

Effects of a health educational intervention on malaria knowledge, motivation, and behavioural skills: a randomized controlled trial

ABSTRACT

Background: The levels of insecticide-treated net use among pregnant women and uptake of intermittent preventive treatment in pregnancy, have been sub-optimal in Nigeria. Previous studies have reported positive correlations between knowledge, attitude and practice of malaria preventive measures. It has also been reported that information and motivation, act through a mediator (behavioural skills), to cause a health behaviour change. The aim of this study was as such to develop, implement, and assess the effects of a health educational intervention based on the information–motivation–behavioural skills (IMB) model on the levels of knowledge, motivation, and behavioural skills for ITN use and IPTp uptake among pregnant women in a hospital in north-eastern Nigeria.

Methods: This was a randomized controlled parallel-group trial in which 372 antenatal care attendees were randomly assigned to either an intervention or control group after collecting baseline data using a structured questionnaire. The intervention group received a 4-h health education on malaria, guided by a module developed based on the IMB theory, while the control group received health education on breastfeeding for a similar duration and by the same facilitator. Follow-up data were subsequently collected at 2 months and at 4 months post-intervention using the same questionnaire. The generalized linear mixed models analysis was used to determine the between-group and within-group effects of the intervention. The intention-to-treat analysis was used after missing data had been replaced. This was followed by a sensitivity analysis, where the analyses were repeated without replacing the missing values.

Results: The intervention was significant in achieving a 12.75% ($p < 0.001$), 8.55% ($p < 0.001$), and 6.350% ($p < 0.001$) higher total knowledge, motivation, and behavioural skills scores respectively, for the intervention group over the control group. The sensitivity analysis revealed no great differences in the effect sizes, even when missing data were not replaced.

Conclusion: The intervention module was effective in improving knowledge, motivation and behavioural skills. It is as such recommended to be adopted and incorporated into the routine antenatal health education schedules. It is also recommended that booster doses of the module be given say 2 months after the first dose to sustain levels of motivation and behavioural skills.

Keyword: Randomized controlled trial; Health education; Pregnant women; Knowledge; Motivation; Behavioral skills