

Development and validation of pelvic floor muscles exercise intervention for urinary incontinence among pregnant women

ABSTRACT

Introduction: The prevalence of urinary incontinence among pregnant women is high in Malaysia. However, healthcare providers appear to pay little attention to it along with a limited local intervention that addresses the continence health during pregnancy. This study aims to develop and validate intervention with pelvic floor muscle exercise (PFME) for pregnant women. **Materials and methods:** The development of PFME intervention was guided by the Medical Research Council Framework for Developing and Evaluating Complex Intervention (MRC Framework). This involved four phases: identification of current research evidence, expert opinion, validation via focus group discussions with physiotherapists and pregnant women, and piloting the intervention using a single group pre-post design among 30 pregnant women at Maternity Hospital Kuala Lumpur to assess the feasibility of the intervention by evaluating changes in knowledge and attitude. The qualitative approach was used to analyse the first three phases, while non-parametric methods were used to analyse the pilot prepost test results. **Results:** Based on research evidence and guidelines found during the literature review, a PFME intervention was developed using a new paradigm incorporating two theories, the Health Belief Model and Motivational Interviewing that have been shown to be important in continence promotion and exercise adherence. The contribution of the panel of experts in refining the intervention to meet the local context, endorses the achievement of the intervention's content validity. While, the focus group discussion with pregnant women and physiotherapists revealed the face-validity of the intervention. The findings of the pilot pre-testing showed that PFME knowledge ($p < 0.001$) and attitude ($p = 0.011$) improved significantly immediately following the intervention. **Conclusions:** Evidently, this is a pioneer study that illustrates the development of a Malaysian context-adapting PFME intervention on the basis of recommended steps using the MRC Framework. Incorporating a theory-based and rigorous validation approach into the development of the PFME intervention brought novel perspectives to the intervention. Given the promising preliminary results of the pre-testing pilot study, the PFME intervention could be implemented in the planned randomised control trial to validate the robustness of the results.

Keyword: Urinary incontinence; Pelvic floor muscle exercise; Intervention; Pregnant women