An epidemiological study of hysterectomies in India and Australia

Abstract

Hysterectomy, the surgical removal of the uterus, is one of the most commonly performed gynaecological procedures worldwide. Although hysterectomy is a definitive treatment for many benign gynaecologic conditions, it has been associated with several long-term physical and psychological consequences, particularly when performed at younger ages or alongside bilateral oophorectomy. Studies, primarily from high-income countries, indicate that sociodemographic and reproductive factors, including lower educational attainment and higher parity, are associated with an increased likelihood of hysterectomy. However, there has been no systematic synthesis of evidence from low and middle-income countries (LMICs).

In India, about one in ten women report having undergone hysterectomy by age 49, with substantial regional variation. Evidence on the association between tubal ligation and hysterectomy remains scarce and inconsistent, with no recent prospective cohort studies examining the association.

This thesis synthesizes existing evidence on factors associated with hysterectomy in LMICs, explores subnational patterns and correlates of hysterectomy in India, and examines tubal ligation as a potential associated factor in an Australian cohort.

This thesis comprised three analyses: a systematic review, a cross-sectional analysis using the National Family Health Survey-5 (NFHS-5) data from India, and a prospective cohort analysis using the Australian Longitudinal Study on Women's Health (ALSWH) 1973-78 cohort data from Australia.

The systematic review found that evidence on correlates of hysterectomy in LMICs is limited, with more than three-quarters of the included studies conducted in India. Evidence across multiple LMICs, including India, suggested that increasing age at survey (in the reproductive ages), health insurance coverage at survey, being currently married or having a partner, and higher wealth quintiles were associated with a higher likelihood of hysterectomy. Subnational analysis indicated a similar younger median age at hysterectomy across both low and high-prevalence group of states. Analysis of ALSWH data indicated that women who had undergone tubal ligation had a significantly higher likelihood of hysterectomy compared with those who had not undergone the procedure.

Using nationally representative data from India and Australia, this thesis identified several early and mid-life factors associated with hysterectomy among women of reproductive age. Further population-based and prospective studies, particularly from LMICs, are needed to better understand treatment pathways and indications for hysterectomy.