

BACKGROUND

Women’s services have poor attendance. Fear and embarrassment surrounding gynaecological health remain prevalent. Numerous long term sequelae can result from lack of gynaecological care include pelvic inflammatory disease, infertility and malignancy. Although the menstrual tampon as a biospecimen collection device has been demonstrated to be able to identify various gynaecological abnormalities, currently, possibly due to its novelty and lack of information on validity, they are not routinely used.

OBJECTIVES

Determine if self-collected vaginal tampons, as biospecimen collection tools, are comparable to current gold-standard methods in their efficacy, safety and acceptability.

METHODS

A Systematic review was conducted following PRISMA guidelines and prospectively registered with PROSPERO (CRD42022374857). PubMed, MEDLINE, Cochrane Library, Scopus, and Web of Science were searched for eligible studies. All primary studies reporting the acceptability, efficacy or safety of vaginal tampons as a biospecimen collection device in comparison to other conventional methods of collection were included.

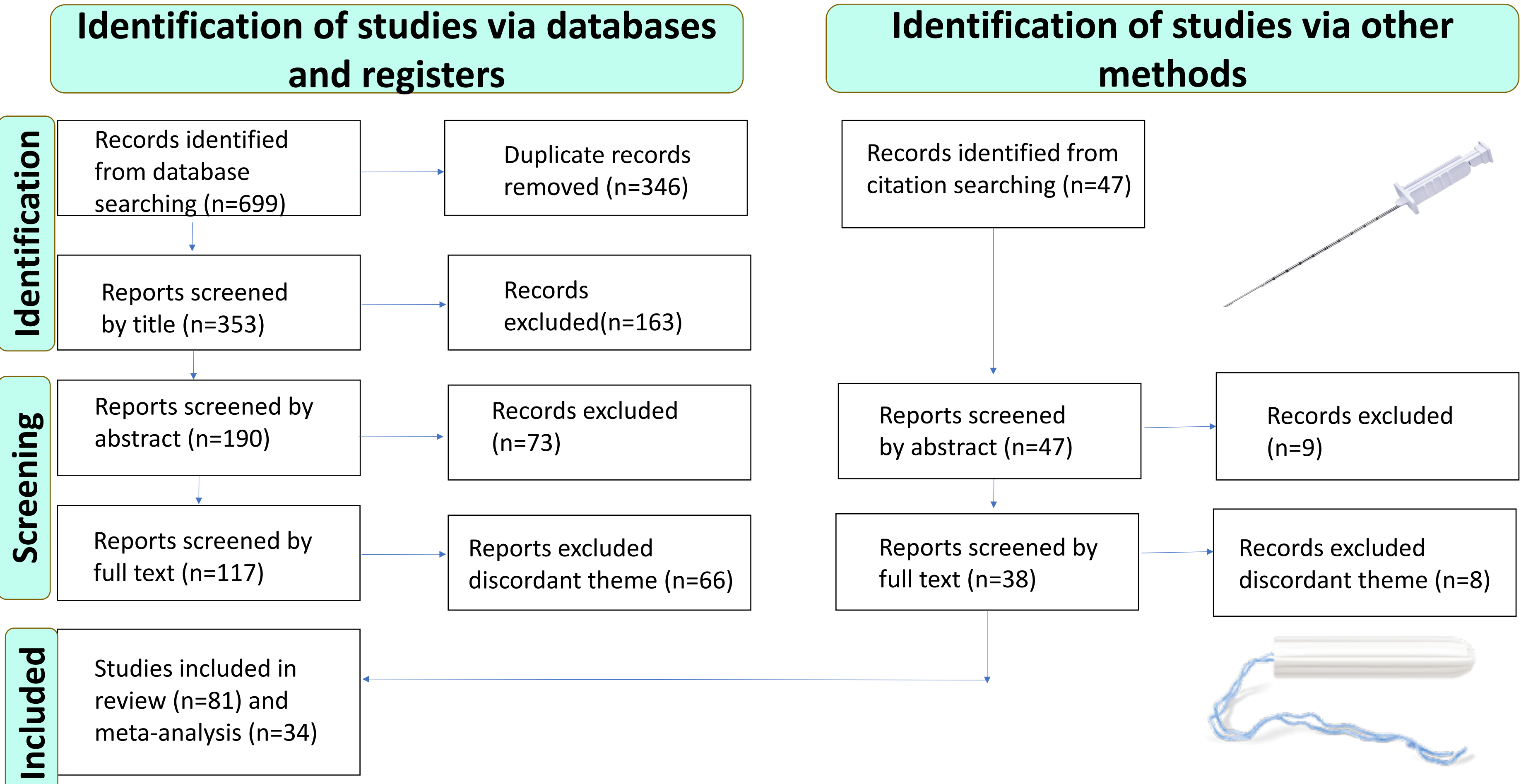


Figure 1. PRISMA flow diagram illustrating the search strategy for this meta-analysis

RESULTS

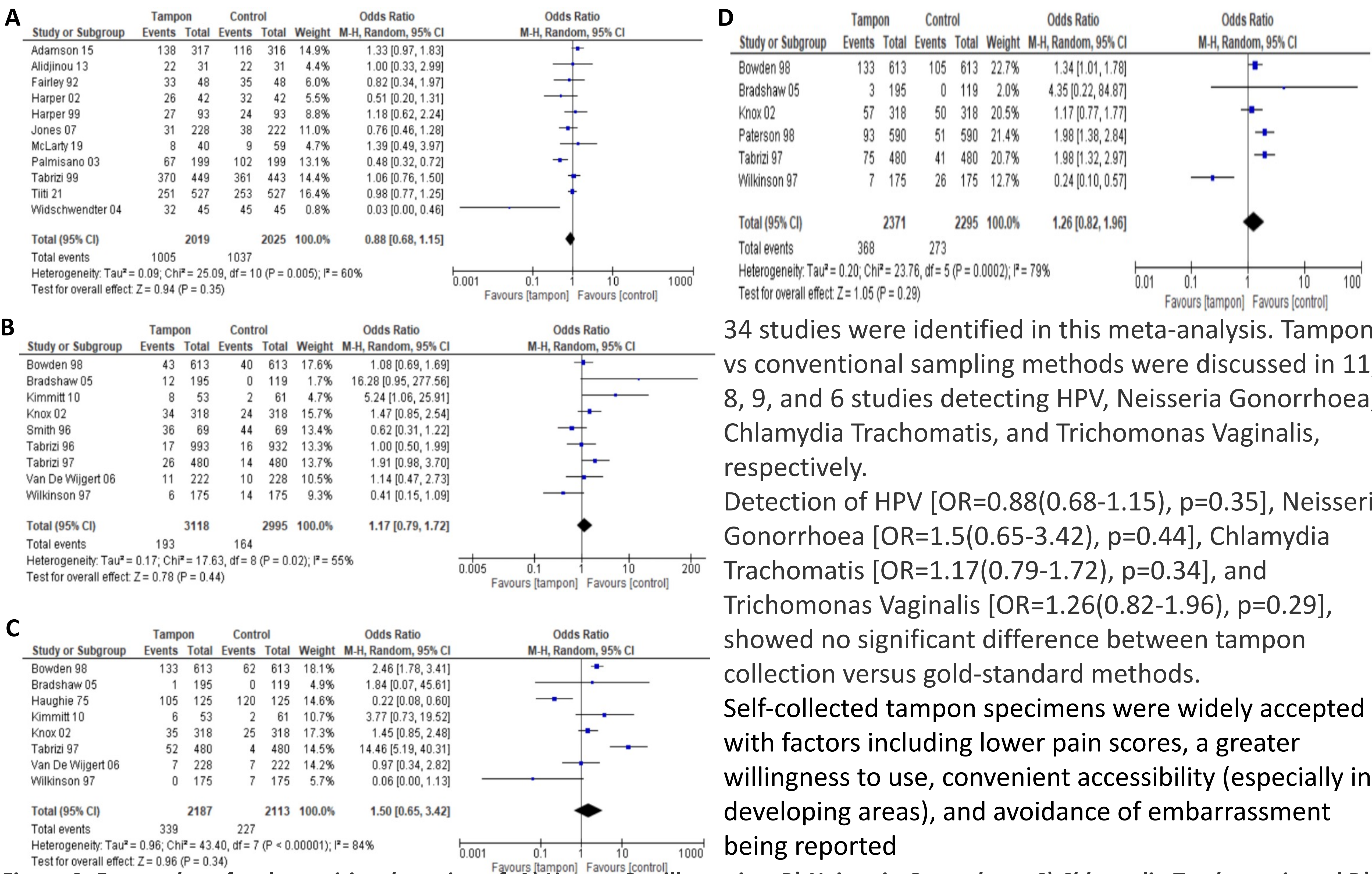


Figure 2. Forest plots for the positive detection of A) Human Papillomavirus B) Neisseria Gonorrhoea C) Chlamydia Trachomatis and D) Trichomonas Vaginalis via Tampon Vs Control

CONCLUSIONS AND RECOMMENDATIONS

There was no significant difference between tampon collection versus gold-standard methods in the detection of gynaecological abnormalities. Self-collected tampon specimens were widely accepted with factors including lower pain scores, a greater willingness to use, convenient accessibility (especially in developing areas), and avoidance of embarrassment being reported. Very few papers reported adverse side effects and in those that did, vaginal tampon collection methods were regarded as less traumatic with a decreased likelihood of bleeding as compared to other methods including cervical swabs. The use of menstrual tampons in clinical practice may help overcome barriers to accessing healthcare and participation in screening, necessary for preventing avoidable gynaecological conditions and their associated long-term complications. Further research is required to explore the optimisation of transportation and storage requirements.