

INTRODUCTION

Postpartum hemorrhage (PPH) is a major cause of maternal morbidity and mortality globally and up to 50% of maternal deaths in Ethiopia from 2013 to 2018 were primarily attributed to PPH. Interventions for PPH include external aortic compression and uterine massage. However, external aortic compression is not commonly utilized in the management of PPH.

AIM OF THE STUDY

The purpose of this project is to evaluate the impact of simulation-based training on the knowledge and practice of external aortic compression and uterine massage among healthcare providers dealing with maternal healthcare.

METHODS

After ethical approval, a repeated measures study was conducted in four hospitals in Addis Ababa. A digital questionnaire was distributed to assess knowledge and practice of the two maneuvers before and directly after simulation-based training of maternal healthcare providers. It will be repeated at three months, and six months.

Participants’ self evaluation of knowledge and ability to perform external aortic compression (ExAC) and uterine massage

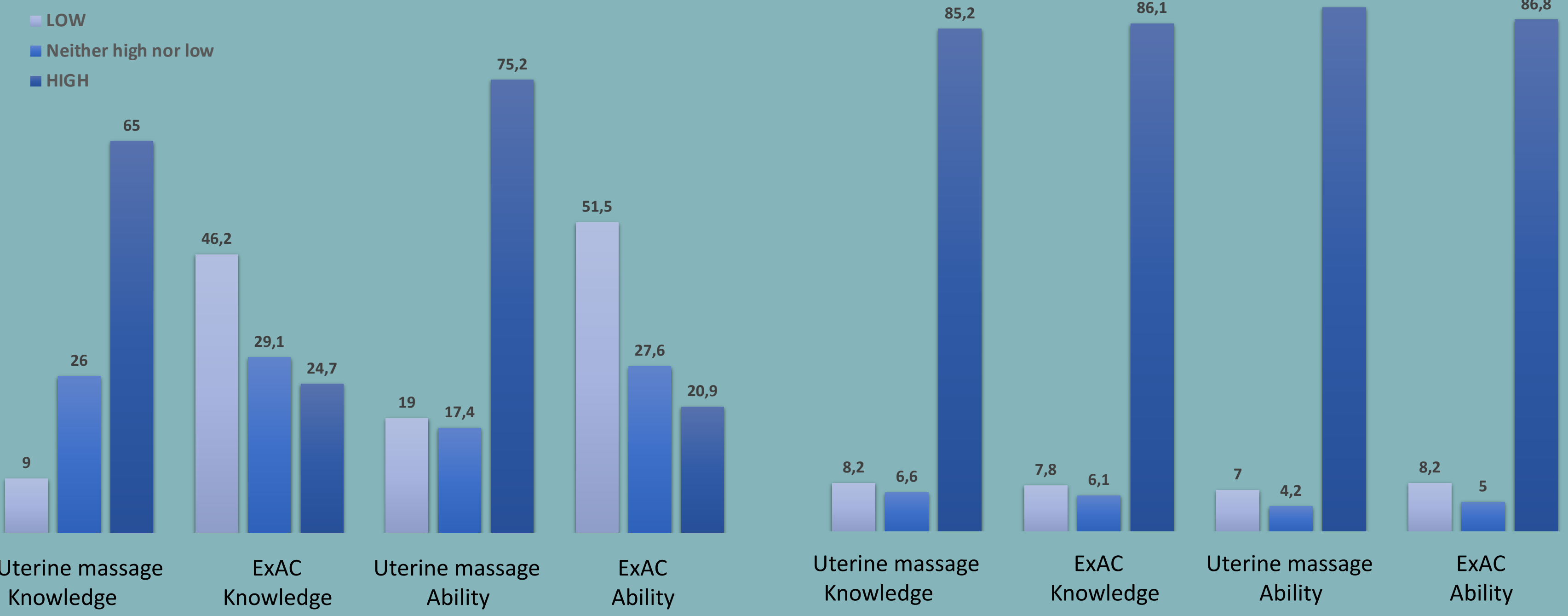


Figure 1: Prior to training

Figure 2: After training

Top three actions participants opted to do in the management of sever PPH

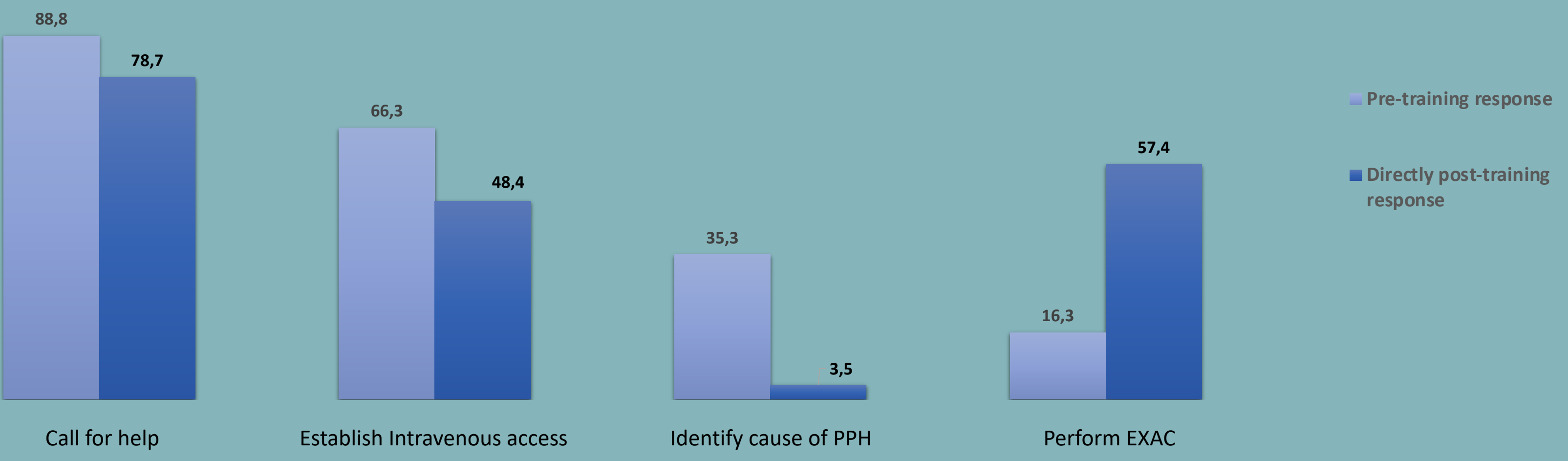


Figure 3: The participants were asked to choose the top three actions from 14 alternatives. The Baseline question: What do you do if you find a woman with profuse bleeding after delivery with signs of severe PPH? The Directly after question: What will you do the next time you find a woman with profuse bleeding after delivery with signs of severe postpartum hemorrhage?



More information on the ExAC Trainer

Figure 4 The ExAC Trainer allows the health care workers to practice external aortic compression and experience how the pulsation in the femoral artery ceases when aorta in completely compressed. It also allows the recognition of an atonic uterus, practice of uterine massage and feel the change as uterus contracts.



RESULTS

Data collected from T1 and T2 (N=258) 109 obstetrics and gynecology residents, and 115 midwives. Of the respondents 70 (27.2%) indicated they encountered severe PPH more than once a month and 144 (55.8%) respondents answered that there had been maternal deaths due to PPH at their hospital the last year. Only 64 (24.8%) stated to have used external aortic compression previously. Simulation training increased the respondents’ self-assessed knowledge and ability to perform external aortic compression and uterine massage as well as the likelihood of performing external aortic compression in a clinical situation. Directly after training, 227 (88%) of the respondents rated the likelihood of performing external aortic compression in a clinical situation to be ‘high’ or ‘very high’.

DISCUSSION

Preliminary results show it is possible to successfully introduce simulation training for low-cost and life-saving maneuvers like external aortic compression in low-income countries. Data collected at T3 and T4 will show whether respondents implement the maneuvers in their clinical work. Future studies will assess whether early application of these maneuvers reduces maternal morbidity and mortality.

REFERENCES

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