

Prevalence of Abortion and Adverse Pregnancy Outcomes among Working Women in Korea

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Many female workers start their jobs at mid-twenties or early-thirties, which overlap in time with marriage, pregnancy and delivery. There is ongoing trend of low birth rate, increasing rate of hard-to-gestations and infertility problems among eight million female workers in Korea. Moreover, various repro-toxic agents, including suspicious or unknown agents, are affecting workers' reproductive health. Our study aims to investigate epidemiological traits of reproductive problems related with occupations, and accommodate preventive management plan for high risk industries.

We obtained claim data of National Health Insurance from 2011 to 2015 and analyzed to obtain the odd ratio (OR) for abortion and other obstetrical complications. We compared each industry group to non-working female and public administrative workers as a reference group.

We analyzed the data from 2011 to 2015, and found out the industries having steadily higher ORs. In 2013, the OR for miscarriage(spontaneous and missed abortion) of all working female is 1.26(95%CI : 1.23-1.28), which is statistically higher compared to non-working female, i.e., female dependents of the employment-based NHI program. Industry groups showed higher OR for abortion and have over 1,000 cases of abortion were business support services (1.45, 95%CI 1.35-1.56), manufacture of electronic components, computer, radio, television and communication equipment and apparatuses (1.40, 95%CI 1.33-1.48), human health (1.36, 95%CI 1.31-1.41), other manufacturing (1.33, 95%CI 1.24-1.42), and etc. The OR of all female workers compared to non-working female for habitual abortion, threatened abortion, small for gestational age(SGA) and placenta abruption were 1.28 (95%CI 1.21-1.36), 1.40 (95%CI 1.38-1.43), 1.19 (95%CI 1.13-1.26) and 1.28 (95%CI 1.15-1.42), respectively. The trend that higher rate of abortion in working women than non-working women were continued from 2011 to 2015.

We investigated the epidemiological traits of Korean female workers' reproductive health problems and provided data indicating female workers in several industry groups have higher OR for several reproductive health problems. Finally, we suggested that working status itself might be considered as a risk factor for reproductive health problems, such as abortion, habitual abortion, threatened abortion, SGA and placenta abruption.