research reports

Ex-nuptially Conceived Births: a Note on Measurement

Katharine Betts
Department of Anthropology and Sociology
Monash University
Victoria

Teenage girls who become pregnant outside of marriage have long been taken as exhibiting a particularly alarming form of deviance, especially if they fail to legitimate their pregnancy by marriage. And, as Montague points out (1980), with the cold winds now blowing from the right, judgements are becoming harsher.

If we are to understand the variety of social and sociological problems associated with the phenomenon of ex-nuptially conceived births we do need, first of all, a clear picture of its demographic characteristics. If the Australian population were to remain stable in terms of size and of the distribution of its members by age, sex and marital status, the raw figures on ex-nuptial births and pre-marital pregnancies would represent real changes in reproductive experience. But, as it has not done so, raw figures are an inadequate index of change over time, and, because they do not necessarily tell us about the relative sizes of the sub-sections of the population 'at risk', they may even mislead as a description of the present.

Have unmarried teenagers been having more babies (legitimated after conception or not)? Or might this merely seem to be the case because there are more unmarried teenagers? And, do teenagers have more ex-nuptial births and pre-marital pregnancies than older women, or might not such an appearance, also, be nothing but a consequence of there being greater numbers of unmarried teenagers than of unmarried older women? To answer these questions we need to find a way of expressing ex-nuptial fertility that controls for changes in population size and composition while at the same time avoiding the introduction of new, extraneous variables. This can present some difficulties.

Sometimes, for example, nuptial births which are the presumed result of pre-nuptial conceptions (from here on to be called 'bridal' births) are expressed in terms of the percentage of brides pregnant at marriage in a given year. When we are in effect talking of the number of bridal births per 100 marriages the rate arrived at can be affected by changes in the marriage rate. This can limit our ability to compare changes in bridal births over time, and to compare the experience of one age group category with another.

A further disadvantage of this measure is that it does not permit us to compare changes in bridal births with changes in ex-nuptial births. The two phenomena do differ in their outcomes: the one being marriage, legitimacy and a measure of social approval, the other, illegitimacy, disapproval, and a greater chance of economic hardship. But, despite this, they share some things in common. They are, for example, both the result of extra-marital sexuality and many of the births involved will be unplanned. To rule out the possibility of comparing the one with the other places unnecessary limits on our understanding of both.

It may be more helpful to express both bridal and ex-nuptial births as percentages of all births, because here at least we may compare one with the other. Again, however, the rates produced will be affected by an extraneous variable, in this case the total number of all births. Nuptial fertility comprises by far the greater part of total fertility and if, as has happened in Australia, it should fall more rapidly than ex-nuptial fertility, the latter, expressed as a percentage of total fertility may appear to increase when in reality it has done nothing of the kind. It may, for example, have stayed constant or even declined, though at a slower rate. Moreover, total fertility has not declined at a uniform rate for all age groups. This means that comparisons of one age group's experience with another's will be even more distorted if this measure is used.

Both of these rates, then, confuse the picture they produce by introducing extraneous variables (marriage rates and nuptial birth rates) and neither provides more than an indirect control for changes in population size. And, of equal importance, neither makes

allowance for the distribution of the population by age and marital status.

Since the last war Australia's population has grown very rapidly. From 1946/47 to 1970/71 the average (mean) annual growth rate was 2.16%. While these rates eased during the seventies to an average of 1.39% from 1971/72 to 1977/78 the figure was still high by the standard of the developed world, and, given the present government's drive to increase immigration targets, likely to rise still higher.[1] A history of growth gives populations a youthful bias. This is because babies of their nature are young, while immigrants, whether through externally or internally imposed constraints, tend to be so. More than 80% of post-war immigrants to Australia have been under 40 years of age (Australian Immigration, 1979: 24-25).

This history of growth has, then, not merely increased the total numbers of the population, it has affected its age structure, and through this the relative contribution of teenage girls to ex-nuptial fertility. In the four censuses taken in 1960, 1966, 1971 and 1976 the number of girls aged 15 to 19 was, in all cases, greater than the number of women in any other, older, five year age group category, and, at each census, the total number of girls aged 15 to 19 had increased considerably.

To control for these changes in the numbers and distribution of women of childbearing age we might simply express ex-nuptial births as a rate per thousand women in specified age-group categories. This, however, would be to omit a crucial variable: marital status. Ex-nuptial children and pre-maritally conceived children involve unmarried women. So, if we are to get a useful picture of the distribution of births of this sort and the way in which their frequency may have changed over time, we need to be able to express them in the form of rates per 1,000 *unmarried* women by age.

A rate per 1,000 unmarried women by age controls for population growth and its differential effect on the age structure, and it controls for differences in marital status by age. This does not mean that it is a measure without imperfections. Data on numbers of women by age and marital status are only available for census years. Thus some fineness than an annual rate would show must be foregone. Moreover, given intervals between censuses and delays in processing census data, it cannot directly illuminate the experience of the most recent years. Also, not all unmarried women are sexually active so, by assuming that they are all 'at risk', it assumes too much. Nevertheless, it introduces no new extraneous variables and its use would, I suggest, provide a clearer picture of the distribution of ex-nuptial and bridal births by age, and of the way these have changed in distribution and frequency over time, than the measures previously discussed.

Figures for the number of unmarried women (that is women who are never married, widowed or divorced) by age are set out in Table 1 for the years 1961, 1966, 1971 and 1976. Given the distribution by age displayed in Table 1 it is not surprising to discover from the data in Table 2 that girls aged 15 to 19, who are so very much more numerous than unmarried women in the other age group categories, account for a large number of ex-nuptially conceived births. In view of the level of community concern it is, however, interesting to note that even the raw figures for births to teenage girls have declined since 1971, most especially those for bridal births (here defined as those occurring up to and including the sixth month of marriage).

Table 2 also gives data for 1979. While there have been slight increases in the raw figures for ex-nuptial births between 1976 and 1979, the increase is more than twice as great for 20 to 24 year olds as it is for teenagers. Moreover, while the raw figures for bridal births have also increased for older women between 1976 and 1979, they have further declined for teenagers. Taking both sets of figures together, the raw data for the duration of the seventies show a continuing decline in the number of ex-nuptially conceived babies born to teenage mothers.

Nevertheless, the raw data do suggest that, while there has been an overall decline in the seventies, teenagers have generally experienced a level of ex-nuptial and bridal fertility that is higher than that of other age groups. When, however, the raw figures are converted into a rate per 1,000 women 'at risk' the pattern alters dramatically and we can see that this im-

Table 1: Numbers of Unmarried (Never Married, Widowed and Divorced) Women Aged 15 to 44

	15-19	20-24	25-29	30-34	35-39	40-44
1961	366,715	133,553	42,123	33,864	35,711	38,447
1966	469,689	169,701	48,282	29,066	31,780	38,501
1971	494,491	195,494	59,761	34,717	30,556	37,946
1976	551,276	227,446	90,634	51,109	40,181	38,190

Source: Census Data

Table 2: Ex-Nuptial Confinements and Bridal Confinements (Confinements Within the First Seven Months of Marriage) by Age of Mother

	15-19	20-24	25-29	30-34	35-39	40-44
			Ex-nuptial			
1961	3,443	3,544	2,049	1,637	1,040	325
1966	6,421	4,767	2,321	1,403	953	372
1971	9,807	8,488	3,685	1,904	966	354
1976	8,547	7,143	4,095	1,891	823	175
1979	9,286	8,759	4,582	2,154	785	167
			Bridal			
1961	6,760	5,004	788	331	161	50
1966	9,839	6,421	862	250	125	36
1971	11,591	8,028	1,115	335	122	38
1976	5,073	3,448	1,118	441	138	27
1979	3,636	3,793	1,544	697	252	24

Sources: A.B.S. Births, Catalogue No. 3301, and Demography (prior to 1971)

pression has been wholly due to the large and growing numbers of unmarried teenagers relative to the numbers of unmarried women in older age group categories.

Firstly, it is quite clear from Table 3 that teenage girls have a very low ex-nuptial birth rate and that Montague's defence of a stigmatised group is more than justified (1980). The only age group category which shows a lower rate is that of women aged 40 to 44. Before the early seventies, the bridal rate for girls aged 15 to 19 was somewhat higher (though not as high as the ex-nuptial rate experienced by older women) but even here the bridal rate of 20 to 24 year olds has been much higher. If the two rates, ex-nuptial and bridal, are combined as a 'total ex-nuptial fertility rate' the rate for unmarried 15 to 19 year olds is lower than that of all unmarried women aged 20 to 34.

Secondly, Table 3 shows that while both ex-nuptial and bridal rates were indeed rising during the sixties, all rates for all age groups fell sharply in the early seventies. Bridal rates, however, fell more sharply and to a lower level.

Thirdly, the table reveals an interesting difference in the distribution of ex-nuptial and bridal births by age. Unmarried women aged 25 and over are more likely to have ex-nuptial births, while younger women, especially those aged 20 to 24, are more likely to have ex-nuptial pregnancies which are legitimated by a subsequent marriage. While this is not the place for a systematic attempt at explanation, the difference between the ex-nuptial and bridal rates, both in their age distribution and in their differential rate of decline, may be indications that the two phenomena have less in common than is usually supposed. If this is so, theories which take this into account will have greater explanatory power.

It is sometimes suggested that, with an increasing social acceptance of single motherhood, unmarried, pregnant women are feeling less pressure to marry and that this explains the

Table 3: Ex-nuptial and Bridal Confinements as a Rate per 1000 Unmarried Women by Age

	15-19	20-24	25-29	30-34	35-39	40-44
			Ex-nuptial			
1961	9.4	26.5	48.6	48.3	29.1	8.5
1966	13.7	28.1	48.1	48.3	30.0	9.7
1971	19.8	43.4	61.7	54.8	31.6	9.3
1976	15.5	31.4	45.2	37.0	20.5	4.6
			Bridal			
1961	18.4	37.5	18.7	9.8	4.5	1.3
1966	20.9	37.8	17.9	8.6	3.9	0.9
1971	23.4	41.1	18.7	9.6	4.0	1.0
1976	9.2	15.2	12.3	8.6	3.4	0.7
			Ex-nuptial and Bridal			
	27.8	64.0	67.3	58.1	33.6	9.8
	34.6	65.9	66.0	56.9	33.9	10.6
	43.2	84.5	80.4	64.4	35.6	10.3
	24.7	46.6	57.5	45.6	23.9	5.3

Source: Derived from Tables 1 and 2

differential decline of the two rates. Despite the sense of conservative alarm and, even, an apparent increase in the social hostility directed at unmarried mothers, this may be the case. Some welfare support, albeit meagre, does now exist and some increase in tolerance may have taken place at some levels. Community opinion is not monolithic. It could well be argued, however, that the role of single mother is still sufficiently stigmatised and unpleasant as to predispose many women (especially those who are younger and have fewer economic resources) to choose marriage in preference, if marriage is in fact a real option for them. Given the disincentives, it is more likely that such social support as does exist will influence unmarried women to keep their children, rather than surrender them for adoption, but not encourage them to remain single.

An alternative explanation for the sharper decline in the bridal rate has been put forward elsewhere. It is based on the idea that when we are considering bridal and ex-nuptial fertility we may be looking at evidence about different kinds of relationships, and that the people involved in them have had differential access to birth control (Betts, 1980). That is, it may be that ex-nuptial pregnancies later legitimated have tended to occur in more stable relationships where there may already have been some intention to marry. On the other hand, pregnancies that were destined to remain illegitimate may have tended to occur in less stable relationships. The way in which birth control services have developed has not advantaged people involved in casual relationships, especially if they are young and poor. The structure of availability presents difficulties, and the normative beliefs through which methods and services are perceived compounds these difficulties.

If unmarried mothers are now drawn in larger numbers from lower socio-economic groups than previously, as Montague suggests, and are therefore more visible, this too could be a partial consequence of the continuing restrictions, at practical, subjective, and interpersonal levels, on the availability of birth control. Information, self confidence, and an ability to negotiate the private health system are still necessary for most people if they are to find their way round the institutional barriers between them and the effective management of their fertility. It would be strange to find that resources of this kind did not vary with social class.

Because there are so many more unmarried girls than there are unmarried older women, large numbers of ex-nuptial children have teenage mothers, and much avoidable human suffering is endured. But, when we control for population size, it is clear that teenage girls are much less likely to experience births that are the result of ex-nuptial conceptions than are older women and that the overall rate for such births has declined considerably, both for teenagers and for older women, in the last decade.

FOOTNOTE

1. Average annual growth rates are derived from *Australian Immigration*, 1979: 8-9. The Immigration Department's estimated intake for 1980/81 is 107,500, nearly double the net intake of 56,136 for 1977/78. (See departmental mimeograph 'NUMAS Review: Community Consultation. Notes on the Review', 1981: 4.)

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Hospital Structure and Expenditure

S. G. (Mike) Goldstein
Department of Management
The University of Western Australia

Babu Simon
Department of Management
The University of Western Australia

Introduction

The importance of the administrative structure of the hospital system as an instrument of government control has been recognised for some time (Dewdney, 1972: 103). Its relation to hospital costs has also been identified (Australia, Hospitals and Health Services Commission, 1974: 32), though the underlying reasons have not been clearly elaborated.

The research described here has indicated that the administrative structure of the public hospital system can be an important factor in the control and containment of hospital expenditure. The research method used was an interhospital comparison. Two hospitals were selected; one in Queensland, the other in Western Australia. These two States were selected because their hospitals have both widely