

## Abstract

**Purpose :** The purpose of this study was to develop and evaluate an e-learning program for health professionals towards establishing an integrated clinical care pathway for women with gestational diabetes mellitus (GDM).

**Methods :** The study design followed convergent parallel mixed methods design. E-learning was performed for health professionals who work for women with GDM and an online survey (quantitative data) and semi-structured interviews (qualitative data) were conducted. Descriptive statistics and a non-parametric testing strategy were conducted for quantitative data using SPSS. Framework analysis using the Consolidated Framework For Implementation Research and content analysis were conducted for qualitative data.

**Results :** A total of 77 participants (n=40 [nursing staff]; n = 37 [other health professionals]) were recruited for online survey and 19 participants for semi-structured interviews. Regarding the impact of e-learning, the average percentage of correct answers regarding knowledge of GDM, interprofessional collaboration and clinical care pathway increased from 47.4% to 82.4%. Furthermore, the e-learning significantly reduced their perceptions about the adequacy of the current GDM support, and significantly increased the awareness of the need for improved support and the intention to implement the integrated GDM clinical care pathway. Regarding the acceptability, appropriateness, feasibility, intention and barriers to the introduction of this clinical care pathway, the clinical care pathway was generally well accepted. However, there are some potential barriers in terms of the feasibility of implementation, stemming from: a) the difficulty of implementation of the long-term clinical care pathway and collaboration with the local facilities, b) lack of time and resources as many issues need to be prioritized over GDM., and c) lack of knowledge, skill, and confidence among nursing staff to implement the clinical care pathway.

**Conclusion :** E-learning has a potential impact on increasing participants' knowledge, altering their perceptions of the GDM support and increasing intentions to introduce the integrated GDM clinical care pathway. Furthermore, the clinical care pathway was generally well accepted. However, to increase feasibility of implementation planners must address the potential implementation barriers.