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Maternal vulnerability and birth interval in England: a birth cohort study using hospital episode statistics from 2006 to 2016

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Aim

To determine the association between birth interval for mothers with and without indicators of vulnerability.

Methods

We included mothers who gave birth in 2011 recorded in Hospital Episode Statistics. Vulnerability indicators included diagnostic codes for mental health problems, adversity related injuries (ARI), material/social disadvantage (MSD) recorded in the previous five years, or age <20 years at index delivery.

We analyses birth interval using Cox proportional hazard models and adjusted for maternal and birth characteristics.

Results

We included 636,876 women, of whom 93,266 (14.6%) had indicators of vulnerability: 63,421 (10.0%) for mental health problems, 8,229 (1.2%) for ARI, 21,616 (3.4%) for MSD, and 32,622 (5.1%) were aged <20y.

Over a third of mothers (242,401; 38.1%) had another live birth. Median birth interval was 957 days (5-95%centiles:433-1694), and was shortest for women with ARIs (904 days,391-1697).

Vulnerable mothers were more likely than women with no vulnerability indicators to have another live birth (HRadj:1.13, 95%CI:1.12-1.14), particularly teenage mothers (HRadj:1.53,1.50-1.55).

Conclusions

Vulnerable mothers had a shorter subsequent birth interval and were more likely to have another birth in the next five years. Maternity care may be an appropriate time to target interventions to vulnerable families to enable choice about timing of subsequent pregnancy.

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