ABSTRACT

Background: Various international and national commitments and interventions that focus on improving maternal, newborn and child health have been established in South Africa. Irrespective of these efforts, adverse pregnancy outcomes (stillbirths and miscarriages) remain invisible within policies and programmes intended to reduce this public health burden thus leading to its high rate in South Africa. This mismatch of burden to action is due to several factors that keep stillbirths and miscarriages hidden, notably underreporting which leads to a lack of data and a lack of consensus on priority interventions and, social taboos that reduce the visibility of stillbirths and the associated family morning. While studies have identified a number of individual demographic and socioeconomic factors associated with stillbirths and miscarriages, the role of household socioeconomic factors remain unexplored. Poor socioeconomic conditions within a household have broadly been linked with poor health and negative birth outcome among pregnant women. This study therefore sought to identify demographic and household socioeconomic associated with stillbirths and miscarriages in South Africa.

Methods: This study utilized secondary data from the 2010 – 2014 South African General Household Survey (SAGHS). The study sample comprises of women of reproductive age 15-49 years who were resident in the households selected to participate in the SAGHS. A sample of 248,057 women were included in the study; these are women who reported to have been pregnant in the last 12 months preceding the survey from 2010-2014. The population of interest in this study are South African women whose pregnancy has ended in a stillbirth and or a miscarriage. The outcome variable was pregnancy outcomes (stillbirths, miscarriages and others) while predictor variables include household wealth status, maternal age, source of drinking water, type of toilet facility, sex of household head, province of residence,
household electricity, population group and HIV status. Data analysis was done in three stages. First, univariate analysis was done to provide descriptive results of the study population. The second stage involved a bivariate analysis producing odds ratios to examine the association between each predictor variable with each pregnancy outcome. The third stage included an unadjusted (bivariate) and adjusted (multivariate) multinomial logistic regression producing relative risk ratios (RRRs) to examine the demographic and household socioeconomic determinants of stillbirths and miscarriages.

**Results:** The levels of stillbirths were 0.17% and 0.37% in 2013 compared to 0.11% and 0.12% respectively. The stillbirth rate (SBR) from 2010-2014 was 25.7 per 1000 births while miscarriage rate was 24.5 per 1000 pregnancies. Results from the multinomial logistic regression showed that maternal age, race, sex of household head, province of residence, source of drinking water, type of toilet facility, geographic type, household wealth index, hypertension and HIV positive status are significant determinants of stillbirths and miscarriages among women in South Africa. Advanced maternal age (34-39 and 40-44 years), rural residence, being Black, use of other type of toilet facilities, poor wealth quintile, Northern Cape province, being 000HIV positive and drinking piped water are associated with an increased risk of stillbirths and miscarriages.

**Conclusion:** This study found that demographic and household socioeconomic factors are associated with pregnancy outcomes (stillbirths and miscarriages) among women aged 15-49 years in South Africa. This study has demonstrated the fact that household socioeconomic factors are important in understanding the determinants of stillbirths and miscarriages. Thus, the outcomes of pregnancy are not separable from the socioeconomic conditions of the pregnant women within a household as maternal poverty can translate to poor foetal health. Interventions on maternal, newborn and child health should also be more targeted at these pregnancy outcomes as stand-alone health indicators to address the dearth of data and to
ensure proper monitoring. Furthermore, women in remote areas who do not have access to electricity, toilet facilities and other important assets in their household should be prioritized by programs on poverty alleviation. Lastly, it is crucial that quality obstetric care services should be made available, accessible and affordable for women in remote areas. This may improve the outcomes of pregnancy through early detection of pregnancy complications.

KEYWORDS:
Stillbirth, Miscarriage, Pregnancy Outcomes, South Africa