**Abstract**

**Background:** Chronic pelvic pain (CPP) is a common condition which significantly impacts the quality of life and wellbeing of many women. Laparoscopy with histopathology is recommended for investigation of pelvic pain and identification of endometriosis with concurrent removal. Never-the-less, the association between endometriosis and pelvic pain is challenging, with endometriosis identified in only 30-50% of women with pain.

**Aims:** To explore the predictors for undergoing surgery, for identifying endometriosis and endometriosis severity in a cohort of women with CPP.

**Materials and methods:** This study forms part of the Persistent Pelvic Pain project, a prospective observational cohort study (ANZCTR:ACTRN12616000150448). Women referred to a public gynaecology clinic with pain were randomised to one of two gynaecology units for routine care and followed for 36 months with 6-monthly surveys assessing demographics, medical history, quality of life, and pain symptoms measured on a Likert scale. Operative notes were reviewed and endometriosis staged.

**Results:** Of 471 women recruited, 102 women underwent laparoscopy or laparotomy, of whom 52 had endometriosis (n = 37 stage I-II; n = 15 Stage III-IV). Gynaecology unit, pelvic pain intensity and lower parity were all predictors of surgery (odds ratio (OR) 0.342; 95% CI 0.209-0.561; OR 1.303; 95% CI: 1.079-1.573; OR 0.767; 95% CI: 0.620-0.949, respectively). There were no predictors identified for endometriosis diagnosis and the only predictor of severity was increasing age (OR 1.155; 95% CI: 1.047-1.310).

**Conclusions:** Gynaecology unit and pain intensity were key predictors of undergoing laparoscopy; however, pain severity did not predict endometriosis diagnosis or staging. These findings indicate the need to review current frameworks guiding practice toward surgery for pelvic pain