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# Racial/Ethnic Differences in Breastfeeding Initiation and Continuation in the United Kingdom and Comparison With Findings in the United States

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## ABSTRACT

**OBJECTIVE.** Patterns of breastfeeding vary considerably across different racial/ethnic groups; however, little is known about factors that might explain differences across and within different racial/ethnic groups. Here we examine patterns of breastfeeding initiation and continuation among a racially/ethnically diverse sample of new mothers and compare this with patterns seen in the United States. The effects of demographic, social, economic, and cultural factors on racial/ethnic differences in breastfeeding practices are assessed.

**METHODS.** The sample includes all singleton infants whose mothers participated in the first survey of the United Kingdom Millennium Cohort Study. Missing data reduced the sample to 17 474 (96%) infants with complete data.

**RESULTS.** After adjustment for demographic, economic, and psychosocial factors, logistic regression models showed that Indian, Pakistani, Bangladeshi, black Caribbean, and black African mothers were more likely to initiate breastfeeding compared with white mothers. Further adjustment for a marker of cultural tradition attenuated these relationships, but all remained statistically significant, suggesting that some of the difference was a consequence of cultural factors. After adjustment for demographic, economic, and psychosocial factors, Indian, Pakistani, Bangladeshi, black Caribbean, and black African mothers were more likely to continue breastfeeding at 3 months compared with white mothers. Additional adjustment for a marker of cultural tradition attenuated the relationship for Indian, Pakistani, Bangladeshi, and black African mothers, but all remained statistically significant. Models run for breastfeeding continuation at 4 and 6 months were consistent with these results.

**CONCLUSIONS.** We have shown that in the United Kingdom the highest breastfeeding rates are among black and Asian mothers, which is in stark contrast to patterns in the United States, where the lowest rate is seen among non-Hispanic black mothers. The contrasting racial/ethnic patterns of breastfeeding in the United

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### Key Words

race, ethnicity, breastfeeding, psychosocial

### Abbreviations

MCS—Millennium Cohort Study

OR—odds ratio

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Kingdom and United States necessitate very different public health approaches to reach national targets on breastfeeding and reduce health disparities. Those who implement future policies aimed at increasing breastfeeding rates need to pay attention to different social, economic, and cultural profiles of all racial/ethnic groups.

**C**OMPELLING EVIDENCE HIGHLIGHTS the benefits of breastfeeding for infants, mothers, and wider society.<sup>1-6</sup> These advantages include health, nutritional, immunologic, developmental, psychological, social, economic, and environmental aspects.<sup>7</sup> Despite these considerable benefits, breastfeeding rates in the United Kingdom are relatively low and have remained stable in recent years. The latest Infant Feeding Survey revealed that only 69% of UK infants were initially breastfed,<sup>8</sup> whereas more recent data from the Millennium Cohort Study (MCS) estimated the rate at 71%.<sup>9</sup> In the United Kingdom, breastfeeding rates decline sharply within 3 months of the birth and are significantly lower among younger, less-educated, primiparous, and lower-income mothers.<sup>8,9</sup> These socioeconomic patterns of breastfeeding are very similar to those found in the United States.<sup>10,11</sup> However, stark differences are seen in racial/ethnic variations in breastfeeding rates between the United Kingdom and United States. In the United Kingdom, breastfeeding-initiation rates are highest among black (95%) and Asian (87%) mothers compared with white mothers (67%).<sup>8,12</sup> In contrast, US data uniformly demonstrate the lowest rate of breastfeeding among non-Hispanic black mothers.<sup>10,11,13-16</sup> Indeed, the most recent US data from the 2002 National Immunization Survey indicate that the highest rates of breastfeeding initiation are found among Hispanic mothers (80%) compared with white (72%) and non-Hispanic black (51%) mothers.<sup>11</sup> These data show similar variations in exclusive breastfeeding rates according to racial/ethnic group.<sup>11</sup>

Although there is some speculation, little is known about the factors that might explain differences in breastfeeding across and within different racial/ethnic groups in the United Kingdom and United States. The MCS provides an opportunity to assess infant-feeding practices among racial/ethnic minority groups and factors underlying any differences in a contemporary UK setting and to contrast this with the findings in the United States. Our objective for this article was to examine patterns of breastfeeding initiation and continuation among a racially/ethnically diverse sample of new mothers and to assess the effects of demographic, economic, psychosocial, and cultural factors on racial/ethnic differences in breastfeeding practices.

## METHODS

### The MCS

The MCS sample was drawn from infants born in the United Kingdom during a 12-month period spanning the years 2000–2001. The survey design, recruitment process, and fieldwork have been described in detail elsewhere.<sup>17</sup> Briefly, 18 553 households agreed to participate in the first (cross-sectional) sweep of this survey, an overall response rate of 68%. Households were identified through the Department of Work and Pensions Child Benefit system and were selected on the basis of where the family resided shortly after the time of birth. All parents of children up to the age of 16 years are eligible to receive Child Benefit, a welfare benefit paid every 4 weeks, which is equivalent to approximately \$30 for first-born children and \$20 for subsequent children. Uptake of this welfare benefit is almost universal (98%). The sample has a probability design and is clustered at the electoral ward level, with disadvantaged residential areas being overrepresented. The survey involved home visits by interviewers when the cohort member was aged, on average, 9 months. During the interview, questions were asked about infant feeding and health, socioeconomic circumstances, a marker of cultural tradition, and household composition. The sample on which this analysis is based includes all singleton infants whose mothers participated in the first survey of the MCS ( $n = 18\ 247$ ). Missing data on the questionnaire items of interest reduced the sample to 17 446 (96%).

Ethical approval for the MCS was gained from the relevant ethics committees, and parents provided informed consent before the interviews took place.

### Race/Ethnicity

Data on mother's self-assigned race/ethnicity were collected by using the 2001 UK census categories, and the following groups were used for analysis: white, Indian, Pakistani, Bangladeshi, black Caribbean (including mixed/biracial white and black Caribbean), black African (including mixed/biracial white and black African) and other. To prevent problems with small cell sizes, mothers who were mixed/biracial black Caribbean and white were categorized as black Caribbean, mothers who were mixed/biracial black African and white were categorized as black African, and mothers who were mixed/biracial South Asian and white were categorized as other because they could not be categorized into any of the other defined groups. Initial analysis indicated that these aggregations have not affected the conclusions drawn in this article.

These ethnic minority groups have, on the whole, very different migration histories. The black Caribbean and Indian groups mainly migrated to the United Kingdom in the 1950s and 1960s, the Pakistanis migrated in

the 1960s and 1970s, the Bangladeshis migrated in the 1980s, and the black Africans migrated in the 1990s.

### Breastfeeding

Breastfeeding initiation was assessed by the question “did you ever try to breastfeed?” Continuation during the first 9 months was computed on the basis of questions about the age of the infant when last given breast milk and when formula or other types of milk or solids were first given. Predominantly breastfed infants were identified as those who received only breast milk; however, the infant may also have been given water and water-based drinks, fruit juice, oral rehydration salts solution, drop and syrup forms of vitamins, minerals, and medicines, and ritual fluids.<sup>18</sup>

### Explanatory Factors

The explanatory effects of demographic, economic, and psychosocial factors and a marker of cultural tradition were assessed. Demographic, economic, and psychosocial variables were gender of infant, mother’s age at time of birth, parity (1, 2, 3 or more children), household income (less than £10 400 to equivalent to the poverty line, £10 400–£20 800, £20 801–£31 200, £31 201–£52 000, more than £52 000, or “refusal and don’t know”), housing tenure (own/mortgage, rent, or other arrangement), mother’s education level (degree or higher, advanced level or General Certificate of Secondary Education or overseas equivalent, no qualifications), mother’s occupation (National Statistics Socioeconomic Classification categories: managerial and professional, intermediate, small employer and self-employed, supervisory and technical, semiroutine and routine, or unclassifiable), cigarette smoking (never, stopped during pregnancy, 1–10 per day, or  $\geq 11$  per day), employment status (working full-time, working part-time, or not working), childcare arrangements (parent, relative, nursery, or other), and lone parenthood. The marker of cultural tradition was language spoken at home (English only, English plus another language, or another language only).

### Statistical Methods

We investigated the relative importance of demographic, economic, psychosocial, and cultural factors in the prediction of breastfeeding initiation and continuation at 3 months across racial/ethnic groups by using nested logistic-regression models. Model A shows the odds ratios (ORs) across racial/ethnic groups adjusted for demographic, economic, and psychosocial measures, and model B additionally adjusts for cultural tradition. We chose to report models for continuation at 3 months because 40% of all mothers continued to breastfeed their infant and 17% did so predominantly at this time, whereas the proportions being predominantly breastfed at 4 and 6 months were 3.2% and 0.3% respectively.

However, models were run for breastfeeding continuation at 4 and 6 months, and the results were consistent with those for continuation at 3 months (data not shown). Models were also run to investigate the explanatory effect of income on breastfeeding initiation within each racial/ethnic group.

All analyses, which were based on participants with complete data, allowed for the clustered stratified sample using the “survey” commands in Stata 8.2.<sup>19</sup>

### RESULTS

Data are shown for white ( $n = 14\,635$ ), Indian ( $n = 417$ ), Pakistani ( $n = 742$ ), Bangladeshi ( $n = 283$ ), black Caribbean ( $n = 240$ ), black African ( $n = 321$ ), and other ( $n = 836$ ) mothers of cohort members. The mean age of the infants at the time of interview was 9.2 months (SD: 0.53 months). Breastfeeding initiation and continuation over time shows a pattern of consistently higher rates for black African mothers and consistently lower rates for white and Pakistani mothers (Fig 1), whereas predominant breastfeeding shows black Caribbean and other mothers with consistently high rates, Indian mothers in the middle, and all of the other groups with low rates (Fig 2). Of those mothers who were breastfeeding their infant at 3 months, the largest proportion who did so predominantly were Pakistani (49%) and black Caribbean (44%) mothers, and the lowest proportions were among Bangladeshi (29%) and black African (24%) mothers.

Table 1 shows the distribution of demographic, psychosocial, economic, and cultural explanatory factors according to the mother’s racial/ethnic group. It is worth noting that across all racial/ethnic groups breastfeeding initiation was more common among mothers who spoke a language other than English (82%) or in addition to English (82%) compared with English only (63%) at home.

The odds of breastfeeding initiation, any breastfeeding at 3 months, and predominant breastfeeding at 3 months, with the largest group (white mothers) as the reference category, are shown in Table 2. In the unadjusted model, the odds of breastfeeding initiation among black African, black Caribbean, Bangladeshi, Indian, and Pakistani mothers were 8.1, 6.5, 3.5, 2.6, and 1.6, respectively, compared with white mothers. Adjustment for demographic, economic, and psychosocial factors (model A) increased the odds for the Pakistani, Bangladeshi, black Caribbean, and black African mothers. Additional adjustment for language spoken at home (model B) attenuated the relationship for black African, Indian, Pakistani, and Bangladeshi mothers, but all differences remained statistically significant.

At 3 months the odds of any breastfeeding for black African, black Caribbean, Indian, and Bangladeshi mothers were 5.3, 3.9, 2.1, and 1.6, respectively, compared with white mothers. Adjustment for demographic,

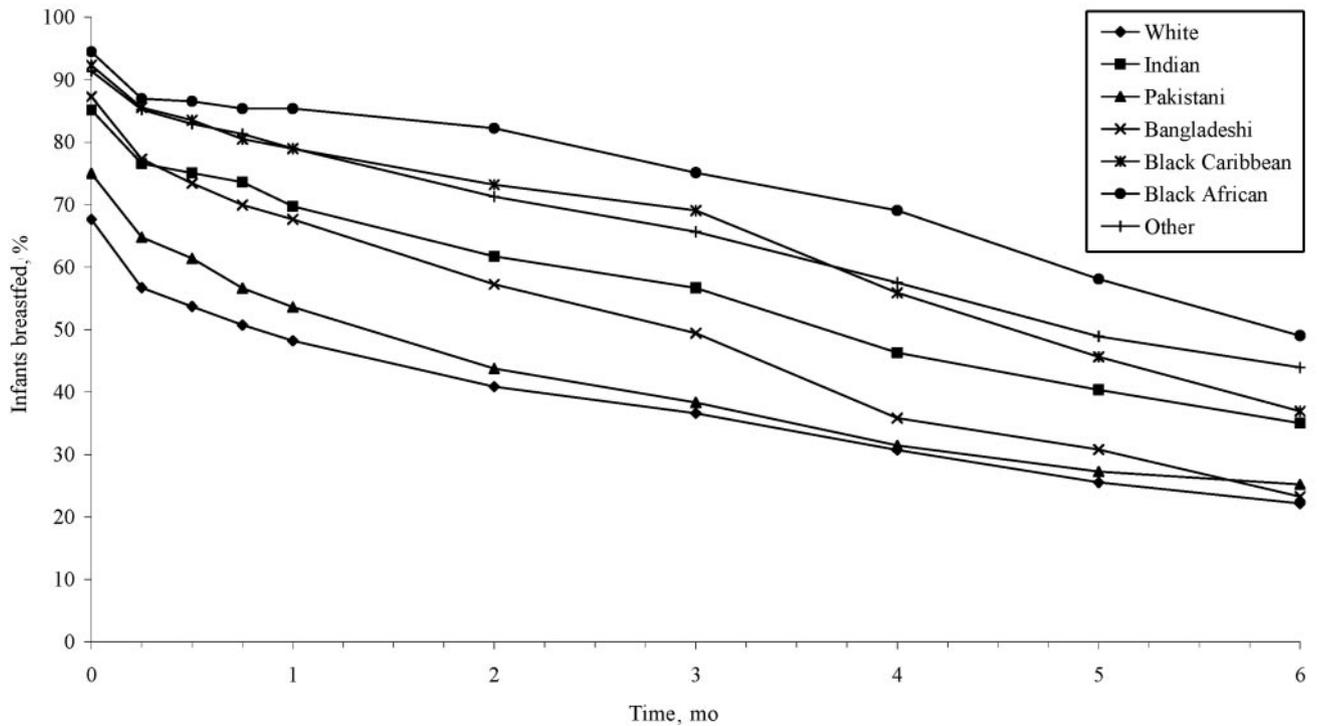


FIGURE 1  
Proportion of infants fed any breastmilk in the first 6 months of life according to ethnic group.

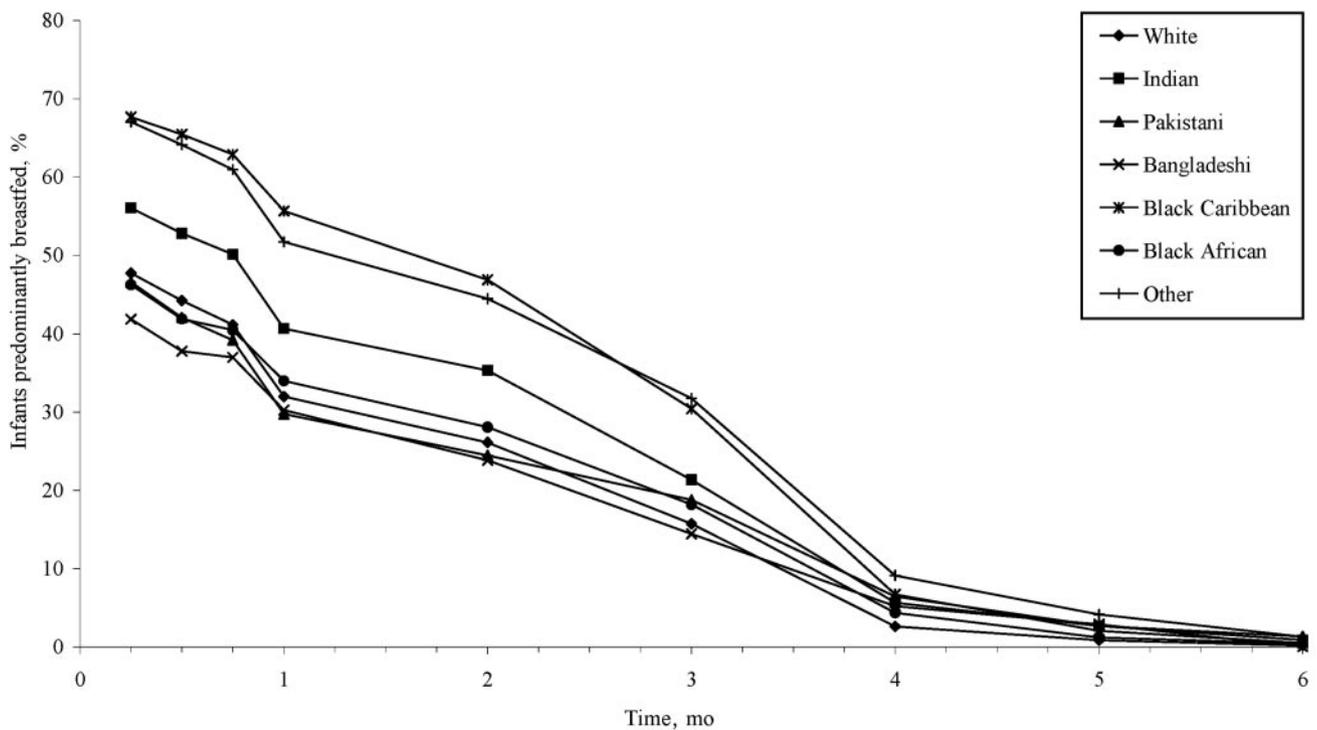


FIGURE 2  
Proportion of infants predominantly breastfed during the first 6 months of life according to ethnic group.

economic, and psychosocial factors strengthened the relationship among black African, black Caribbean, and Bangladeshi mothers, and Pakistani mothers also be-

came significantly more likely to breastfeed their infants compared with white mothers. Additional adjustment for language spoken at home attenuated the relationship

**TABLE 1 Demographic, Economic, Social, and Cultural Factors According to Ethnic Group**

	White (n = 14 635), %	Indian (n = 417), %	Pakistani (n = 742), %	Bangladeshi (n = 369), %	Black Caribbean (n = 240), %	Black African (n = 321), %	Other (n = 836), %
Mother's age at time of birth, y							
13–19	9.3	1.5	6.1	4.9	9.2	3.5	6.1
20–24	18.2	21.8	34.9	40.7	18.1	13.6	15.0
25–29	27.3	37.9	31.4	33.3	22.7	24.3	25.7
30–34	29.5	25.2	19.7	14.9	21.5	34.1	33.9
35–39	13.6	12.3	5.8	4.9	24.6	19.9	16.9
≥40	2.1	1.3	1.7	1.1	3.8	4.6	2.3
Unknown	0.0	—	0.3	0.3	—	—	0.1
Parity, No. of children							
1	42.6	38.8	28.6	21.4	36.2	27.8	44.6
2	34.6	30.1	23.2	20.1	31.9	26.2	27.5
≥3	21.5	20.6	33.3	35.8	26.2	33.5	17.1
Unknown	1.3	10.6	3.5	22.8	5.8	12.5	10.9
Household income, British pounds (£)							
0–10 400	23.8	20.3	38.4	41.5	44.2	41.4	26.8
10 400–20 800	30.7	30.3	34.5	28.7	21.2	23.7	25.6
20 800–31 200	19.5	15.9	5.6	2.7	12.3	7.9	15.3
31 200–52 000	14.1	12.5	3.1	1.6	5.8	7.4	14.5
≥52 000	5.1	5.5	0.8	0.3	1.2	2.2	5.6
Unknown	6.8	15.5	17.7	25.2	15.4	17.4	1.7
Housing tenure							
Owns or mortgage	60.9	66.5	55.7	30.9	26.5	12.5	49.8
Rents private or council	33.8	18.9	22.9	53.9	65.4	85.3	43.9
Lives with parents or other arrangement	5.2	14.2	20.6	14.9	7.3	2.2	5.7
Unknown	0.1	0.4	0.8	0.3	0.8	—	0.5
Mother's occupational social class							
Managerial and professional	28.0	19.7	6.1	5.7	25.0	15.8	27.2
Intermediate	17.7	18.9	7.9	6.5	24.2	10.6	12.4
Small employer and self-employed	3.6	2.5	2.0	0.3	2.3	2.2	5.4
Low supervisory and technical	5.9	2.3	3.1	1.6	5.8	4.1	4.0
Semiroutine and routine	38.2	35.6	29.7	24.4	30.0	29.2	26.6
Unclassifiable	6.5	21.0	51.1	61.5	12.7	38.1	24.4
Mother's education							
First or higher degree	15.6	21.8	6.7	3.0	10.8	18.8	26.5
A, AS, or HE diploma	18.4	16.7	9.5	10.0	16.9	16.6	16.3
GCSE grades A–C	36.7	20.6	17.2	19.0	38.1	13.6	14.3
GCSE grades D–G	11.6	7.8	7.9	8.7	12.7	4.6	3.6
Other academic qualifications including overseas	1.0	10.2	12.2	13.0	2.7	9.5	14.3
No academic qualifications	16.4	22.9	45.8	46.1	18.1	36.5	24.8
Unknown	0.2	—	0.6	0.3	0.8	0.3	0.3
Employment status of mother							
Not working	48.6	57.4	88.2	90.0	52.7	65.4	62.9
Part-time	33.6	25.4	6.1	5.1	19.2	10.6	18.7
Full-time	17.6	16.7	5.3	4.6	28.1	24.0	18.1
Unknown	0.2	0.4	0.3	0.3	—	—	0.3
Smoking status							
Non smoker	59.1	94.1	95.4	97.3	60.8	94.8	73.6
Smoked before pregnancy and stopped up to 10 per day	14.1	3.6	1.1	0.8	17.3	3.3	12.5
≥11 per day	20.1	2.1	2.9	1.9	17.7	1.9	12.0
≥11 per day	6.3	0.2	0.5	0.0	2.3	0.0	1.8
Unknown	0.3	—	0.1	—	1.9	—	0.1
1-parent household	17.3	4.7	8.3	6.5	50.8	43.9	15.2
Language spoken at home							
English only	97.6	15.9	5.0	1.6	96.5	33.0	42.6
English and other	2.0	67.6	69.0	63.4	3.1	51.8	41.6
Other only	0.5	16.5	26.0	35.0	0.4	15.3	15.8

A indicates advanced; AS, advanced supplementary; HE, higher education; GCSE, General Certificate of Secondary Education; —, no values.

**TABLE 2 ORs and 95% Confidence Intervals for Effect of Ethnicity on Initiation and Continuation of Breastfeeding**

	Unadjusted		Model A <sup>a</sup>		Model B <sup>b</sup>	
	OR	95% CI	OR	95% CI	OR	95% CI
Initiation of breastfeeding <sup>c</sup>						
White	1.0		1.0		1.0	
Indian	2.6	1.8–3.8	2.6	1.7–4.0	1.9	1.2–3.0
Pakistani	1.6	1.2–2.1	3.2	2.6–4.0	2.2	1.6–2.9
Bangladeshi	3.5	2.4–5.0	7.9	5.3–11.6	5.1	3.3–7.9
Black Caribbean	6.5	3.6–11.5	9.3	4.9–17.4	9.2	4.9–17.3
Black African	8.1	4.4–14.7	13.6	7.8–23.7	10.5	6.1–18.2
Other	5.1	4.0–6.6	5.9	4.5–7.8	4.8	3.6–6.6
Predominant breastfeeding at 3 mo						
White	1.0		1.0		1.0	
Indian	1.5	1.2–2.0	1.4	1.1–1.8	1.1	0.8–1.5
Pakistani	1.3	1.0–1.9	1.9	1.3–2.7	1.4	1.0–2.1
Bangladeshi	1.0	0.6–1.5	1.4	0.9–2.2	1.0	0.6–1.7
Black Caribbean	2.4	1.7–3.3	2.9	2.1–4.0	2.9	2.1–4.0
Black African	1.2	0.9–1.6	1.0	0.7–1.6	0.9	0.6–1.4
Other	2.5	2.0–3.0	2.3	1.9–2.9	2.0	1.5–2.6
Any breastfeeding at 3 mo						
White	1.0		1.0		1.0	
Indian	2.1	1.6–2.7	2.0	1.6–2.6	1.6	1.2–2.1
Pakistani	1.1	0.9–1.5	1.9	1.5–2.5	1.4	1.0–2.0
Bangladeshi	1.6	1.2–2.1	2.9	2.0–4.2	2.0	1.3–3.1
Black Caribbean	3.9	2.7–5.6	5.6	3.7–8.5	5.6	3.7–8.4
Black African	5.3	3.3–8.7	7.4	4.2–13.2	6.0	3.3–10.8
Other	3.3	2.7–4.1	3.7	2.9–4.7	3.1	2.4–4.0

CI indicates confidence interval.

<sup>a</sup> Model A plus gender of baby, parity, age of mother, housing tenure, household income, mother's education, mother's occupational social class, smoking status, mother's employment status, 1 or 2 parent household, child care arrangements.

<sup>b</sup> Model B plus gender of baby, parity, age of mother, housing tenure, household income, mother's education, mother's occupational social class, smoking status, mother's employment status, 1 or 2 parent household, child care arrangements, language spoken at home.

<sup>c</sup> Child care arrangements not included in these models.

for Indian, Bangladeshi, black African, and Pakistani mothers (for Pakistani mothers, differences lost statistical significance). Black Caribbean, Indian, and black African mothers were more likely to predominantly breastfeed their infants at 3 months compared with white mothers. After adjustment for demographic, economic, and psychosocial factors, the odds were significantly higher for Pakistani compared with white mothers, whereas further adjustment for language spoken at home reduced the odds for all groups compared with white mothers except for the black Caribbean mothers.

Table 3 shows the relative unadjusted effect of income on the odds of breastfeeding initiation within racial/ethnic groups. For the white and Asian mothers, higher income levels were associated with increased

odds of breastfeeding initiation with the exception of the Indian mothers. The association between income and breastfeeding initiation was less consistent for those in the black groups.

## DISCUSSION

In this large national UK study, black African, black Caribbean, Bangladeshi, Pakistani, and Indian mothers were more likely to initiate breastfeeding compared with white mothers. Continuation of breastfeeding at 3 months was more likely for black Caribbean, black African, Indian, and Bangladeshi compared with white mothers. Black Caribbean mothers were more likely to predominantly breastfeed at 3 months compared with white mothers.

**TABLE 3 ORs and 95% Confidence Intervals for Effect of Income on Breastfeeding Initiation Within Ethnic Groups**

	White	Indian	Pakistani	Bangladeshi	Black Caribbean	Black African	Other
Below poverty line (less than £10 400)	1	1	1	1	1	1	1
Above poverty line but below average (£10 400–£20 800)	2.0 (1.8–2.2)	0.9 (0.4–2.2)	1.4 (0.9–2.1)	3.3 (0.7–15.1)	2.8 (0.5–17.6)	0.5 (0.1–2.2)	1.7 (1.0–3.0)
Average or above (more than £20 800)	5.1 (4.7–5.6)	1.5 (0.6–3.6)	2.6 (1.2–5.7)	2.5 (0.2–28.8)	0.9 (0.3–3.0)	6.4 (0.2–195.4)	4.1 (2.2–7.5)
Refused/don't know/missing	2.2 (1.9–2.6)	0.6 (0.2–1.7)	1.4 (0.8–2.5)	0.6 (0.2–1.7)	1.4 (0.2–8.2)	0.2 (0.0–0.7)	2.3 (1.0–5.4)

Adjustment for psychosocial, economic, and demographic factors increased the breastfeeding advantage of racial/ethnic minority groups with the exception of the Indian group. This is not surprising, given the socioeconomic gradient in breastfeeding shown in Table 3, with mothers from advantaged backgrounds more likely to breastfeed their infants<sup>8,9</sup> and the economic disadvantage of racial/ethnic minority groups compared with the white group in the United Kingdom (with the exception of the Indian group, which Table 1 shows has a similar economic profile to the white group). We also examined the possibility that differences in breastfeeding across racial/ethnic groups reflected differences in cultural tradition by using (as a crude marker) language spoken at home. This correlated with breastfeeding within racial/ethnic groups: those who spoke English only at home were less likely to breastfeed, and adjustment for this in the models reduced the advantage for those racial/ethnic minority groups (Indian, Pakistani, Bangladeshi, and black African) in which a significant number of respondents did not speak English at home. This suggests that the lower breastfeeding rate in the white group is at least partly a reflection of cultural difference and that more “traditional” mothers within racial/ethnic minority groups are more likely to breastfeed. A concern, then, is that “integration” into dominant cultural practices may reduce breastfeeding in racial/ethnic minority groups.

Few studies have assessed breastfeeding rates among representative samples of different racial/ethnic minority groups. Our results, however, are in support of the findings from the UK Infant Feeding Survey in 2000 and descriptive analysis of the MCS, both of which showed higher rates of breastfeeding among the black and Asian mothers compared with the white mothers.<sup>8,12</sup> The contrasting racial/ethnic patterns of breastfeeding in the United Kingdom compared with those in the United States raises important questions about the varying nature of racial/ethnic disadvantage. In a recent national US survey, initiation rates were highest among the mothers of Hispanic (80%) compared with non-Hispanic white (72%) and non-Hispanic black (51%) infants.<sup>11</sup> At 6 months only 20% of black infants were breastfed compared with 37% of white and 40% of Hispanic infants. The higher rates of breastfeeding among, perhaps less culturally integrated, Hispanic families reflects those found among racial/ethnic minority groups in the United Kingdom. The differences between black Americans and Hispanics on the one hand and between black Americans and the black groups in the United Kingdom on the other hand are puzzling, particularly because overall rates of breastfeeding in the United States and United Kingdom are remarkably similar. In contrast, broader investigations of racial/ethnic disparities in health have revealed great similarities between black Caribbean people in the United Kingdom and black Americans for a range of health outcomes, findings that

are not surprising given their similar contemporary socioeconomic positions, as well as their shared historical trajectories.<sup>20</sup> That the advantage shared by black and other racial/ethnic minority groups in the United Kingdom in breastfeeding, despite their socioeconomic disadvantage, is not shared by black Americans with other racial/ethnic minority groups in the United States is of great public health significance and merits additional investigation. That evidence from the United Kingdom suggests that a more-traditional cultural location correlates with increased rates of breastfeeding suggests possible lines of investigation. Another possible explanation could relate to the different barriers that may hinder a mother’s breastfeeding decisions and practices. A range of social, economic, employment, and environmental factors have been identified as influential on breastfeeding patterns. These factors may operate differently in the United Kingdom and United States and, therefore, partly explain the differing racial/ethnic patterns of breastfeeding between the 2 countries. Also, both health care systems and public health programs differ greatly between the United States and United Kingdom.

More positively, although similar racial/ethnic differences in breastfeeding in the United States have been shown by Ryan et al<sup>10</sup> using the Ross Laboratories Mothers Surveys, trend data from these surveys suggest that the racial/ethnic disadvantage is decreasing over time. For example, using estimates provided in Table 1 of the Ryan et al article, the relative risk of initiating breastfeeding for the mothers of black infants compared with mothers of white infants increased from 0.58 to a still-significant 0.73 between 1996 and 2001. Trends in average rates of breastfeeding, as well as differences in these trends across racial/ethnic groups, suggest that additional success in reducing disparities in this area can be obtained through public health initiatives.

One possible limitation of our study is that the data were collected when the infants were 9 months old and, thus, could potentially be affected by recall bias. Previous studies have shown that the recall of breastfeeding initiation and duration are more accurate than recall of when complementary feeding commenced.<sup>21,22</sup> Estimates of predominant breastfeeding rates, therefore, may be less reliable than other rates reported in this article. It is unclear whether the extent of such recall bias will vary across racial/ethnic or demographic groups. Additional research is needed to assess the validity of maternal recall of breastfeeding practices and the extent to which this may vary by racial/ethnic groups. Another limitation of the study relates to how we assessed cultural tradition. Language spoken at home was the only marker available to assess this, and a broader range of cultural markers such as migrant/generation status would have provided a more comprehensive assessment of cultural identity.

## CONCLUSIONS

We have shown that rates of breastfeeding initiation and continuation in the United Kingdom are higher among black and Asian mothers compared with white mothers. These findings are in stark contrast to US data, which show the lowest rates of breastfeeding among non-Hispanic black mothers. The contrasting racial/ethnic patterns of breastfeeding in the United Kingdom and United States necessitate very different public health approaches to reach national targets on breastfeeding and reduce health disparities. Those who implement future policies aimed at increasing breastfeeding rates need to pay attention to the different social, economic, and cultural profiles of all racial/ethnic groups.

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