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EARLY MOTHERHOOD AND DISADVANTAGE: A COMPARISON BETWEEN ETHNIC GROUPS

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ABSTRACT

This paper examines the relationship between age at first birth and poverty among ethnic minorities in Britain. It is well known that ethnic minorities, particularly Pakistanis and Bangladeshis, have very high rates of family poverty and early fertility. Because it has been established that early motherhood is associated with a high risk of poverty and other disadvantages, it is tempting to link Pakistani and Bangladeshi poverty with their early family formation patterns. We find, however, that age at first birth had little effect on the poverty experienced by ethnic minorities. While the disadvantaged outcomes of teenage motherhood within the white community appear to be associated with the young women's departure from the dominant social norm, when early fertility is the norm in a minority community, it does not lead to any further disadvantage beyond that experienced by the ethnic group as a whole.

Early Motherhood and Disadvantage: A Comparison between Ethnic Groups

Karen Robson and Richard Berthoud

Research on young motherhood in the UK has consistently shown that young mothers, particularly teen mothers, face considerable socioeconomic disadvantages in later life, including low educational attainment, reduced likelihood of being employed and an increased likelihood of living in poverty (see for example Hobcraft and Kiernan 2001; Kiernan 1997; Manlove 1997; Moffitt 2002; Robson and Berthoud forthcoming). Berthoud (2001) found that ethnic minorities, particularly Bangladeshis and Pakistanis, have very high rates of early parenting. As well, these two ethnic minorities also have very high rates of family poverty. Is the poverty associated with early parenting? The objective of this paper is to examine the relationship between age at first birth and family poverty among ethnic groups in Britain. This paper is a contribution to the ISER research programme funded by the Department of Health that examined the determinants and outcomes of early motherhood, as well as the consequences of early motherhood on the children of teen mothers.

The reasons behind the disadvantages experienced by young mothers are fairly straightforward. Early motherhood curtails educational attainment and thus limits the later employment options available to women. Additionally, young mothers, particularly teen mothers, are often single parents, which creates obvious difficulties balancing child care and paid employment, particularly in the UK where state-funded childcare for under 3s trails well behind the standards set in other EU countries such as France, Denmark, and Spain. As well as demonstrating that young mothers tend to have low levels of education and be single parents, previous research has also shown that where partners and husbands do exist, they also tend to have low educational attainment and therefore limited employment opportunities.

In addition to truncated periods of human capital acquisition and assortative mating (i.e. young mothers having partners who also have low educational qualifications), a further explanation of the disadvantages faced by young mothers is found in the norms surrounding family formation in the UK. According to Cavalli and Galland (1995) family formation in the UK is characterised by transitions from school to work occurring early in life, but household and family formation occurring at a somewhat delayed, although clustered, point in time. The

period between leaving home and family formation has two distinct periods: the transition from education to work and then the additional transition of union formation and delayed parenthood. In a multi-country analysis, Robson and Berthoud (forthcoming) found that in European countries where teenage motherhood was rare, the socioeconomic disadvantages faced by young mothers were far greater than in countries where early childbearing was more conventional. This deviation from the norm of family formation in a country can also be seen as a contributing factor to the poverty and economic challenges faced by young mothers. In cases where young motherhood is a "rare" event, the social structures may simply not be able to cope with this deviation from the norm and therefore early childbearing isolates mothers from the pathways to economic comfort. It should be noted that while UK has the highest teenage pregnancy rate in Western Europe, the overall average age for first birth is increasingly rising.

Family Formation Patterns and Ethnic Minorities in the UK

The above conceptualisation of family formation in the UK, however, does not take into account the various cultural differences in family formation that exist in ethnic minority populations. The family formation patterns of ethnic minority groups are often different from those of the dominant culture, as people from different cultures bring with them the norms of their places of origin. Immigration of people with varied cultural and religious backgrounds in the UK has necessarily diversified the types of family formation that are considered "morally appropriate" (Allan, Hawker, and Crow 2001). This increasing diversity challenges the notion of the "white" pattern of family formation as different cultural expectations regarding marriage and age at first birth are present within different ethnic groups.

Berthoud (2000) identified three major family formation patterns found in Britain. A Caribbean pattern of family formation has also been identified by Haskey (1998) and evidence of this pattern within the UK has been confirmed by Berrington (1994). Berthoud (2000) called the Caribbean pattern "modern individualism" and characterised it as having very low rates of marriage and high rates of childbearing occurring independently of marriage. According to Berthoud, "the practice of living independently of the children's father can be traced to West Indian social and economic traditions" (2000:9).. Berrington (1994) found that of Caribbean women living in UK, 38 per cent aged between 25 and 29 were lone parents, compared to 10 per cent of white women. As well, almost 60 per cent of

Caribbean children under the age of 16 lived in lone parent families, compared to 16 per cent of white children.

While Berthoud (2000) did not examine family formation patterns of Black Africans, some similarities between their patterns of family formation and Caribbeans can be seen. Regarding lone motherhood, Berrington (1994) found that figures for African women were not as high as for Caribbeans, although they were much higher than those for other ethnic groups. Almost 28 per cent of African women aged 25-29 lived as lone parents, and 39 per cent of African children under 16 lived in lone parent families.

Singh et al (2001) noted that in the UK, single mothers and cohabiting partners with children are a rare family structure in households headed by persons of Asian origin, compared to households headed by blacks or whites. Berthoud (2000) identified South Asians communities in Britain as having an "old fashioned" family formation type. "Old fashioned", in this sense, refers to the similarity that this pattern of family formation has with white women in Britain during the 1950s and 1960s. Virtually all South Asians with a partner are in a formal marriage with very low instances of cohabitation. Women tend to marry at early ages and have children shortly thereafter. Berthoud (2000) noted that Bangladeshi women have a high rate of teenage births compared to white women, with the striking difference between the two groups being that Bangladeshi women are married at the time of a teenage birth. Large families are also characteristic of the Pakistani and Bangladeshi communities, while fertility rates between Indian and white women are very similar.

Berrington (1994) found among Bangladeshi and Pakistani women aged 25-29 in the UK, 90 per cent were married. The comparative figure for the white population was 60 per cent. As well, for women aged 20-29 in the UK between 1989 and 1991, 11 per cent of white females were cohabiting, compared with under two per cent of Indians and Pakistanis. Berrington found that a third of households headed by a white individual consisted of a married couple with dependent children, compared with almost two thirds of those headed by an individual of Pakistani ethnic origin. Lone parent households headed by women were exceedingly rare among Bangladeshis and Pakistanis (zero and three per cent, respectively), while slightly more common among Indians (nine per cent). The marked difference between the family formation patterns of the Bangladeshis and Pakistanis, on the one hand, and Indians, on the other, indicate that the differences within the South Asian community must be acknowledged. Bangladeshis and Pakistanis have a family formation pattern characterised by early marriage and early age of first birth, and resultant larger families. Indians are more

likely to marry later and consequently have a later first birth. The "old fashioned" family formation type, therefore, can be thought of being placed on the opposite end of a spectrum to the Caribbean pattern of "modern individualism" with the white family formation sitting in the middle of these two extremes. Indians within the South Asian group, however, are probably more appropriately placed between the Pakistani/Bangladeshis who are exemplary of the "old fashioned" pattern, and the white pattern.

The distinction between the family formation patterns of Bangladeshis/Pakistanis and Indians is likely attributable to religious and cultural differences between the two groups, most notably Islam being the predominant religion in Pakistan and Bangladesh, and Hinduism and Sikhism being the predominant religions among British Indians (Berrington 1994; Blackaby, Leslie, Murphy, and O'Leary 1999; Modood 1997). Cultural and religious beliefs held by Muslims about the role of women are reflected in their comparatively low employment participation rates (Berrington 1994; Modood 1997), and presumably their earlier ages of family formation.

While family formation clearly varies by ethnic group in the UK, it is also important to highlight some additional ethnic differences that must be considered before undertaking the analyses proposed here. Berrington (1994) notes the suggestion of an assimilation trend of second generation South Asians having family formation patterns that are somewhat intermediate between first generation patterns and the white population. On the other hand, Berrington also shows that white rates of lone parenthood and extramarital childbearing appear to becoming more similar to the Caribbean population in the UK. Berthoud (2000), however, shows that second generation Caribbeans are become more distinct from the white population by having increasing rates of single parenthood.

Elements of cultural assimilation that may act as gateways to the British labour market by various ethnic groups has been discussed by Blackbury et al (1999). They note that compared to the "more-assimilated" Indian population, Pakistanis and Bangladeshis tend to live in communities of high-Muslim concentration. This, combined with language difficulties and lower educational qualifications, may contribute to limited employment possibilities, which is reflected in the high unemployment rates of Pakistanis and Bangladeshis in the UK.

While it has been repeatedly established by previous research that early childbearing in the UK is associated with various socioeconomic disadvantages in later life, little attention has been given to the question of whether these effects differ by ethnic group. When considering the relationship between early childbearing and later disadvantage, the underlying

causal mechanism must be considered. Here, it was proposed that in addition to suppressed human capital, early childbearing runs counter to the family formation norms that exist in the UK. While the "white" pattern of family formation was noted above, ethnic deviations from this standard were also discussed. As well, issues of elements of cultural assimilation to the dominant culture were also discussed in terms of the low participation rates of Muslim women and as barriers to participation in the British labour force for Pakistani and Bangladeshi men.

The Current Study

The purpose of this study is to examine if and how the outcomes of early childbearing in the UK differ by ethnic group. The main outcome that will be examined here is whether or not a woman is in a working family, although other correlates will be examined in the process. Because household income was not available in the data, we have chosen this non-working family classification as an acceptable proxy for poverty. The measure is discussed below, but briefly the rationale is that if neither a woman nor her partner, where a partner exists, is in employment, a family is likely to have to claim benefits. Benefit recipients, without question, have a standard of living that is well below the national average. As well, Vegeris and Perry (2003) clearly show that non-working families with children are over three times more likely to have an income below the poverty line (75 per cent) than working families with children (22 per cent).

Before analysing the "ethnic effect", consideration will be given to the relationship between age at first birth and educational attainment and marital status among all women with children in Britain. It is not possible to determine the direct causal ordering between age at first birth and educational attainment from the data we are using. It is quite possible that low educational attainment or prospects may be a causal factor (Kiernan 1997), but it is also likely that early childbearing prevents or at least postpones higher educational attainment. As well, an even more important causality issue exists between early motherhood and marital status. In our analysis, it is not possible to determine the marital status of women at the time of their first birth. Previous findings, however, do suggest that large proportions of young mothers are single parents at the time of first birth and are much more likely to be lone parents many years after the birth of their first child (Hobcraft and Kiernan 2001). We approach our analysis with the awareness of this causality problem between early motherhood, educational attainment and marital status. A multivariate analysis predicting

whether or not a woman is in a working family by age at first birth and other factors will be estimated for all women with children, regardless of ethnic group. The analysis will then turn to ethnic differences. Numerous descriptive statistics are used to illustrate the difference in family characteristics by ethnic group. Multivariate analyses predicting being in a working family by ethnic group then follow. When discussing the results, the relationship between ethnic family formation norms and the severity of disadvantage experienced by young mothers are focused upon.

Data and Methods

Data for the analyses were drawn from the official UK Labour Force Survey (LFS), using years 1992 to 2000 inclusive. All women aged 16 to 59 were included initially. While data from approximately 60 000 households are collected each year, a single year of analysis would not provide enough cases for the detailed sort of examination of ethnic minorities proposed here. Therefore, data from nine years have been pooled in order to yield sample sizes of ethnic minorities large enough to analyse comparatively. Since 1992, the Labour Force Survey has included a longitudinal component in which the same sample is interviewed for five consecutive quarters. Here, we analyse the spring quarter of each year and exclude the fifth of the sample who had been included the previous spring. The sample analysed consists of women with co-resident children, excluding those whose age at first birth could not be determined.

<u>Variables</u>

Age at first birth. The basic analytical approach to identify age at first birth was to work out how old the mother was when each of her children was born, making use of the exact date of birth of each woman and child in the LFS. This method of estimation is only accurate if we assume that that the vast majority of children live with their natural mothers. We have excluded women for whom the length of time between the birth of the oldest child and the time of the interview was greater than 15 years, as a method of safeguarding our assumption that the oldest child observed in the data was indeed the woman's first birth. Additionally, because we are looking at outcomes, a woman was excluded from the analysis if her first birth occurred in the same year as the survey date. The maximum age at first birth considered here is 44. While the techniques used here identified births at older ages, these were a rarity (less than one per cent) and were considered outliers.

Because our analysis includes ethnic minorities who may not have been born in the UK, women whose first birth occurred before arriving in the UK were also excluded from the analysis. It is important that woman's first birth occurred in the UK because of the family formation and assimilation theories advanced here. For a detailed description of this technique for identifying mothers' age at first birth in the Labour Force Survey, see Berthoud (2001).

Ethnic group. Eight ethnic groups are identified in the LFS: White, Caribbean, Black African, Indian, Pakistani, Bangladeshi, Chinese, and other. The category of Caribbean actually combines the LFS codes of "Caribbeans" and "Black others" on the grounds that most people recording their ethnic group as "black other" were of Caribbean origin. Chinese women and those in the "other" category are not included in the analyses. This is because the technique used to determine age at first birth identified very few (<300) Chinese women with children. The "other" category is not used in the analyses because it is not associated with any specific ethnic group.

Family Employment. A woman was considered working if she was in paid employment for at least sixteen hours per week. A family was considered working either if she herself was working, or she had a partner and he was in work according to the criteria above. Because of this definition, working 16 or more hours per week included unpaid family workers. Working 16 or more hours per week in the UK, is the "boundary" for claiming out-of-work benefits, and is conceptualised here as the minimum that a person needs to be engaged in employment in order to support one's self.

Age. Age was measured by a variable that asked the respondent her current age in the survey year.

Age on Arrival in the UK. The year in which non-UK-born respondents came to the UK was recorded in the data. A variable with three categories was created: 1) women who had been born in the UK, 2) women who had been born abroad and immigrated to the UK when they were less than sixteen years old, and 3) women who had been born abroad and immigrated to the UK when they were sixteen or older The second category were considered second generation immigrants while the third group were considered first generation immigrants. . This method of identification is similar to that employed by Berthoud (1997).

Marital Status. Marital status was measured with an LFS variable that provided six categories: married, cohabiting, single (never married), divorced, widowed, and separated

Educational Attainment. Educational attainment was measured with a variable which had five categories: degree, greater than basic secondary qualifications (i.e. 'O' levels or GCSEs) but lower than degree, basic secondary qualifications, less than basic secondary qualifications, and none. Family educational attainment was measured by selecting the highest educational attainment of the woman or her partner (where a partner existed). This was preferred over including both the woman's educational attainment and that of her partner, as those without partners would have missing data for this item.

LFS Year. Within the pooled data set, the years corresponding to the dates of data collection were retained and this variable used as a control to account for yearly fluctuations in the labour market. Dummy variables for individual years were used.

Region. A twenty-category variable measuring region of usual residence was also included as a control variable. Dummy variables were constructed for each region.

Rationale of the Age at First Birth Specification

The vast majority of the literature examining the effects of early birth on later outcomes focuses on teen mothers. Recent findings (Hobcraft and Kiernan 2001), however, suggest that the disadvantages associated with early motherhood are not necessarily limited to first births that occur before age 20. We believe that the issue of the disadvantages associated with early parenthood be examined as a concept that is not restricted to teen births. One possibility is to examine single years of age at first birth, with the idea that there is a continuous variation in outcomes from year to year. A single variable measuring age at first birth assumes that each additional year of postponing a birth has a uniform effect such that the advantage of postponing a first birth from 15 to 16 is the same as postponing a first birth from age 29 to 30. Intuitively, this is simply incorrect. The alternative is to use multiple dummy variables, but presenting the results of estimations with 30 or so dichotomous variables can clearly be cumbersome.

We have decided to use an alternative approach. The effect of age at first birth on the probability of a woman being in a working family was modelled using a technique called a "spline". Modelling a spline suggests that the relationship between age at first birth and probability of being in a working family is characterised by a "knot" at a specific age where the nature of the linear relationship changes. In this case, a single knot was placed at age of first birth at 27. Using a spline for age 27 then assumes that the probability of being in a

working family and age at first birth has a distinct turning point at 27, i.e. that while the probability of being in a working family steadily increases for every year a young mother postpones a first birth, the relationship changes at 27 and becomes less steep.

Several steps were involved in deciding upon age 27 as the spline specification used for the analyses here. First, age at first birth in single years was examined as a possible specification. The problem with this measure, however, is that for certain ethnic groups, the single ages become problematic due to smaller sample sizes and the reality that very few Bangladeshi and Pakistani women have a first birth after 30, while first births after 30 are very common in the White, Caribbean, and Black African populations. Various splines were modelled for the different ethnic groups considered here and the ones that best fit the relationship between age at first birth and probability of being in a working family. For Whites, a multiple spline at 27 and 35 fits best, while for Bangladeshis, a single spline at 24 fits best. The results of analyses of the other ethnic groups reported best model fit with single splines: at age 28 for Indians and Pakistanis, age 29 for Caribbeans, and age 30 for Africans. Clearly, however, a single measure was needed so that the outcome variable examined here could be clearly compared by ethnic group. The common pattern determined was that there was very little difference in the line trajectories among the different ethnic group after age 27, and because of this, a single knot at 27 was implemented.

In order to assess whether the spline was an appropriate alternative to the much more detailed specification of single years of age at first birth, the predicted probabilities of the spline and the multiple dummy variable specification were plotted. Figure 1 illustrates that the spline is very close to the multiple dummy variables – almost identical up the age of 39. Therefore, given the relative simplicity of modelling and presenting results for the spline in the estimations and that there is little discrepancy between it and the dummy variables for single years of age at first birth, it can be concluded that the spline is an appropriate alternative with notable advantages. It should be noted that the spline technique was also tested against a teen mother dummy specification and was found to have far more explanatory power.

Figure 1. Age at First Birth Specifications on Probability of Being in a Working Family
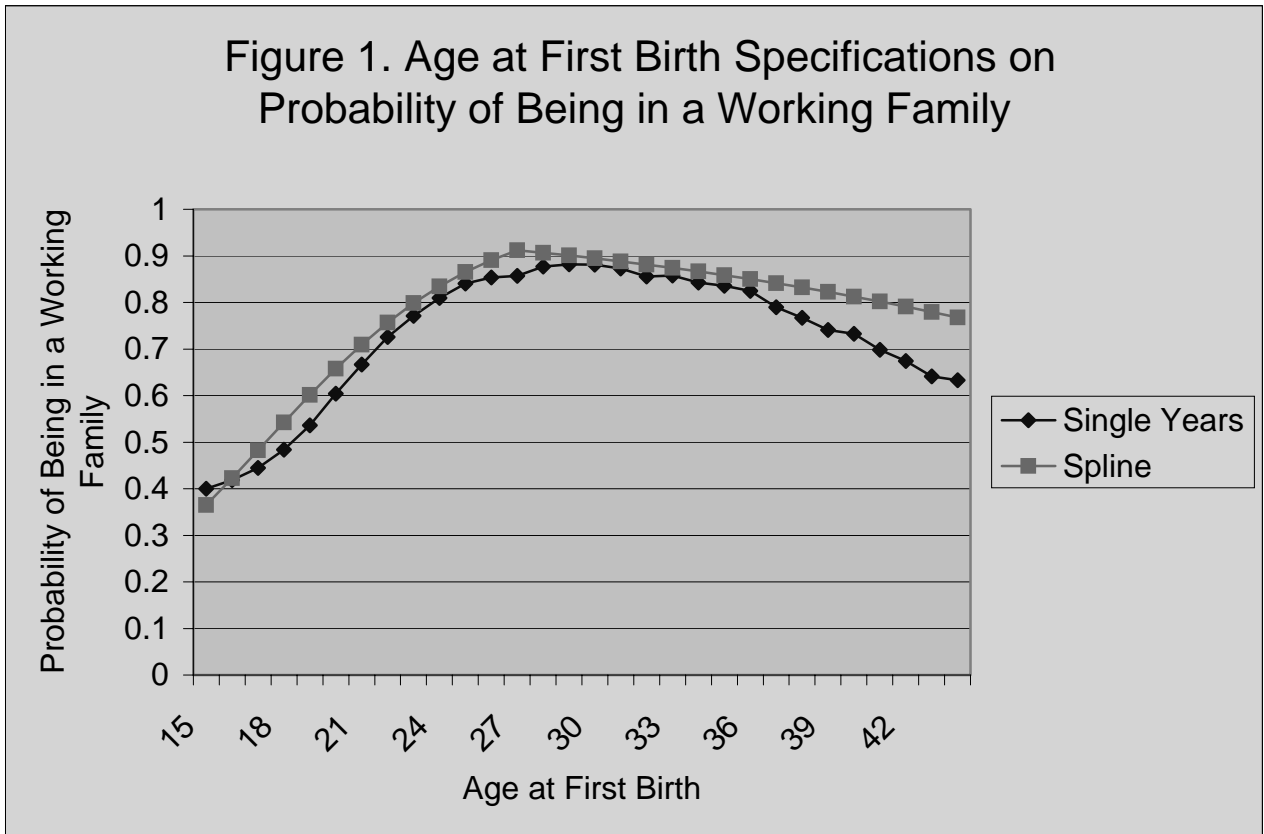
Results

The first part of the analysis focuses on all women with children, without consideration for ethnic group. The objective of the first set of analyses is to establish the relationships between age at first birth, education, marital status, and non-employment for the population as a whole. The second part of the analysis applies the models in the first part of the analysis to different ethnic groups so that differences between ethnic groups can be examined.

Analysis of the Population as Whole

Table 1 presents the distribution of ages at first birth. See Berthoud (2001) for a discussion of how the technique used for identification of age at first birth in the LFS yields estimates that closely corresponds to official annual fertility rates in the UK. These estimates are not intended to be interpreted as rates and are presented for the purpose of illustrating the numbers of cases available. Approximately 14 per cent of births occurred before the age of 20, while almost 68 per cent occurred before 27. There is a fairly even distribution of ages at first birth between age 19 and 29, at which point the numbers taper off.

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The first relationship that was tested was between educational attainment and age at first birth. As discussed above, it is not possible to analyse in this cross sectional data set whether low educational attainment led to an early birth or if early birth resulted in low educational attainment. The results in Table 2, however, certainly support the idea that whatever the causal direction, there is a definite pattern that women who have a baby early were less likely to have a degree. The earlier the birth, the more likely a woman was to have no educational qualifications, with over half of the women whose first birth was at 15 having no qualifications at age 28.

Table 1. Distribution of Age at First Birth (N=105576)

Age	N	%	Cum. %
15	355	0.34	0.34
16	1,252	1.19	1.52
17	2,852	2.7	4.22
18	4,518	4.28	8.5
19	5,684	5.38	13.89
20	6,013	5.7	19.58
21	6,541	6.2	25.78
22	6,916	6.55	32.33
23	7,378	6.99	39.32
24	7,561	7.16	46.48
25	7,849	7.43	53.91
26	7,687	7.28	61.19
27	7,027	6.66	67.85
28	6,446	6.11	73.96
29	5,658	5.36	79.31
30	4,714	4.47	83.78
31	3,785	3.59	87.36
32	2,963	2.81	90.17
33	2,395	2.27	92.44
34	1,933	1.83	94.27
35	1,542	1.46	95.73
36	1,237	1.17	96.9
37	986	0.93	97.84
38	752	0.71	98.55
39	547	0.52	99.07
40	385	0.36	99.43
41	264	0.25	99.68
42	170	0.16	99.84
43	106	0.1	99.94
44	60	0.06	100

The relationship between age at first birth a marital status was then examined. The partnership status of a woman has direct implications for her likelihood of being in a working family. Obviously, single parents have only the half of the potential resources for being the workforce as women with partners. The following analyses give an indicator first of the relationship between age at first birth and marital status. Table 3 presents predicted probabilities generated from a multinomial logit that controlled for elapsed time since first birth. The probabilities in Table 3 are based upon a woman whose elapsed time since first birth was three years or less. This limits the analysis to women whose birth was recent, giving a clearer picture of their marital statuses closer to the time of birth. The predicted probabilities here provide evidence that young mothers are much more likely to be lone parents than women who postpone a first birth. An estimated 62 per cent of women who had a child at the age of 17 were lone parents during the child's pre-school years, compared with only 9 per cent of women whose first child was born when they were 27.

Table 2. Predicted Probabilities of Mothers' Highest Academic Qualifications by Age at First Birth*

	degree	>O level, < degree	O level	lower	none
15	0%	7%	20%	19%	53%
16	0%	9%	23%	20%	48%
17	0%	11%	26%	20%	43%
18	0%	13%	28%	20%	38%
19	1%	15%	31%	20%	33%
20	1%	18%	33%	20%	29%
21	2%	20%	35%	19%	24%
22	3%	22%	36%	18%	20%
23	4%	25%	37%	17%	17%
24	6%	27%	38%	16%	14%
25	9%	29%	37%	15%	11%
26	12%	30%	36%	13%	8%
27	17%	31%	34%	11%	6%

* Predicted probabilities from multinomial logit controlling for current age. Probabilities based upon a woman who was 28 years old at the time of the survey

Table 3. Predicted Probabilities of Mothers' Marital Status by Age at First Birth*

	married	living together	single never married	divorced	separated
15	10%	18%	69%	1%	3%
16	13%	20%	63%	1%	3%
17	18%	20%	57%	1%	4%
18	24%	21%	50%	1%	4%
19	30%	21%	43%	2%	4%
20	38%	20%	36%	2%	5%
21	46%	19%	29%	2%	5%
22	54%	17%	23%	2%	5%
23	62%	15%	17%	2%	4%
24	68%	13%	13%	2%	4%
25	74%	11%	9%	2%	4%
26	80%	9%	7%	2%	3%
27	82%	9%	5%	2%	2%

* Predicted probabilities from multinomial logit controlling for elapsed time since first birth. Probabilities based upon a woman whose elapsed time since first birth was less than four years.

Table 4 presents the results of the logistic regression of whether a woman is in a working family on age at first birth, with the additional controls of highest family educational attainment and marital status entered in subsequent estimations. An odds ratio of over 1 indicates that an increase in that variable (or the presence of it, in the case of dummy variables) is associated with an increase odds of an outcome and an odds ratio of less than 1 refers to a decrease in the odds of an outcome. Conventionally, odds ratios are discussed in terms of per cent changes. Therefore, an odds ratio of 1.54 would means that there was a 54% increase in the odds of an outcome (in this case, a woman being in a non-working family), while an odds ratio of .90 would refer to a 10% decrease in the odds of an outcome.

The first estimation, controlling only for the woman's current age, indicated that each additional year of postponing a first birth up to age 27 increased the odds by 22% of a woman being in a working family. Introducing highest family educational attainment reduces the odds ratio on the age of first birth (up to 27) variable to 1.172, although the effect is still statistically significant. Furthermore, controlling for marital status, reduces the age at first birth odds ratio to 1.098, however the effect remains statistically significant. The "single mother effect" is also demonstrated here, revealing that being a single mother, whether never married or previously married, significantly reduced the likelihood of a woman being in a working family. Independent of the (strong) effects of marital status and educational

attainment, every year of postponing a first birth had a statistically significant effect of increasing the odds of a woman being in a working family.

Table 4. Logistic Regression of Whether or Not a Woman is in a Working Family on Age at First Birth, Current Age, Family Education, and Marital Status+
Odds Ratios

	(1)	(2)	(3)
Current Age	1.029*	1.044*	1.039*
Age at First Birth			
Up to 27	1.224*	1.172*	1.098*
After 27	0.909*	0.904*	0.915*
Family Education			
Degree (reference)		1.000	1.000
> O level, < degree		0.501*	0.521*
O levels		0.416*	0.383*
Lower		0.353*	0.241*
None		0.176*	0.107*
Marital Status			
Married (reference)			1.000
Cohabiting			0.564*
Single, never Married			0.044*
Widowed			0.048*
Divorced			0.055*
Separated			0.050*
Pseudo R-squared	0.10	0.13	0.34
Observations	105413	105137	105137

+Controlling for LFS year and respondent's region.
* $p < .001$, two-tailed.

Analysis of Ethnic Groups

We turn next to our analyses of these effects by ethnic group. Tables 5 through 8 report descriptive characteristics of the sample by ethnic group. These descriptive statistics illustrate how women from the various ethnic groups considered here vary across the characteristics that will be considered in the multivariate analyses.

Table 5 illustrates the numbers of cases available at each age of first birth. What is immediately noticeable is the very small numbers of cases for South Asian women for births prior to 17 years of age, as well as similarly few numbers of cases for these groups past the age of 35. This is particularly true among Bangladeshis where this is both a result of the overall small sample size and the rarity of having a first birth after the late twenties for this

ethnic group. These issues with the distribution will have to be taken into consideration when interpreting the findings as small sample sizes can introduce error into the estimations.

Table 5. Distribution of Ages at First Birth by Ethnic Group

	White	Caribbean	African	Indian	Pakistan	Bangladeshi	Total
15	307	8	6	5	3	2	342
16	1,118	41	10	3	6	3	1,196
17	2,532	68	16	21	37	40	2,746
18	3,966	103	31	48	67	55	4,333
19	4,946	114	35	96	125	63	5,446
20	5,268	108	31	123	124	43	5,766
21	5,697	89	44	148	133	30	6,229
22	6,028	89	56	163	117	31	6,593
23	6,584	77	59	163	84	15	7,084
24	6,733	98	58	168	74	19	7,250
25	7,074	80	53	148	61	13	7,545
26	6,937	63	45	160	57	10	7,382
27	6,375	77	55	104	37	14	6,782
28	5,854	55	47	109	34	7	6,236
29	5,136	63	44	98	27	4	5,473
30	4,289	53	23	69	21	6	4,562
31	3,474	39	22	46	20	3	3,679
32	2,689	21	23	46	15	7	2,862
33	2,186	22	17	29	9	3	2,326
34	1,785	17	10	21	7	3	1,879
35	1,414	17	4	22	8	2	1,494
36	1,132	17	3	15	7	0	1,202
37	905	14	2	14	4	1	959
38	679	8	6	6	3	0	728
39	503	4	0	8	2	3	532
40	342	7	2	2	5	1	365
41	232	3	4	2	3	3	255
42	150	3	0	5	2	1	164
43	98	0	0	1	2	0	104
44	52	2	1	0	3	0	58
Total	94,485	1,360	707	1,843	1,097	382	101572

Table 6. Age of First Birth Characteristics by Ethnic Group

	Mean	%<20	% 20-26	%>26	N
White	25.44	14%	47%	39%	94638
Caribbean	24.06	25%	44%	31%	1,363
African	25.01	14%	49%	37%	711
Indian	25.01	9%	58%	32%	1844
Pakistani	23.16	22%	59%	19%	1098
Bangladeshi	21.78	43%	42%	15%	382

Table 6 presents summarised age of first birth characteristics by ethnic group. The mean differences in age at first birth by ethnic group demonstrate that there is not much difference in the mean age (about 25) at first birth among whites, Africans and Indians. Caribbean women had a slightly smaller mean age at around 24, while Pakistani and Bangladeshi had much younger average ages of first birth – 23 and 22 years of age, respectively. The next columns give the proportions of first births prior to age 20, between 20 and 26, and after 27. Over 40 per cent of Bangladeshis had a first birth as a teen, compared to only nine per cent of Indian women and 14 per cent of white and African women. Comparatively, only 19 per cent of Pakistanis and 15 per cent of Bangladeshis had a first birth after 26, compared to almost 40 per cent of white and African women., and about 30 per cent of Caribbean and Indian women.

Table 7. Marital Statuses of Women with Children by Ethnic Group (Proportions)

All Mothers	Married	Cohabiting	Single	Widowed	Divorced	Separated
White	71%	8%	9%	1%	7%	5%
Caribbean	33%	6%	47%	1%	7%	6%
African	49%	5%	24%	1%	7%	14%
Indian	92%	1%	1%	1%	2%	3%
Pakistani	88%	1%	1%	1%	3%	7%
Bangladeshi	91%	0%	1%	1%	1%	5%
Teen Mothers						
White	42%	15%	28%	0%	8%	7%
Caribbean	19%	6%	65%	0%	4%	7%
African	43%	8%	30%	2%	5%	12%
Indian	87%	2%	3%	1%	2%	5%
Pakistani	88%	0%	1%	0%	5%	6%
Bangladeshi	91%	0%	1%	0%	3%	6%

Table 7 illustrates the marital statuses of women with children by ethnic group. The first column for each ethnic group presents the proportion of all women with children in the marital status, while the second column presents the proportion of all former teenage mothers in the marital status. Consistent with Berrington (1994), a markedly larger proportion of African and Caribbean women with children were single (47 and 24 per cent, respectively) compared to women from other ethnic groups. As well, women of Indian, Pakistani, and Bangladeshi ethnic group were far more likely to be married (about 90 per cent) than women from the remaining ethnic groups. White women reported the highest frequency of cohabiting (eight per cent) while African women had the highest frequency of being divorced or

separated (21 per cent). As well, about 60 per cent of white women who were former teenage mothers were married or cohabiting at the time of the survey, compared to about 90 per cent of Indian, Pakistani, and Bangladeshi women who had their first birth as a teen. Only a quarter of Caribbean women who had given birth as a teen were married or living with a partner, while the comparative proportion for African women was just over half. Thus, the majority of South Asian women who had a baby as a teenager were partnered, compared to much smaller proportions of teenage mothers in other ethnic groups.

Table 8 presents the proportions of women with children who were first and second generation immigrants, as well as those who were born in the UK. The vast majority of white women were born in the UK (95 per cent), followed by Caribbean women (64 per cent). About twenty per cent of Pakistani and Indian women were UK born, while just 13 per cent of African women and six per cent of Bangladeshi women were born in the UK. Of non-natives, 61 per cent of Bangladeshi and 68 of Indian women were first generation immigrants. With regard to highest family educational attainment, the fourth and fifth columns of Table 8 show that well over half of Pakistani and Bangladeshi women lived in families with no educational qualification, compared to a third of Indian women and a similar proportion (27 per cent) of white women. To contrast, only about twenty per cent of Caribbean and African women lived in families with no educational qualifications.

Table 8. Proportions of Women with Children by Ethnic Group on Various Characteristics

	Age on Arrival in the UK			Family Education		
	First Generation (16+)	Second Generation (<16)	Born in UK	Family Has Qualifications	Family Has No Qualifications	% in Working Families
White	4%	1%	95%	73%	27%	77%
Caribbean	33%	3%	64%	80%	20%	58%
African	55%	32%	13%	81%	18%	51%
Indian	68%	14%	18%	66%	34%	81%
Pakistani	60%	20%	20%	40%	59%	56%
Bangladeshi	61%	32%	6%	32%	68%	53%

The final column of Table 8 reports the proportion of women with children who live in working families, by ethnic group. As this is the outcome variable of interest in the multivariate analyses that follow, these figures are presented to illustrate the large differences

in the proportions of working families among the ethnic groups considered here. Of Indian women with children, 81 per cent lived in working families, which was followed by white women at 77 per cent. Just under 60 per cent of Caribbean and Pakistani women with children lived in working families, compared to just over half of African and Bangladeshi women.

These descriptive statistics have illustrated key differences by ethnic group that must be considered before considering the effects of age at first birth on the likelihood of a woman being in a working family. It is clear that Caribbean and African women are much more likely than women from other ethnic groups to be single parents. As well, women of Bangladeshi and Pakistani background are far more likely to be in families with very low educational qualifications, which will have obvious implications on their employability, or the employability of their partners. Additionally, a larger proportion of South Asian women are first generation immigrants, which may also serve to reduce the likelihood of them being in a working family for reasons associated with cultural assimilation addressed earlier in the paper. We now turn to multivariate analyses that will allow us to control for these various effects while examining the impact of age at first birth on a women being in a working family.

Table 9. Summary of Logistic Regressions Using Age at First Birth Up to 27 to Predict Whether a Woman is in a Working Family
Odds Ratios

Controlling for	current age, LFS year and region	…plus marital status	…plus family education	…plus age on arrival
White	1.232**	1.190**	1.121**	1.121**
Black Caribbean	1.117**	1.099**	1.057*	1.056*
Black African	1.135**	1.096**	1.076*	1.075*
Indian	1.075**	1.056*	1.021	1.020
Pakistani	1.014	0.995	0.968	0.967
Bangladeshi	1.001	0.934	0.932	0.933

The summarised results of four models are presented in Table 9, while detailed results by ethnic group are reported in Tables 10 through 15. It should be noted that the predictors used in the estimations here are somewhat different from those used in the estimations for the population as a whole. Because very few South Asian women were in marital statuses other

than married, the variable was collapsed into three dummy variables (instead of five). The category of "single, never married" was retained, while new variables were created that combined married and cohabiting into "partnered", and widowed, divorced, and separated into "previously married". As well, because almost 60 per cent of Pakistani families and almost 70 per cent of Bangladeshi families had no educational qualifications, a much simplified assessment of educational attainment was used in the following estimations where educational qualifications are measured simply in terms of a dummy measuring "no qualifications", for which the reference category is (obviously) any qualifications. These simplifications clearly result in a loss of detail in the analysis, but attempting to use the detailed marital status and educational attainment variables, particularly on the Bangladeshi and Pakistani samples, results in problems of collinearity and large standard errors. In order to address these problems and preserve degrees of freedom (particularly in analyses of ethnic groups with smaller sample sizes), and because the same variables should be used for each ethnic group estimation in order to allow for maximum comparability, the simplified variables had to be adopted for all further analyses.

The first column of these tables is a logistic regression of whether or not a woman is in a working family on age at first birth, controlling only for age, region, and survey year. Controlling just for age, region and year, each additional year of postponing a first birth up to age 27 increased the odds of a woman being in a working family for whites, Caribbeans, Africans, and Indians. The effect of age at first birth up to 27, however, was not a predictor of a woman being in a working family for Pakistani or Bangladeshi women. In the second model, marital status was added to the estimations. Each year of postponing first birth up to age 27 increased the odds of a woman being in a working family for white, Caribbean, African, and Indian women. The odds ratios reduced in all cases (compared with the simple model) suggesting a mediating effect of marital status, but remained statistically significant. Highest family educational attainment was added in the third model. The odds ratios for white, Caribbean, African women weakened, but remained statistically significant, with the odds ratio losing statistical significance for Indians. The final model introduced the variable measuring age on arrival in the UK. Each additional year of postponing first birth up to 27 continued to significantly increase the odds of white, Carribean and African women being in a working family. In the final model, each additional year of postponing a first birth increased the odds of being in a working family by twelve per cent for white women, six per cent for Caribbean women, and about eight per cent for African women.

To summarise, these findings indicate that each additional year of postponing birth up to age 27 increased the odds of white, Caribbean, and African women being in working families. For Indian women, the odds ratio lost statistical significance in Model three, when the control of educational attainment was added. Despite strong controls, however, the main effects of age at first birth continued to remain statistically significant for whites, Caribbeans, and Africans, indicating that even accounting for the effects of marital status, educational attainment, and time lived in UK, the direct effect of each year postponing a first birth up to age 27 significantly increased the odds of a woman being in a working family. Equally as important, however, was that age at first birth up to age 27 had no effect on whether or not Pakistani or Bangladeshi women would be in a working family.

Table 10. Logistic Regression of Whether a Woman is in a Working Family on Age at First Birth and other Characteristics (Ethnic Group=White)
Odds Ratios

	(1)	(2)	(3)	(4)
Current Age	1.029**	1.044**	1.044**	1.044**
Age at First Birth				
Up to Age 27	1.232**	1.190**	1.121**	1.121**
After 27	0.907**	0.906**	0.908**	0.909**
Family Education				
Some Education (reference)		1.000	1.000	1.000
No Education		0.404**	0.284**	0.284**
Marital Status				
Partnered (reference)			1.000	1.000
Single, never Married			0.044**	0.044**
Previously Married			0.055**	0.055**
Age at Migration				
Born in UK (reference)				1.000
First Generation (16+)				0.883*
Second Generation (<16)				0.810
Observations	94381	94198	94198	94198
Pseudo R-squared	0.10	0.13	0.35	0.35

*significant at 1%; ** significant at 0.1%
+Controlling for LFS year and respondent's region.

We now turn to the detailed analysis of the estimations by ethnic group, presented in Tables 10 through 15. Table 10 presents the detailed models for white women with children. The addition of strong controls in Models 2 and 3 increased the fit of the model significantly,

and the odds ratios for all variables added at these two stages were statistically significant. The size of the odds ratio of age of first birth up to 27 strengthened in Models 2 and 3 and remained statistically significant. The odds ratio for age at first birth up to 27 remained statistically significant upon the addition of the age at migration variables. It should be noted that more stringent criteria for statistical significance were used in the model for whites (i.e. a significance level of 0.001) due to the large sample size.

Table 11. Logistic Regression of Whether a Woman is in a Working Family on Age at First Birth and other Characteristics (Ethnic Group=Caribbean)
Odds Ratios

	(1)	(2)	(3)	(4)
Current Age	1.082**	1.090**	1.086**	1.086**
Age at First Birth				
Up to Age 27	1.117**	1.099**	1.057*	1.056*
After 27	0.927*	0.937*	0.942	0.945
Family Education		1.000	1.000	1.000
Some Education (reference)		0.419**	0.273**	0.281**
No Education				
Marital Status				
Partnered (reference)			1.000	1.000
Single, never Married			0.103**	0.099**
Previously Married			0.118**	0.118**
Age at Migration				
Born in UK (reference)				1.000
First Generation (16+)				0.944
Second Generation (<16)				0.449*
Observations	1350	1345	1345	1345
Pseudo R-squared	0.10	0.12	0.25	0.25

* significant at 5%; ** significant at 1%
+Controlling for LFS year and respondent's region.

Estimations for Caribbean women are found in Table 11. Marital status, educational status, and length of time in the UK all improve the fit of the model. In the final model, the significant predictors of whether or not a woman was in a working family were age at first birth, family educational attainment, marital status, and being a second generation immigrant. Having no qualifications decreased the odds by 72 per cent of being in a working family, compared to being in a family where there were some educational qualifications. All marital

statuses compared to being partnered resulted in a decreased odds of around 90 per cent of being in a working family, while being a second generation immigrant decreased the odds of being in a working family by 55 per cent, compared to those born in the UK. As well, the variable that measured age at first birth after 27 was statistically significant in all models, suggesting that each additional year of postponing a first birth after age 27 increased the odds by about six per cent of being in a working family.

Table 12. Logistic Regression of Whether a Woman is in a Working Family on Age at First Birth and other Characteristics (Ethnic Group=African)
Odds Ratios

	(1)	(2)	(3)	(4)
Current Age	1.033	1.037	1.051*	1.053*
Age at First Birth				
Up to Age 27	1.135**	1.096**	1.076*	1.075*
After 27	1.011	1.016	1.032	1.033
Family Education				
Some Education (reference)		1.000	1.000	1.000
No Education		0.186**	0.184**	0.190**
Marital Status				
Partnered (reference)			1.000	1.000
Single, never Married			0.199**	0.190**
Previously Married			0.198**	0.198**
Age at Migration				
Born in UK (reference)				1.000
First Generation (16+)				0.930
Second Generation (<16)				0.542
Observations	694	688	688	688
Pseudo R-squared	0.07	0.13	0.21	0.21

* significant at 5%; ** significant at 1%
+Controlling for LFS year and respondent's region.

Results for the analysis of African women with children are presented in Table 12. Controls for educational attainment and marital status improved the fit of the model and slightly decreased the strength of the effect of age at first birth. As expected, having no qualifications decreased the odds of being in a working family, as did not being partnered. Age of migration to the UK was not a significant predictor of being in a working family. As

well, in the final model, each additional year of age also increased the odds of being in a working family by about five per cent.

Table 13. Logistic Regression of Whether a Woman is in a Working Family on Age at First Birth and other Characteristics (Ethnic Group=Indian)
Odds Ratios

	(1)	(2)	(3)	(4)
Current Age	1.031*	1.036*	1.051**	1.048**
Age at First Birth				
Up to Age 27	1.075**	1.056*	1.021	1.020
After 27	0.879**	0.878**	0.873**	0.874**
Family Education				
Some Education (reference)		1.000	1.000	1.000
No Education		0.698*	0.538**	0.538**
Marital Status				
Partnered (reference)			1.000	1.000
Single, never Married			0.070**	0.071**
Previously Married			0.071**	0.071**
Age at Migration				
Born in UK (reference)				1.000
First Generation (16+)				1.141
Second Generation (<16)				0.919
Observations	1818	1812	1812	1812
Pseudo R-squared	0.05	0.05	0.15	0.15

* significant at 5%; ** significant at 1%
+Controlling for LFS year and respondent's region.

Table 13 presents the detailed analyses for Indian women. As discussed above, the odds ratio for age of first birth remained statistically significant until educational attainment was added in Model 3. This suggests that the educational attainment mediates the effect of age at first birth on whether or not a woman is in a working family. In the final model, being in family with no educational qualifications decreased the odds by 46 per cent of being in a working family, while being single and previously married decreased the odds by 93 per cent of being in a working family, compared to those who had a partner. As well, each additional year of age also decreased the odds by 13 per cent that a woman would be in a working family. The age at migration variables were not statistically significant. Interestingly, each

additional year of age at first birth after 27 decreased the odds of a woman being in a working family by about 12 per cent and this effect remained even with the addition of strong controls.

Table 14. Logistic Regression of Whether a Woman is in a Working Family on Age at First Birth and other Characteristics (Ethnic Group=Pakistani)
Odds Ratios

	(1)	(2)	(3)	(4)
Current Age	0.997	1.008	1.017	1.019
Age at First Birth				
Up to Age 27	1.014	0.995	0.968	0.967
After 27	0.920*	0.913*	0.922*	0.914*
Family Education				
Some Education (reference)		1.000	1.000	1.000
No Education		0.566**	0.493**	0.507**
Marital Status				
Partnered (reference)			1.000	1.000
Single, never Married			0.238	0.221
Previously Married			0.050**	0.048**
Age at Migration				
Born in UK (reference)				1.000
First Generation (16+)				1.073
Second Generation (<16)				0.624
Observations	1096	1093	1093	1093
Pseudo R-squared	0.03	0.04	0.13	0.14

* significant at 5%; ** significant at 1%
+Controlling for LFS year and respondent's region.

Results for the analyses on Pakistani women are presented in Table 14. Age at first birth up to 27 was not a statistically significant predictor of being in a working family in any of the models. In the final model, current age, family education, and being previously married were predictors of being in a working family. each additional year of age reducing the odds by nine per cent of being in working family, while having no educational qualification reduced the odds by about 50 per cent of being in a working family. Compared to partnered women, being previously married reduced the odds of being in a working family by 95 per cent. The variables measuring age of arrival in the UK were not significant predictors. As with Indian women, however, each additional year of having a first birth after 27 decreased the odds of a woman being in a working family, even in the full model.

Table 15. Logistic Regression of Whether a Woman is in a Working Family on Age at First Birth and other Characteristics (Ethnic Group=Bangladeshi)
Odds Ratios

	(1)	(2)	(3)	(4)
Current Age	0.991	1.017	1.010	1.013
Age at First Birth				
Up to Age 27	1.001	0.934	0.932	0.933
After 27	0.766**	0.766**	0.776*	0.771*
Family Education				
Some Education (reference)		1.000	1.000	1.000
No Education		0.390**	0.299**	0.311**
Marital Status				
Partnered (reference)			1.000	1.000
Single, never Married			0.051*	0.038*
Previously Married			0.104**	0.092**
Age at Migration				
Born in UK (reference)				1.000
First Generation (16+)				0.376
Second Generation (<16)				0.646
Observations	378	377	377	377
Pseudo R-squared	0.10	0.13	0.18	0.18

* significant at 5%; ** significant at 1%
+Controlling for LFS year and respondent's region.

Table 15 presents the analyses for Bangladeshi women. As with Pakistani women, the age at first birth specification for births prior to 27 failed to achieve statistical significance in any of the four models, while the post 27 specification achieve significance in all models. Family education and marital status improved the fit of the model. In families with no educational qualifications, there was a 70 per cent decrease in the odds of being in a working family, compared to families with at least some qualifications. As well, compared to being partnered, being single decreased the odds of being in a working family by 96 per cent while being previously married decreased the odds by 91 per cent. There were very few single women in the Bangladeshi sample, however, so these results must be interpreted with caution. The age at which women migrated to the UK was not a significant predictor being in a working family.

To summarise, age at first birth up to 27 had a significant effect on whether or not a woman was in a working family for white, Caribbean, and African women. This effect was reduced, but not eliminated, when account was taken of the potential mediating effects of lone parenthood and low educational qualifications. The age at which members of minority groups arrived in the UK made no difference. The early motherhood effect was always much stronger for white women than for either Caribbean or African women. The effect of early motherhood was also significant for Indian women, but was found to be largely mediated through educational attainment. For Bangladeshi and Pakistani women, age at first birth up to 27 did not predict whether or not a woman was in a working family. Conversely, for Indian, Bangladeshi, and Pakistani women, births after age 27 were associated with a decreased odds in being in a working family.

Table 16. Predicted Proportion of Women who are in a Working Family by Age at First Birth*

	White	Caribbean	African	Indian	Pakistani	Bangladeshi
Has Partner						
17	74%	75%	46%	77%	63%	58%
19	80%	78%	52%	80%	62%	59%
22	87%	82%	60%	83%	63%	61%
27	94%	87%	73%	88%	65%	63%
No Partner						
17	15%	29%	15%	22%	10%	15%
19	20%	32%	19%	25%	11%	15%
22	29%	37%	25%	30%	11%	16%
27	48%	47%	37%	39%	12%	18%

* predicted for when a woman's current age was 30.

Because whether or not a woman is in a working family is clearly influenced by her marital status the probability of being in a working family was predicted for women with and without partners by selected ages at first birth and ethnic group (Table 16). The most obvious finding is that in all ethnic groups, the presence of a partner substantially increased the proportion of women in working families, regardless of the age at which they had a child. Among whites, the proportion in working families increased as age at first birth increased. For example, among whites only 15 per cent of lone parents whose first birth was at 17 were in working families compared to almost half of lone parents whose first birth was at 27.

Among Caribbeans a similar pattern was found, although lone mothers whose first birth was at 17 had almost double the proportion in working families than whites. Among African women, the difference between those with partners and without partners in working families was smaller, although a much smaller proportion of lone parents were in working families. Higher ages at first birth were associated with larger proportions of both lone parents and partnered women in working families. Indian women had a pattern that was similar to white women, with comparable proportions of lone and partnered mothers in working families through the different ages at first birth considered and a steady rise in these proportions as ages at first birth increased. Pakistani and Bangladeshi women had patterns similar to each other, but quite different from those exhibited in other ethnic groups, especially whites. While Pakistani and Bangladeshi women who were partnered were far more likely to be in working families, there was scarcely any change in the predicted proportions as age at first birth increased.

Discussion

Does age at first birth have an impact on women's probability of living in poverty? An overwhelming amount of literature asserts that this is the case. While the effectively-retrospective approach based on the LFS data does not settle the issues of causality addressed elsewhere in our research programme, it is strongly consistent with previous studies in demonstrating an association between the age at which a woman has her children, and the family's subsequent economic position.

The large sample size also provides an opportunity to contribute to that line of analysis by distinguishing outcomes according to each single year of mother's age at first birth. Although 'teen mothers' and their families are indeed disadvantaged (on average) relative to all other mothers, there was no evidence of a discontinuity in the impact at age 20. Rather, each additional year by which first birth was postponed improved later prospects, up to a turning point around age 27.

The results for the population as a whole show that the odds of living in a working family are improved by 22 per cent for each year by which women delay starting a family (up to 27). Women who delay parenting are also more likely to have achieved educational qualifications, and more likely to have the support of a husband or partner. These other advantages help to explain why later motherhood improves the family's economic prospects – we interpret them as mediating influences – but they explain only about half of the main

affect of age at first birth. The latter has a substantial effect even after allowing for education and marital status.

The issue of how these effects vary by ethnicity has not previously been addressed in Britain. Our prior knowledge was that:

- young mothers have a high risk of family poverty;
- members of some ethnic minority groups, and especially Pakistanis and Bangladeshis, have high rates of early parenting;
- members of some ethnic minority groups, and especially Pakistani and Bangladeshi families, have a high risk of poverty.

So it was possible that the high levels of poverty in these minority communities was associated with their high rates of early parenting. But we had found in a similar comparison of the outcomes of teenage motherhood in Europe, that in countries with high rates of teenage motherhood, the disadvantages of early parenting were rather less serious than in countries where it was rare. Although the UK was an exception to that pattern, we formed a hypothesis that the disadvantageous outcomes were associated with the mother's departure from established norms. If early motherhood is accepted, even encouraged, in some communities, both the causes and consequences might be different.

We can divide the ethnic groups analysed here into four categories:

1. We have confirmed that postponing a first birth strongly decreases the likelihood of a white woman living in non-working family. This effect is half explained by family educational attainment and marital status; but the effect is still strong even after allowing for those mediating factors.

2. The same pattern is true of Caribbean and African women. For these minority ethnic groups, there was a significant absolute effect that was only partly mediated by education and marital status. But the effects (gross and net of other factors) were only about half as strong for black women as for whites.

3. For Indian women, there was a small disadvantage associated with early birth, but this was almost entirely explained in terms of educational achievements.

4. For Pakistanis and Bangladeshis, there were no effects of age at first birth on being in a working family, even if only basic control variables were included in the estimation. For these two ethnic groups, the likelihood of being in a non-working family was determined by family education, and marital status, but not by early motherhood. In fact, there was

evidence that postponing a first birth past age 27 can have detrimental effects for South Asian women.

How can we explain the different impacts of age at first birth by ethnic group? Above, we discussed the typical patterns of family formation found in each ethnic group examined here. The "white" pattern was characterised by transitions from school to work occurring at an early point in life, with household and family formation occurring at a somewhat delayed, although clustered, point in time. The transition from school to work is followed by a transition to union formation and parenthood. Women who deviate from this may be expected to experience disadvantage, and from the findings presented in Table 11 and 12 for white women, the penalty of early motherhood remains clear.

A second type of family formation pattern of Caribbeans was described as childbearing occurring outside of marriage. A Black African family formation type was not readily identifiable in the literature, although African women had family characteristics that were somewhere between Caribbean and white women. There was a much larger proportion of teenage births among the Caribbeans (25%) compared to the Africans (14%). The largest difference between these two groups (on characteristics examined here) was that a much larger proportion of African mothers were first generation immigrants compared to their Caribbean counterparts, although this had little impact on outcomes. The more important point is that lone motherhood is a typical family structure among these two ethnic groups, particularly for Caribbean women. This may explain, to some extent, why the main effects for Caribbean women (Table 11, Model 1) are stronger than for African women, as they deviate more from the dominant "white" pattern of family formation. As suggested by Berthoud (2000), "modern individualism" as a family formation pattern among these two groups may actually contribute substantially to family poverty. Nevertheless, the age effect was substantially smaller than among the majority white population.

Family formation for Pakistani and Bangladeshi women was characterised by early union formation and early childbearing, what was referred to as the "old fashioned" family formation pattern. Early parenthood is expected of this family formation pattern. As age at first birth up to 27 did not achieve statistical significance in any of the models for these two ethnic groups, it can be concluded that early motherhood does not have an impact on whether or not a woman is in a working family.

The family formation norms of Indians were discussed as being midway between the "old-fashioned" pattern and the white British pattern. Marriage and child-bearing are

encouraged, but Indian women start their families no earlier than their white counterparts. Some authors, noted above, discussed how Indians were more assimilated to white British culture than Pakistanis and Bangladeshis, which is largely attributable to religious differences. The effect of early age at first birth was a significant predictor only in the simple models, and had virtually disappeared once education had been taken into account.

Figure 2 plots the odds ratios presented in Table 9, Model 1 against the proportion of first births under 27 for each ethnic group. The trend suggests a clear negative relationship between the 'frequency' and the 'severity' of early motherhood. As the proportion of first births before 27 increases, the disadvantageous effect decreases. Pakistani and Bangladeshi women are positioned in the lower right hand corner of Figure 2—both with insignificant odds ratios and comparatively high proportions of first births under 27. The suggestion is that the disadvantage associated with early parenting is inversely associated with its frequency in the mother's community.

Figure 2. Proportion of Births Before 27 by Effect of Age at First Birth on A Family being in Employment, by Ethnic Group
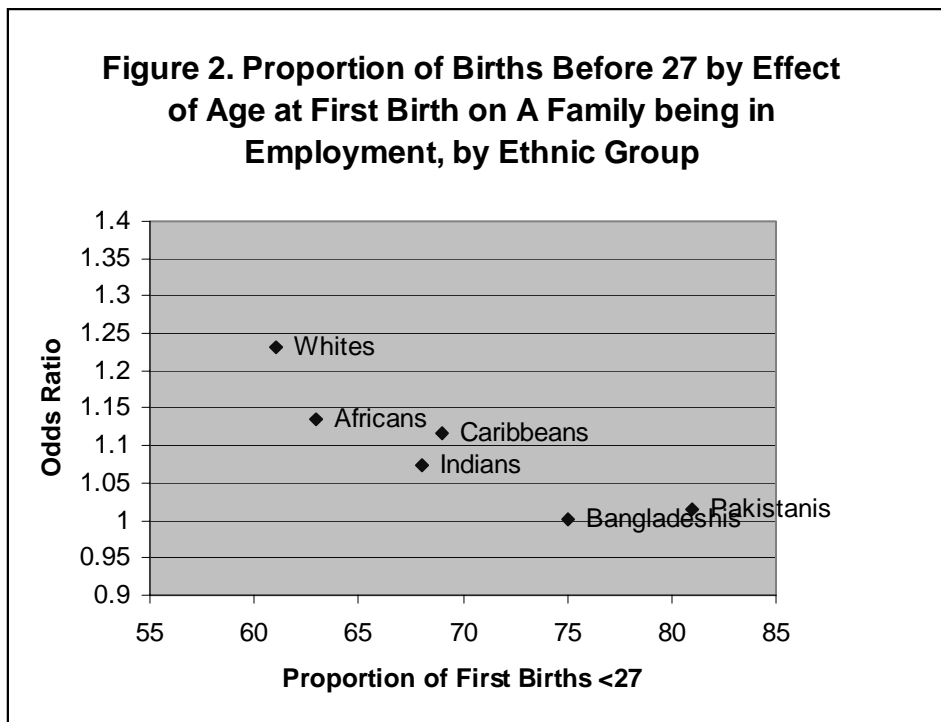
These findings send an important message. Pakistanis and Bangladeshis have rates of early first birth that far exceed their counterparts in the other ethnic groups considered here. Among Pakistanis, 81 per cent of first births occurred before 27 and with Bangladeshis, the

figure was 75 per cent. Young motherhood, however, had no effect on whether or not a Pakistani or Bangladeshi family was in employment. Policies designed to reduced family poverty by preventing early births will only have a chance of being effective for whites, Caribbeans, Africans and (perhaps) Indians. In particular, the high rates of unemployment and poverty among Pakistani and Bangladeshi families will not be impacted by reducing the number of women who have a birth at an early age. Policy makers need to look elsewhere for a solution to Pakistanis' and Bangladeshis' serious disadvantage.

A wider conclusion is that early births themselves are not intrinsically disadvantaging. The effects on whites, Africans, and Caribbeans must be a social or socio-economic one rather than a biological one. Even accounting for marital status, educational attainment, and length of time in Britain, there are many factors that we have not accounted for that may suggest why early motherhood among these ethnic groups results in disadvantage. Pakistani and Bangladeshi families are highly disadvantaged anyway, but their parenting patterns have no further effect. It might be suggested that it is not having a baby as a teenager that is the problem – but the social, economic and policy environment into which the child is born.

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