

## The Invisible risk: The implications of adverse childhood experiences on ectopic pregnancy treatment and outcomes

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Childhood adversity is known to be associated with serious gynaecological conditions in later life. Prior research has primarily focused on the mechanism and psychological ramifications of miscarriages with limited attention given to ectopic pregnancies. The study extends that of previous reproductive research by investigating the extent to which childhood adversity affects the severity of treatment and outcomes of women who have experienced ectopic pregnancies; with additional focus on the psychological ramifications. Our study comprised of 120 women who had experienced at least one ectopic pregnancy. Data was collected through an anonymised cross-sectional questionnaire of 25 questions between November 2022 and March 2023.

Multinomial logistic regression models and Pearson's coefficient were used to determine the association between (i) individual and summary ACE variables; (ii) clinical treatment and outcomes; and (iii) satisfaction of medical care given. Fifty percent of women experienced their first ectopic pregnancy at 21-23 years of age and 58% of our cohort were exposed to  $\geq 3$  ACEs. Women with  $\geq 3$  exclusively had an ectopic pregnancy score of  $\geq 7$ ; were 6.26 times more likely to present with  $\geq 6$  severe signs or symptoms; accounted for 65.7% of medical complications ( $p < 0.0001$ ); 70% required additional invasive treatment ( $p < 0.0001$ ); had lower levels of awareness ( $p = 0.0034$ ) and were exclusively associated with  $\geq 4$  ectopic pregnancies. A history of physical abuse versus no history was associated with higher frequencies of recurrent ectopic pregnancies (OR=5.44 [2.23;13.26],  $p < 0.001$ ). Women who experienced a breadth of childhood abuse and neglect were more likely to have severe and invasive treatment to manage their ectopic pregnancies and consequently, had significant negative physical and psychological outcomes. Our findings suggest that ACEs may be implicit in the mechanism of ectopic pregnancies.