Health inequalities are highest among White Scottish, similar for British and Irish, and significantly lower for Asians and Other Whites. This suggests that cultural and/or behavioural factors may reduce the effect of material deprivation on health.

**Background**

Marked ethnic variations in infant mortality have been documented in England and Wales. The reasons why certain ethnic groups have higher rates remain generally unknown. We aimed to evaluate ethnic variations in infant mortality, adjusting for deprivation and mother’s migration status and to explore the contribution of preterm birth to these variations.

**Methods**

Routinely collected birth and death registration data on all singleton live births (gestational age ≥22 w) in England and Wales, 2006–2012 were linked to other routine data on infant’s ethnicity and gestational age. We analysed infant mortality by ethnic group using logistic regression in STATA to adjust for maternal sociodemographic characteristics (age, area deprivation, migration status and marital status/registration type) and gestational age.

**Results**

In the 4,634,932 births analysed, crude infant mortality rates were highest in Pakistani, Black Caribbean, Black African, and Bangladeshi infants (6.92, 6.00, 5.17 and 4.40 per 1000 live births, respectively vs. 2.87 in White British infants). Adjustment for maternal sociodemographic characteristics changed the results little. Further adjustment for gestation significantly attenuated the risk in Black African (OR 1.17, 95% CI 1.06–1.29) and Caribbean (OR 1.02, 95% CI 0.89–1.17) but not in Pakistani (OR 2.32, 95% CI 1.06–1.29), Bangladeshi (OR 1.29, 95% CI 1.06–1.29), and Indian infants (OR 1.02, 95% CI 1.01–1.03).

The association between ethnicity and infant mortality differed significantly between term and preterm infants (p < 0.001 for interaction). In term infants, all three South Asian groups had a higher risk not explained by maternal characteristics or gestation. In preterm infants, adjustment for gestational age (<28, 28–31, 32–33, 34–36 weeks) fully explained the higher risks in Black African and Caribbean infants, but not in Pakistani and Bangladeshi infants. A sensitivity analysis excluding deaths due to congenital anomalies did not fully explain the excess risk in Pakistani infants.

**Conclusion**

South Asian and Black infants have higher infant mortality compared with White British infants which is not explained by deprivation, migration status or other maternal characteristics. A higher proportion of infants born at younger gestational age appears to explain the increased risks in preterm Black African and Caribbean infants but not in the South Asian groups.

This large national study provides insight into ethnic inequalities in early life to inform policy, practice, and future research. Findings suggest that strategies targeting the prevention and management of preterm birth in Black African and Caribbean mothers and babies would help to reduce ethnic inequalities in infant mortality. Different strategies may be required in South Asian groups.