.1	226.4	58.7	24.4	25.3	39.1	49.4
Black.....	545.1	975.8	828.0	514.2	289.3	238.2	225.5	222.2
Rhode Island.....	114.6	*1,000.0	373.5	102.5	44.1	39.8	59.1	93.8
White.....	89.4	*1,000.0	310.7	79.3	34.9	33.8	51.0	57.5
Black.....	546.8	*1,000.0	786.1	497.5	361.9	217.4	*222.2	*500.0
South Carolina.....	194.3	827.8	442.3	154.1	64.6	64.1	110.2	149.1
White.....	49.3	478.9	145.4	39.3	13.4	12.7	24.9	43.8
Black.....	418.3	922.8	715.2	333.6	189.6	178.5	228.0	220.6
South Dakota.....	115.6	818.2	316.6	104.6	47.0	50.1	50.0	29.0
White.....	69.7	*666.7	248.6	59.0	19.8	17.3	15.8	-
Black.....	37.7	-	-	-	-	*250.0	-	-
Tennessee.....	158.2	800.0	336.4	126.2	62.7	70.2	90.6	126.4
White.....	59.2	487.8	143.9	45.7	21.8	26.3	39.1	58.4
Black.....	517.1	996.2	760.1	434.3	290.2	299.7	305.3	325.9
Texas.....	122.5	782.2	293.7	99.8	45.9	47.1	60.1	71.5
White.....	69.8	607.9	175.8	56.6	27.8	30.9	43.6	58.3
Black.....	423.7	979.8	684.5	350.8	203.5	185.5	181.9	152.2
Utah.....	30.3	619.0	133.3	25.5	9.9	4.5	9.6	6.5
White.....	28.0	650.0	126.3	23.1	9.2	4.2	8.5	-
Black.....	171.4	-	*333.3	166.7	133.3	*125.0	-	-
Virginia.....	145.6	832.2	384.3	133.1	52.6	47.9	61.0	74.5
White.....	56.4	566.0	179.1	51.7	19.7	17.7	28.8	32.9
Black.....	450.6	979.1	728.6	385.2	240.9	225.4	212.1	181.8
Washington.....	100.0	883.5	300.1	88.1	41.1	34.0	55.6	43.8
White.....	85.3	915.5	267.0	75.3	34.0	28.9	41.2	50.4
Black.....	384.7	*888.9	666.7	345.5	220.6	122.9	153.8	-
West Virginia.....	99.1	592.2	224.7	71.9	46.0	49.7	52.2	117.6
White.....	83.7	548.4	190.3	60.2	38.3	47.3	47.5	124.4
Black.....	481.7	*1,000.0	775.1	355.6	304.8	181.8	*333.3	-
Wisconsin.....	108.6	1,000.0	406.6	88.2	32.4	31.2	38.6	36.0
White.....	78.4	1,000.0	332.6	60.7	21.8	23.0	27.0	19.3
Black.....	558.2	1,000.0	852.9	503.0	291.1	240.8	296.3	366.7
Wyoming.....	70.1	*733.3	230.3	43.6	18.9	26.7	21.1	-
White.....	63.3	*666.7	214.4	39.5	15.1	24.6	21.7	-
Black.....	333.3	-	642.9	157.9	*200.0	-	-	-

¹Total for each area includes races other than white and black.

Table 12. Number and ratio of births to unmarried women for metropolitan and nonmetropolitan counties by age of mother and race: total of 38 reporting States and the District of Columbia, 1975

[Ratios are out-of-wedlock live births per 1,000 total live births in specified group]

Age of mother and race	Number			Ratio		
	All counties	Metro-politan counties	Nonmetro-politan counties	All counties	Metro-politan counties	Nonmetro-politan counties
All races¹						
All ages	303,043	204,507	98,536	142.3	157.6	118.4
Under 15 years.....	7,861	5,050	2,811	849.9	894.8	779.8
15-19 years	154,787	101,728	53,059	373.4	429.1	298.9
20-24 years	89,800	62,221	27,579	119.0	139.9	89.1
25-29 years	31,807	22,664	9,143	51.5	57.1	41.3
30-34 years	12,169	8,498	3,671	50.6	54.4	43.7
35-39 years	5,079	3,356	1,723	68.1	72.6	60.7
40 years and over	1,540	990	550	83.5	92.5	71.1
White						
All ages.....	120,066	74,931	45,135	69.7	73.6	64.2
Under 15 years.....	2,335	1,350	985	657.0	725.4	581.8
15-19 years	61,858	37,294	24,564	214.3	243.6	181.2
20-24 years	34,960	22,234	12,726	56.8	63.5	47.9
25-29 years	13,042	8,793	4,249	24.4	26.0	21.5
30-34 years	5,109	3,445	1,664	25.0	26.3	22.6
35-39 years	2,147	1,398	749	35.6	38.0	31.9
40 years and over	615	417	198	43.5	51.2	33.1
Black						
All ages.....	175,593	126,505	49,088	490.2	504.7	456.3
Under 15 years.....	5,366	3,623	1,743	974.6	978.9	965.7
15-19 years	89,698	63,109	26,589	759.6	782.9	709.5
20-24 years	52,419	39,011	13,408	423.6	448.5	364.5
25-29 years	17,762	13,421	4,341	264.5	273.4	240.4
30-34 years	6,680	4,869	1,811	236.5	241.2	224.8
35-39 years	2,796	1,909	887	237.2	243.2	225.2
40 years and over	872	563	309	235.6	250.2	213.0

¹Includes races other than white and black.

Table 13. Ratios of births to unmarried women by age of mother and race: 25 largest standard metropolitan statistical areas in the reporting States, 1975

[Ratios are out-of-wedlock live births per 1,000 total live births in specified group]

Area and race ¹	All ages	Age of mother						
		Under 15 years	15-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40 years and over
Total.....	175.8	919.8	480.3	164.2	64.5	59.9	79.3	108.5
White.....	76.5	764.5	266.3	70.3	26.9	27.4	39.4	52.9
Black.....	524.0	982.7	802.6	475.8	293.2	254.5	252.0	286.2
Birmingham, Ala.	172.3	809.5	436.5	129.6	53.1	52.9	82.3	97.6
White.....	34.7	*600.0	119.6	23.8	6.8	10.5	38.5	-
Black.....	413.9	875.0	739.1	305.5	191.4	179.7	166.7	181.8
Chicago, Ill.	224.0	974.3	589.2	228.0	93.2	82.3	110.9	147.8
White.....	78.1	882.9	296.5	78.3	31.1	30.0	46.5	65.6
Black.....	602.8	997.7	849.9	573.0	393.0	346.9	336.0	354.8
Dallas, Tex.	162.5	880.8	414.4	135.0	44.9	48.2	62.0	109.8
White.....	66.1	618.2	205.8	51.7	17.5	26.2	30.4	49.2
Black.....	483.5	985.3	772.4	404.1	198.3	172.6	230.8	285.7
Denver, Colo.	117.8	925.0	378.5	118.0	40.1	27.6	59.5	58.8
White.....	97.6	892.9	332.0	95.6	33.2	23.1	46.3	42.6
Black.....	423.4	*	770.6	396.0	202.0	113.8	323.5	*400.0
Detroit, Mich.	190.6	956.0	519.8	173.2	65.9	63.3	73.7	78.3
White.....	76.3	869.6	297.5	65.7	20.8	24.1	31.5	33.9
Black.....	475.2	975.5	769.2	434.0	247.8	215.6	198.9	190.5
Fort Worth, Tex.	119.2	846.2	333.6	82.0	33.6	30.6	39.9	34.5
White.....	61.3	*625.0	194.1	46.5	15.0	17.1	15.1	-
Black.....	435.1	944.4	712.3	295.4	195.5	166.7	235.3	*333.3
Houston, Tex.	144.6	850.0	375.0	126.2	50.0	44.6	48.4	86.1
White.....	66.6	674.4	198.0	57.4	22.5	22.5	28.9	52.6
Black.....	411.2	1,000.0	707.4	350.4	194.2	159.2	132.8	205.9
Indianapolis, Ind.	174.3	875.0	428.7	135.3	53.8	70.3	95.2	134.3
White.....	87.6	684.2	263.1	61.4	21.3	41.8	65.3	58.8
Black.....	582.0	1,000.0	828.1	499.5	332.1	304.3	235.3	375.0
Kansas City, Mo.-Kans.	160.5	882.4	425.8	140.2	57.4	56.2	91.4	157.9
White.....	73.1	687.5	242.8	60.4	24.4	23.4	42.4	73.2
Black.....	544.5	1,000.0	801.7	498.7	305.4	273.0	340.0	375.0
Louisville, Ky.-Ind.	166.6	882.4	413.8	134.7	49.6	53.2	70.0	90.9
White.....	83.9	666.7	230.6	67.0	27.1	33.0	36.6	76.9
Black.....	544.3	1,000.0	885.5	453.2	217.0	197.5	235.3	*142.9
Memphis, Tenn.-Ark.	305.2	973.2	605.1	254.5	125.2	138.8	201.5	273.4
White.....	47.4	*700.0	160.8	39.6	14.5	17.5	24.4	-
Black.....	540.3	992.8	782.6	467.7	316.1	298.9	326.4	376.3
Miami, Fla.	194.9	879.1	525.8	182.5	80.3	70.9	74.4	95.9
White.....	62.4	500.0	199.3	64.9	27.9	34.0	32.4	63.3
Black.....	499.1	985.9	800.6	448.6	279.0	224.1	200.0	183.3

¹Total for each area includes races other than white and black.

Table 13. Ratios of births to unmarried women by age of mother and race: 25 largest standard metropolitan statistical areas in the reporting States, 1975—Con.

[Ratios are out-of-wedlock live births per 1,000 total live births in specified group]

Area and race ¹	All ages	Age of mother						
		Under 15 years	15-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40 years and over
Milwaukee, Wisc.	165.5	1,000.0	552.2	151.0	49.6	51.0	73.1	70.3
White.....	85.9	*	383.9	75.2	22.8	29.2	38.4	19.9
Black.....	576.7	1,000.0	863.2	529.6	303.8	253.8	316.3	357.1
Minneapolis-St. Paul, Minn.	115.2	1,000.0	495.5	115.0	40.7	29.4	51.1	57.8
White.....	91.3	*	437.9	91.9	30.7	22.9	43.9	38.7
Black.....	479.2	*	796.2	445.7	265.6	164.8	190.5	*400.0
New Orleans, La.	225.7	868.4	477.6	202.8	106.2	99.2	99.8	130.7
White.....	55.8	*562.5	177.1	49.8	20.6	14.3	25.6	72.3
Black.....	424.1	918.4	663.4	375.0	263.0	237.3	196.4	209.0
Newark, N.J.	222.1	937.5	674.8	256.4	90.5	62.1	84.0	122.6
White.....	73.2	833.3	339.2	88.9	35.0	26.8	33.5	41.1
Black.....	525.2	971.4	861.5	526.2	292.1	196.0	210.5	312.5
Paterson-Clifton-Passaic, N.J.	114.0	1,000.0	491.9	128.5	41.8	40.6	45.5	37.6
White.....	60.0	*	286.5	70.6	26.6	23.8	38.4	32.1
Black.....	531.1	*	868.5	499.1	298.8	254.7	123.5	100.0
Philadelphia, Pa.-N.J.	189.5	955.6	536.7	197.1	67.1	51.8	64.0	95.1
White.....	69.3	809.5	268.6	69.5	26.4	22.5	30.4	56.1
Black.....	551.1	982.5	836.9	527.6	292.7	228.7	219.3	230.8
Phoenix, Ariz.	130.4	944.4	353.1	112.0	45.7	47.0	47.5	73.5
White.....	105.0	956.5	304.7	87.5	35.3	38.5	44.9	53.6
Black.....	481.8	*857.1	734.9	450.3	230.8	236.8	62.5	*285.7
Pittsburgh, Pa.	99.0	857.1	345.9	97.5	31.6	30.8	53.8	41.7
White.....	46.3	833.3	176.9	45.1	15.8	18.4	38.4	34.1
Black.....	502.5	*888.9	819.7	446.6	258.5	215.5	208.3	*125.0
Portland, Oreg.-Wash.	112.9	818.2	380.0	103.5	40.4	33.5	67.1	33.7
White.....	95.9	785.7	338.2	87.0	34.3	30.2	65.2	36.6
Black.....	488.9	*	798.0	426.4	282.6	181.8	*333.3	-
St. Louis, Mo.-Ill.	216.0	951.0	530.9	196.7	83.9	89.5	103.4	170.0
White.....	73.4	782.6	260.5	63.1	22.8	21.7	37.7	58.6
Black.....	612.6	1,000.0	861.0	560.9	393.2	368.1	360.9	432.7
San Antonio, Tex.	125.9	756.8	277.4	113.2	50.6	80.0	77.2	125.0
White.....	108.2	727.3	236.7	94.2	46.1	75.8	70.7	141.0
Black.....	390.3	*	656.3	379.6	152.7	195.7	210.5	-
Seattle-Everett, Wash.	114.7	785.7	397.6	117.6	54.1	37.8	44.2	40.0
White.....	92.1	*666.7	331.6	94.7	45.8	35.0	25.1	48.8
Black.....	454.6	*857.1	812.0	461.1	252.0	111.1	125.0	-
Tampa-St. Petersburg, Fla.	190.2	873.7	461.6	155.0	60.4	61.5	83.0	96.2
White.....	89.9	636.4	259.5	76.1	26.3	29.7	45.8	38.0
Black.....	573.4	1,000.0	830.2	489.5	298.4	245.4	256.1	333.3

¹Total for each area includes races other than white and black.

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APPENDIX I

SOURCES OF DATA AND METHODS

Sample

Data shown in this report for 1972-76 are based on 100 percent of the birth certificates from States reporting legitimacy status and participating in the Cooperative Health Statistics System (CHSS). They are based on a 50-percent sample of births from all other reporting States. Beginning in 1972 reporting States providing data through CHSS were Florida, Maine, Missouri, New Hampshire, and Rhode Island. The following States were added in subsequent years: Michigan and Colorado in 1973; Illinois, Iowa, Kansas, Nebraska, Oregon, and South Carolina in 1974; Louisiana, North Carolina, Oklahoma, Tennessee, Virginia, and Wisconsin in 1975; and Alabama, Kentucky, Minnesota, and West Virginia in 1976. Data for 1951-54, 1956-66, and 1968-71 are based on a 50-percent sample of births, while statistics for 1967 are based on a 20- to 50-percent sample of births. Birth data for 1955 and years prior to 1951 are based on 100 percent of the birth records.

Residence Classification

All tables included in this report are by place of residence. Births to U.S. residents occurring outside this country are not reallocated to the United States. Beginning in 1970, births to nonresidents of the United States occurring in the United States have been excluded from tabulations by place of residence. Prior to this year, births occurring in the United States to nonresident mothers were considered as births to residents of the place of occurrence.

Reporting Areas for Educational Attainment and Prenatal Care

Data on educational attainment and legitimacy status are derived from information reported by the States that require the reporting of both items on the birth record. In 1975 the following States did not have both items: Alabama, Arkansas, California, Connecticut, Georgia, Idaho, Maryland, Massachusetts, Montana, Nevada, New Mexico, New York, Ohio, Pennsylvania, Texas, Vermont, and Washington. Data on prenatal care and legitimacy status are also based on statistics from the States that report both items on the birth certificate. The following States did not report both items in 1975: Alabama, Alaska, Arkansas, California, Connecticut, Georgia, Idaho, Maryland, Massachusetts, Montana, Nevada, New Mexico, New York, Ohio, Pennsylvania, Vermont, and Virginia.

Birth statistics by legitimacy status, educational attainment, and prenatal care are based only on births occurring in the areas that reported these items to residents of these areas. Thus illegitimate births occurring in New York State to residents of New Jersey, for example, are not included in tabulations of illegitimate births because New York State does not report legitimacy status.

Determination of Race of Child

Births are classified according to the race or national origin of the parents: white, black, or other. The category "white" comprises births

reported as white, Mexican, Puerto Rican, and Cuban. The category "other races" includes American Indian, Chinese, Japanese, Hawaiian and Part-Hawaiian, Filipino, and "other" births. Since the race of the father is not stated for the majority of births to unmarried women, the race of the mother and child are identical for most of these births. Therefore, for ease and clarity in writing this report, the racial identification given to the mother is that of the child; the term "white mothers," for example, actually refers to white births.

Illegitimacy Rates by Educational Attainment

Illustrative illegitimacy rates by age of mother, educational attainment of mother, and race have been computed for this report for 1970. Since the numbers of illegitimate births by age and educational attainment of mother were not available for the United States as a whole, they were estimated by applying the known distribution of illegitimate births by educational attainment in the 33 reporting States and the District of Columbia to the estimated number of illegitimate births in the United States as a whole. This procedure was done separately by race.

The populations of unmarried women by age, educational attainment, and race (the denominators for the rates) were derived from the 1970 census report, *Marital Status*.³⁹

Incomplete Residence Reporting on District of Columbia Birth Certificates

The place of residence was incompletely reported on a sizable number of District of Columbia certificates of illegitimate births for the years 1965-72. When the place-of-residence item was not complete on the birth certificate, a processing rule identified the place of residence as the place of occurrence. Consequently the number of white illegitimate births classified as District of Columbia residents was overstated. In general, these births occurred to mothers whose place of residence was given simply as Virginia or Maryland, with no county or city specified.

Standardization of Proportions of Births Illegitimate and of Illegitimacy Rates by Race According to Educational Attainment of Mother

To eliminate the effects of differences between the distributions of black and white births by educational attainment and age of mother on proportions of illegitimate births by educational attainment and race, the direct method of standardization was used. The 1975 distribution of births of all races by educational attainment and age of mother in the 33 States and the District of Columbia which reported both educational attainment and legitimacy status on the birth record was used as the standard population in this procedure. Standardization for educational attainment and age of mother was performed separately for each racial group using the following formula:

$$m_1 = \frac{\sum m_a P_a}{P} \times 100$$

where

m_1 = standardized percent illegitimate for given race

m_a = proportion of births illegitimate in each educational-attainment/age-of-mother group, for given race

P_a = standard population of births in each educational-attainment/age-of-mother group

P = total standard population of births

Similarly, to eliminate the effects of differences between the distributions of black and white unmarried women by educational attainment on illegitimacy rates by educational attainment and race, the direct method of standardization was used. The 1970 distribution of unmarried women of all races by age and educational attainment was used as the standard population in this procedure. Standardization for educational attainment and age of mother

was performed separately for each racial group using the following formula:

$$m_1 = \frac{\sum m_a P_a}{P}$$

where

m_1 = standardized illegitimacy rate for given race

m_a = illegitimacy rate in each educational-attainment/age-of-mother group for given race

P_a = standard population of unmarried women in each educational-attainment/age group

P = total standard population of unmarried women 15-44 years of age



APPENDIX II

POPULATION ESTIMATES

The numbers of unmarried women by color enumerated by the U.S. Bureau of the Census in 1940 and 1950 have been used to compute illegitimacy rates for those years. However in each year since 1957 estimates of the population 14 years and older, classified by age, color, sex, and marital status, have been available from the Census Bureau's March Current Population Survey.⁴⁰ Since these estimates fluctuate erratically from year to year because of sampling error, they have been smoothed so that the rates computed from them do not also fluctuate.

The observed percent of unmarried women (defined as "single, widowed, and divorced") in each age and color group in each year was smoothed by computing a 3-term moving average for the years 1955-76. Since the data necessary for calculating the averages at the beginning of the period are not available by color, they had to be estimated. These estimates were made by assuming that the proportion unmarried for each age-color group in each year from 1954 to 1956 was the same as the corresponding proportion for 1957 and then adjusting these estimates by color to the observed total unmarried population in each age group in each year.

The percents of unmarried women obtained by computing a moving average were subsequently applied to estimates of the total resident population as of July 1 in the appropriate age-color groups. The total numbers of unmarried women by age for 1955-76 were estimated by summing up the figures for white women and women of all other races.

The total figures (both color groups combined) for 1951-54 were estimated by com-

puting a 3-term moving average of the percent unmarried for each age group and applying these to the annual July 1 estimates of the total resident population in the appropriate age groups.

Beginning with 1969 data, estimates of the number of unmarried black women have been prepared, and illegitimacy rates for this group are shown in this report. In addition it has been possible to refine further the age groupings for which illegitimacy rates are calculated. Thus rates are now separately available for teenage girls 15-17 and 18-19 years of age, beginning in 1966. At the other end of the age spectrum, since 1969 rates have been computed by race separately for unmarried women 35-39 and 40-44 years of age, replacing the combined grouping 35-44 years.

In this report the age-specific illegitimacy rates shown in table 1 for 1941-49 are based on Census Bureau estimates of the unmarried female population. The rates by age and color for 1940 and 1950 are based on census counts. The illegitimacy rates by age for 1951-76 and the rates by age and color or race for 1955-76 were computed using the smoothed series of population estimates described above.

The smoothed series were used in order to have a consistent series for 1951-76. The rates differ, therefore, from those published in issues of *Vital Statistics of the United States* up through 1968, which were based on population estimates provided annually by the Census Bureau.

Illegitimacy rates in this report for the years 1961-69 are based on revised estimates of the resident female population and thus may differ

from those published in *Vital Statistics of the United States*, Volume I, "Natality," for years prior to 1976. The revised population estimates of unmarried women by age and race were

obtained by applying the proportions of unmarried women to the revised total resident population estimates published by the Bureau of the Census in the *Current Population Reports*.⁴¹



APPENDIX III

EVALUATION OF REPORTED LEGITIMACY STATUS

The measurement of illegitimacy in the United States has depended largely on the legitimacy status item, included on the birth certificates of 38 States and the District of Columbia in 1975. The accuracy of illegitimacy statistics thus is very much dependent on the validity of the reporting of this item. In an effort to assess the quality of reporting, an independent study was conducted for a large sample of 1973 births to infer the legitimacy status of births occurring in the reporting States by comparing the surnames of the child, the father, and the mother (present and maiden). The study was carried out by Ronald Chamblee in connection with his work at NCHS and his graduate studies at North Carolina State University,⁷ partly in order to compare the reported with the inferred legitimacy status for each birth.

In Chamblee's study there were four basic criteria developed for use in determining the legitimacy status of a birth:

1. If a record contained no father's name, the birth was considered illegitimate.
2. If a record contained both the father's surname and the mother's current surname, the birth was illegitimate if the names were different; it was legitimate if they were the same.
3. If a record contained the father's surname but not the mother's current surname, the birth was illegitimate if the child's and father's names were different; it was considered legitimate if they were the same.
4. If a record was missing the child's or father's surname and was thus not complete, the birth was considered to be of indeterminate status.

Records from 16 reporting areas were selected for the study. The States were chosen on the basis of the surnames shown on each State's birth certificate, the regulations concerning the name the child takes in the case of an out-of-wedlock birth, and the laws and procedures governing entry of information about the father on the birth record for an illegitimate birth. The States included in the study were representative of the various reporting and legal situations encountered in all 38 reporting States and the District of Columbia. Stratified random sampling was used to select the sample records within each State.

The study population consisted of 516,609 records, from which a sample of 167,000 records was selected. The first five letters of each of four surnames (child's, father's, mother's present, and mother's maiden) were coded on the magnetic tape containing the previously processed source records. According to the reported method, 71,241 records (13.8 percent) had been classified illegitimate and 442,789 (85.7 percent) had been classified legitimate. Legitimacy status for the remaining 2,579 records (0.5 percent) could not be determined.^e

The distribution of the study records by reported and inferred legitimacy status is shown in table I. Using the reported method as the standard, the inferential method correctly classified 99.0 percent of the births reported as legitimate and 97.5 percent of the births reported as illegitimate. Only 0.4 percent of the reported legitimate births were classified as illegitimate by the inferential method. Of the births reported as illegitimate, 1.8 percent were

^eIn processing, NCHS recodes such records as legitimate.

Table I. Number and percent distribution of births by inferred legitimacy status, according to reported legitimacy status: sample of 15 selected States and the District of Columbia, 1973

Reported legitimacy status	Total	Inferred legitimacy status		
		Legitimate	Illegitimate	Indeterminate
<u>Total</u>				
Number	516,609	441,557	71,605	3,447
Percent distribution.....	100.0	85.5	13.9	0.7
<u>Legitimate</u>				
Number	442,789	438,270	1,641	2,878
Percent distribution.....	100.0	99.0	0.4	0.6
<u>Illegitimate</u>				
Number	71,241	1,296	69,476	469
Percent distribution.....	100.0	1.8	97.5	0.7
<u>Indeterminate</u>				
Number	2,579	1,991	488	100
Percent distribution.....	100.0	77.2	18.9	3.9

classified as legitimate. Thus on an overall basis the inferential procedure was quite successful in measuring the extent of illegitimacy.

The closest agreement between the inferential method and the reported legitimacy status occurred when the legitimacy status was inferred on the basis of the first criterion for illegitimacy—absence of the father's surname. Only 1.3 percent of the records with the father's surname missing had been reported as legitimate (table II). Furthermore, this criterion was used more frequently than any other—for 81.6 percent of the records inferred to be illegitimate. The second criterion, "father's surname differs from mother's present surname," was applicable to 14.8 percent of the records inferred to be illegitimate. The rate of difference between the two methods was rather high—7.7 percent. The third criterion, "father's surname not same as child's," was applied to only 3.5 percent of the records and the rate of difference was 2.7 percent. This criterion was infrequently used since it was only pertinent when the mother's current surname was missing from the record. Nearly all the records lacking the mother's current surname were from Pennsylvania, where the informant item often states "mother" instead of her name. The "errors" of understatement

and overstatement are summarized in table III.

Chamblee tabulated his results by State, age of mother, race, live-birth order, and place of delivery. The States showing the closest agreement between the two procedures were Arizona, Iowa, Missouri, Nebraska, New Jersey, Pennsylvania, Rhode Island, South Carolina, and Virginia. Excessive errors of overstatement and/or understatement were observed for Alaska, Arkansas, the District of Columbia, Illinois, and Mississippi. As might be expected, agreement by age of mother was excellent through age 29 and then deteriorated at age 30 and over, when the likelihood of divorce and remarriage, and therefore more name possibilities, is greater (table IV). Agreement was relatively closer, and compensating errors proportionately fewer, for black than for white births. Although agreement by live-birth order was relatively high for all birth orders less than seven, there was a tendency for compensating errors to increase steadily from the first through the sixth birth order. Agreement was substantially lower for seventh and higher order births. Finally, the legitimacy status of births occurring in hospitals was identical for nearly all births for both procedures, and compensating errors were relatively few. There was

Table II. Number and percent distribution of births by reported legitimacy status, according to inferred legitimacy status and inferential criteria: sample of 15 selected States and the District of Columbia, 1973

Inferred legitimacy status and criterion	Total	Reported legitimacy status		
		Legitimate	Illegitimate	Indeterminate
<u>ILLEGITIMATE</u>				
<u>All criteria</u>				
Number	71,605	1,641	69,476	488
Percent distribution.....	100.0	2.3	97.0	0.7
<u>Father's name missing</u>				
Number	58,453	760	57,408	285
Percent distribution.....	100.0	1.3	98.2	0.5
<u>Father's surname differs from mother's present surname</u>				
Number	10,627	813	9,616	198
Percent distribution.....	100.0	7.7	90.5	1.9
<u>Father's surname not same as child's</u>				
Number	2,525	68	2,452	5
Percent distribution.....	100.0	2.7	97.1	0.2
<u>LEGITIMATE</u>				
<u>All criteria</u>				
Number	441,557	438,270	1,296	1,991
Percent distribution.....	100.0	99.3	0.3	0.5
<u>Father's surname same as mother's present surname</u>				
Number	398,042	395,229	898	1,915
Percent distribution.....	100.0	99.3	0.2	0.5
<u>Father's surname same as child's</u>				
Number	43,515	43,041	398	76
Percent distribution.....	100.0	98.9	0.9	0.2
<u>INDETERMINATE</u>				
Number	3,447	2,878	469	100
Percent distribution.....	100.0	83.5	13.6	2.9

relatively more disagreement for births occurring outside of hospitals.

On the basis of his findings, Chamblee listed several cautions in using the inferential method. First, the success of the method is somewhat dependent on the cancellation of "errors" of overstatement and understatement; such errors were relatively frequent. Second, the increasing trend toward permitting the father's surname to

be entered on the birth record of an out-of-wedlock birth diminishes the extent to which the "father's-surname-is-missing" criterion can be used to infer legitimacy status, and it is this criterion that has had the lowest error rate. Similarly, any increase in the incidence of married women retaining their maiden names or adopting a hyphenated combined maiden-husband surname would likely be associated

Table III. Comparison between reported and inferred illegitimate births and allocation of inferential error by type of error: sample of 15 selected States and the District of Columbia, 1973

Measure	Reported illegitimate	Inferred illegitimate	Type of error					
			Overstatement			Understatement		
			Total	Reported legitimate, inferred illegitimate	Reported indeterminate, inferred illegitimate	Total	Reported illegitimate, inferred legitimate	Reported illegitimate, inferred indeterminate
Number	71,241	71,605	2,129	1,641	488	1,765	1,296	469
Percent reported illegitimate	100.0	100.5	3.0	2.3	0.7	2.5	1.8	0.7

Table IV. Comparison between reported and inferred illegitimate births by age of mother: sample of 15 selected States and the District of Columbia, 1973

Age of mother	Births reported illegitimate	Births inferred illegitimate	Births inferred illegitimate as percent of births reported illegitimate
All ages	71,241	71,605	100.5
Under 15 years.....	1,936	1,908	98.6
15-19 years	35,504	35,413	99.7
20-24 years	20,868	21,054	100.9
25-29 years	7,611	7,727	101.5
30-34 years	3,344	3,458	103.4
35-39 years	1,526	1,571	102.9
40-49 years	452	474	104.9

with more error. Finally, the assumption that a child is legitimate if his and his father's surnames are the same when the mother's present surname is missing is apparently valid now, but if current practices change, the assumption may no longer be valid. Other areas of concern relate to the

operational application of the inferential procedure and to the effect of changes in regulations and procedures that would impinge on the success of the inferential method in the various States.



APPENDIX IV

EVALUATION OF NATIONAL ESTIMATES OF BIRTHS TO UNMARRIED WOMEN

It has long been necessary to estimate the number of births to unmarried women in the United States because not all States require the reporting of legitimacy status on the birth record. The National Center for Health Statistics (NCHS) has been concerned for some time about the validity of its national estimates,⁸ particularly since several large States are not included in the legitimacy-reporting area. The usual NCHS estimation procedure has been questioned for not incorporating available inferred illegitimacy data from the nonreporting States in lieu of assuming that the reporting and nonreporting States in a given geographic division are similar with respect to proportions of out-of-wedlock births.³ Berkov and Sklar contend that in some geographic divisions "...the assumed similarity between reporting and non-reporting States is open to question..." (See page 360 of reference 3.)

For this report an attempt was made to evaluate the NCHS procedure for preparing national estimates of illegitimate births. The usual estimation procedure has been described in the text. The areas that report legitimacy status and on which national estimates are based are shown in table V.

The evaluation procedure described in this appendix is similar to that employed by Berkov and Sklar except that the NCHS evaluation is based only on 1975 data. NCHS obtained from each of the nonreporting States its inferred count of illegitimate births to residents by color or race.

All States were grouped by geographic division. A combined total of illegitimate births for each division was derived by summing the reported number of illegitimate births for the

reporting States and the inferred number of illegitimate births for the nonreporting States. The figures for the nine divisions were summed to yield an "independent" estimate of illegitimate births. This procedure was done separately for white and all other births, and the figures by color were combined to yield the estimate for the United States.

A comparison of the usual NCHS estimate and the independent estimate is shown in table VI. In general the two methods were in remarkable overall agreement for the United States, with the independent estimate exceeding the usual estimate by only 1 percent. Agreement was very close for the East North Central, South Atlantic, and Mountain Divisions. All States in three other divisions report legitimacy status (West North Central, East South Central, and West South Central), so that no independent estimates of illegitimate births had to be made. The differences between the two methods were quite large, however, in the Pacific Division, with the independent estimate 32 percent higher than the usual estimate.

The totals by color for each method showed less overall agreement than the totals for all births. For white births the independent estimate was about 6 percent higher than the usual method, and for all other births, the independent estimate was about 3 percent lower. Thus the independent procedure resulted in a somewhat larger estimate of white illegitimate births and a slightly smaller estimate of all other illegitimate births in comparison with the usual method.

The large difference between the two methods noted for the Pacific Division is primarily due to the 43 percent difference in the

Table V. Reporting of legitimacy status on the birth certificate by area, 1976

Area	Whether or not legitimacy status reported	Area	Whether or not legitimacy status reported
<u>New England</u>		<u>South Atlantic—Con.</u>	
Maine.....	Yes	West Virginia.....	Yes
New Hampshire.....	Yes	North Carolina.....	Yes
Vermont.....	No	South Carolina.....	Yes
Massachusetts.....	No	Georgia.....	No
Rhode Island.....	Yes	Florida.....	Yes
Connecticut.....	No		
<u>Middle Atlantic</u>		<u>East South Central</u>	
New York.....	No	Kentucky.....	Yes
New Jersey.....	Yes	Tennessee.....	Yes
Pennsylvania.....	Yes	Alabama.....	Yes
		Mississippi.....	Yes
<u>East North Central</u>		<u>West South Central</u>	
Ohio.....	No	Arkansas.....	Yes
Indiana.....	Yes	Louisiana.....	Yes
Illinois.....	Yes	Oklahoma.....	Yes
Michigan.....	Yes	Texas.....	Yes
Wisconsin.....	Yes		
<u>West North Central</u>		<u>Mountain</u>	
Minnesota.....	Yes	Montana.....	No
Iowa.....	Yes	Idaho.....	No
Missouri.....	Yes	Wyoming.....	Yes
North Dakota.....	Yes	Colorado.....	Yes
South Dakota.....	Yes	New Mexico.....	No
Nebraska.....	Yes	Arizona.....	Yes
Kansas.....	Yes	Utah.....	Yes
		Nevada.....	No
<u>South Atlantic</u>		<u>Pacific</u>	
Delaware.....	Yes	Washington.....	Yes
Maryland.....	No	Oregon.....	Yes
District of Columbia.....	Yes	California.....	No
Virginia.....	Yes	Alaska.....	Yes
		Hawaii.....	Yes

estimate for white births. The only nonreporting State in this division is California, which accounted for 83 percent of all illegitimate births in the division according to the independent estimate. The usual estimation procedure does not work well in the Pacific Division because the estimate is only based on about 17 percent of the illegitimate births, and the States on which the division estimate is based are very unlike California with respect to the incidence

of illegitimacy. (For further discussion of California's inferred illegitimacy statistics, see reference 42.)

The brief evaluation described here indicates that the procedures used by NCHS to make national estimates of illegitimacy, while not ideal (because they do not include direct evidence from the nonreporting States), still result in remarkably accurate estimates of illegitimate births for the United States as a whole.

Table VI. Number of out-of-wedlock births and ratios and rates of births to unmarried women by two estimation procedures, color, and geographic division: United States, 1975

Color and geographic division	Estimate of illegitimate births		Index of agreement of two methods	Illegitimacy ratio		Illegitimacy rate	
	Independent method	Usual method		Independent method	Usual method	Independent method	Usual method
<u>Total</u>							
United States	452,300	447,900	101.0	143.9	142.5	25.0	24.7
New England	16,000	17,300	92.5	108.1	116.9	--	--
Middle Atlantic.....	67,200	72,300	92.9	140.8	151.5	--	--
East North Central.....	89,700	90,300	99.3	147.1	148.1	--	--
West North Central .....	...	26,300	...	...	107.0	--	--
South Atlantic.....	83,500	88,400	94.5	173.1	183.3	--	--
East South Central.....	...	37,600	...	...	171.8	--	--
West South Central .....	...	50,800	...	...	140.8	--	--
Mountain	17,100	16,300	104.9	96.7	92.2	--	--
Pacific.....	64,000	48,700	131.4	150.7	114.6	--	--
<u>White</u>							
United States	198,200	186,400	106.3	77.7	73.0	13.4	12.6
New England	11,400	12,800	89.1	83.0	93.2	--	--
Middle Atlantic.....	27,400	27,100	101.1	70.9	70.1	--	--
East North Central.....	39,100	39,100	100.0	76.6	76.6	--	--
West North Central .....	...	15,800	...	...	70.5	--	--
South Atlantic.....	20,300	21,400	94.9	60.1	63.4	--	--
East South Central.....	...	9,300	...	...	58.5	--	--
West South Central .....	...	18,500	...	...	65.4	--	--
Mountain	12,200	11,500	99.1	71.2	71.8	--	--
Pacific.....	44,100	30,900	142.7	124.4	87.2	--	--
<u>All other</u>							
United States	254,100	261,600	97.1	429.1	441.7	78.1	80.4
New England	4,600	4,500	102.2	430.0	420.7	--	--
Middle Atlantic.....	39,800	45,200	88.1	438.7	498.3	--	--
East North Central.....	50,500	51,300	98.4	507.9	516.0	--	--
West North Central .....	...	10,500	...	...	485.5	--	--
South Atlantic.....	63,300	67,000	94.5	437.5	463.1	--	--
East South Central.....	...	28,300	...	...	471.4	--	--
West South Central	32,300	413.9	--	--
Mountain	4,900	4,800	102.1	295.2	289.2	--	--
Pacific.....	19,900	17,800	111.8	282.7	252.9	--	--

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