

## Abstract

**Purpose:** Maternal SHS exposure is also associated with adverse birth outcomes. Indonesia ranks as one of highest countries for smoking prevalence worldwide. SHS is in all places in Indonesia, particularly in homes, restaurants and public transportation. Almost all non-smoking women and children are exposed to SHS outside the home.

**Methods:** This population-based retrospective cross-sectional study was conducted in Tomohon city, North Sulawesi, Indonesia. The participants were drawn from a population of women who have given birth within the January to August 2017 and who were exposed to SHS during pregnancy. Their health condition was measured before and after pregnancy, as well as the gestational week at birth, birth weight and height, and perinatal health conditions of the infants.

**Results:** The maternal SHS exposure during pregnancy was significantly associated with the risk of reduction of birth weight in Tomohon city (Adjusted  $\beta = 488.23$ , 95% [CI: 86.78 – 892.67],  $p = 0.02$ ). Moreover, infants' birth weight of mothers who were exposed to SHS outside the house was significantly less compared to those exposed to SHS only inside (Adjusted  $\beta = -272.39$ , 95% [CI: -511.84 – -32.95],  $p = 0.03$ ). Also, there were weak trends between SHS exposure inside home and LBW. However, there was no significant association between SHS and postpartum depressive symptoms, LBW, and breastfeeding conditions. The background of women was significantly associated with postpartum depression and exclusive breastfeeding conditions.

**Conclusion:** Maternal SHS exposure during pregnancy inside the home was associated with a reduction of infant birth weight compared to maternal non-SHS exposure in Tomohon city, North Sulawesi, Indonesia.