

A pilot quasi-experimental study to determine the feasibility of implementing a partograph e-learning tool for student midwife training in Nairobi

Abstract:

the partograph is a tool used globally to record labour progress. Although it has the potential to improve maternal and neonatal outcomes, some midwives struggle with using it in practice. Training in partograph use is limited, and the theory is often divorced from practice. Innovative ways of improving training are urgently required. We therefore aimed to determine whether the use of an e-learning tool is beneficial for learning partograph skills. An uncontrolled before-and-after study was conducted, informed by Kirkpatrick's four-stage model of evaluation; we report on the first two stages. We included a cohort of third and fourth year midwifery students who were studying at one university in Nairobi. The same hypothetical case scenario was used, pre- and post-implementation of the World Health Organization partograph e-learning tool, to assess students' partograph completion ability. Views on the tool were also sought, using semi-structured questionnaires. Data were analysed using standard statistical techniques and framework analysis. 92 (88%) students participated. Students expressed positive views about the e-learning tool. However, the mean post-intervention score (27.21) was less than half of the maximum obtainable score. There was some improvement in test scores; year three mean score pre-intervention was 21.39 (SD 5.72), which increased to 25.10 (5.41) post-intervention (paired $t=3.47$, $p=0.001$); year four mean score pre-intervention was 24.39 (5.98) which increased to 29.30 (6.77) post-intervention (paired $t=3.85$, $df=91$, $p<0.001$). In the post-test, year four students scored higher than year three students (unpaired $t=3.28$, $df=90$, $p=0.001$). Students were unable to plot cervical dilatation correctly, once established labour had been confirmed. e-Learning training is acceptable to student midwives and has the potential to be an effective means of teaching the practical application of the partograph. However, in this study, their inability to correctly plot transference from the latent to active phase of labour suggests that the partograph itself may be too complicated. Modifications and further evaluation of the e-learning tool would be required before any widespread implementation. Furthermore, students need the clinical support to operationalise their learning; educating qualified midwives and obstetricians to be positive role models when completing the partograph would be one potential solution. Further research is required, taking on board the recommendations from our pilot study, to investigate the impact of partograph e-learning on practice and clinical outcomes.