

## ABSTRACT

**Background:** The rate of caesarean section has been on an increase over the past decades across the globe. The number of repeat caesarean sections has also increased as a result of the rising caesarean section rates. Intra-abdominal adhesions are the most frequent complication and the main reason for increased morbidity and mortality in repeat caesarean sections.

**Objective:** We aimed to determine the prevalence, and factors associated with severe intra-abdominal adhesions among women undergoing repeat caesarean section at Mbarara Regional Referral Hospital.

**Methods:** This was a cross-sectional study carried out from May to July 2023 at the maternity ward and obstetric theatre of Mbarara Regional Referral Hospital (MRRH) and involved women undergoing a repeat caesarean section. We consecutively enrolled 420 study participants until the sample size was achieved. We computed the prevalence of severe adhesions it's 95% confidence interval. We used modified Poisson regression analysis to determine the factors associated with severe intra-abdominal adhesions.

**Results:** We enrolled 420 participants with a mean age of 27.83 ( $\pm 4.59$ ) years. The majority had  $\geq 2$  previous caesarean sections (55.2%). The prevalence of severe intra-abdominal adhesions among women undergoing repeat caesarean sections at Mbarara Regional Referral hospital was 53.1% (95% CI: 48.3-57.8). The factors independently associated with severe intra-abdominal adhesions were history of surgical site infection (SSI) on the previous caesarean section (aPR 1.52, 95% C.I: 1.28-1.82, p-value  $< 0.001$ ), having 3 or more previous caesarean sections (aPR 1.9, 95% C.I: 1.36-2.68, p-value  $< 0.001$ ) and a positive HIV sero-status (aPR 1.26, 95% CI: 1.05-1.51, p-value=0.014).

**Conclusion:** The prevalence of severe adhesions among women undergoing repeat caesarean section at MRRH is high. Women with history of surgical site infection, those with at least 3 previous caesarean section scars and those who are HIV seropositive are likely to present with severe adhesions.