

WHAT ARE WOMEN'S PERSPECTIVES ON THE USE OF VIRTUAL REALITY FOR STRENGTHENING EARLY MATERNAL FETAL ATTACHMENT: AN EXPLORATORY CROSS-SECTIONAL STUDY

C.S. van den Aardwegh¹, F.F. Bakker¹, S. Aboussi¹, A.A. Thabit^{1,2}, R. Kok³, A.H.J. Koning⁴, E.A.P. Steegers¹, A.G.M.G.J. Mulders¹, M. Rousian¹

1. Department of Obstetrics and Gynaecology, Erasmus MC, University Medical Center - Sophia Children's Hospital, Rotterdam, The Netherlands. 2. Biomedical Imaging Group Rotterdam, Department of Radiology and Nuclear Medicine, Erasmus MC, University Medical Center, Rotterdam, The Netherlands. 3. Department of Psychology, Education and Child Studies, Erasmus University, Rotterdam, The Netherlands. 4. Department of Pathology, Erasmus MC, University Medical Center, The Netherlands.

EP09.41

Background

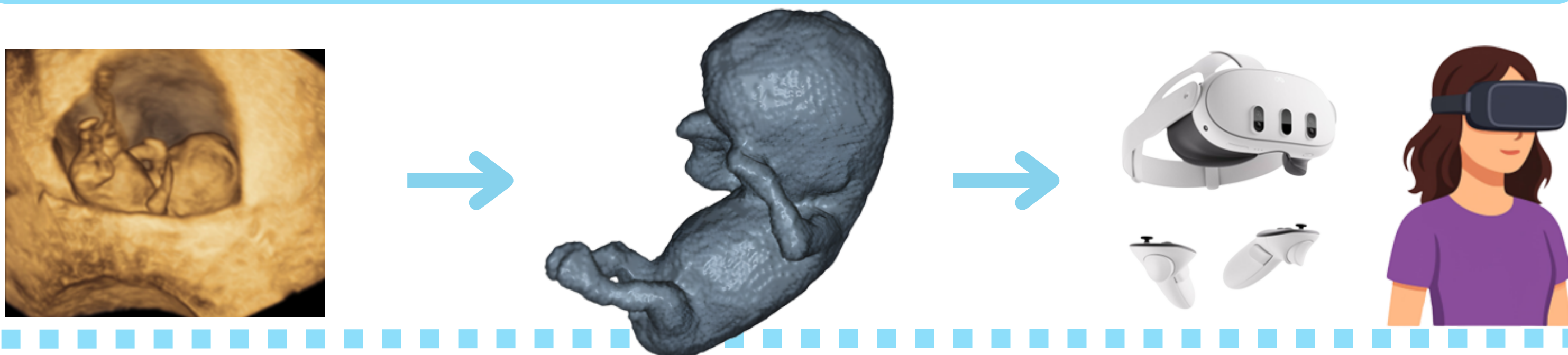
Maternal-fetal attachment (MFA) is the emotional bond between pregnant women and their unborn baby. During the first trimester developing MFA can be challenging, because fetal movements cannot yet be perceived. A novel approach to support early MFA might be three dimensional (3D) virtual reality (VR) visualization.

Aim: examine the perspectives of (pregnant) women on using VR during early pregnancy.

Methods

This first exploratory cross-sectional study was conducted on the Negenmaandenbeurs (a Dutch fair for expecting parents). Participants got an interactive visualization of a developing fetus (7-13 weeks of gestation) through a VR headset (Figure 1). Afterwards, they completed a questionnaire on perceived usefulness to enhance MFA, usability, emotional responses, overall experience

Figure 1. Step 1: 3D ultrasound. Step 2: segmentation of fetus. Step 3: Transferring the segmentation of the fetus to the VR headset.



Results

The responses of 296 participants were analyzed on the following themes: user experience of 3D VR fetus visualization, emotional responses to 3D VR fetus visualization, and implications for future research

62.5% reported positive emotions, **79,1%** perceived the VR headset as easy to use, **83,3%** rated the fetal disability as clear, **55.8%** reported positive perspectives on the potential added value of VR to strengthen MFA, **64,1%** would use VR to improve lifestyle (Figure 2).

Perceptions did not differ by pregnancy status, parity or prior VR use.



Key message

When developing new interventions, take perspectives of the intended users into account.

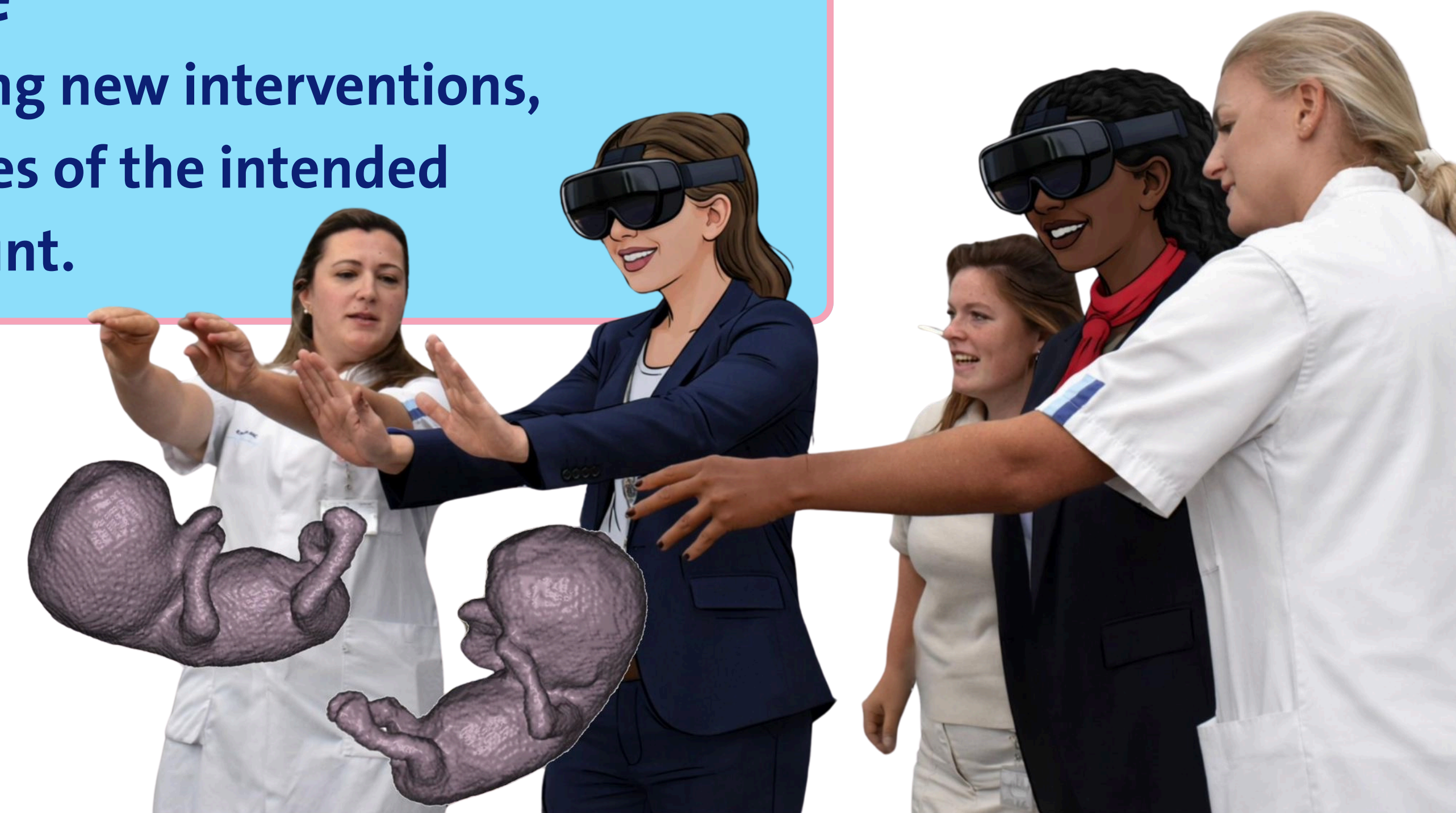
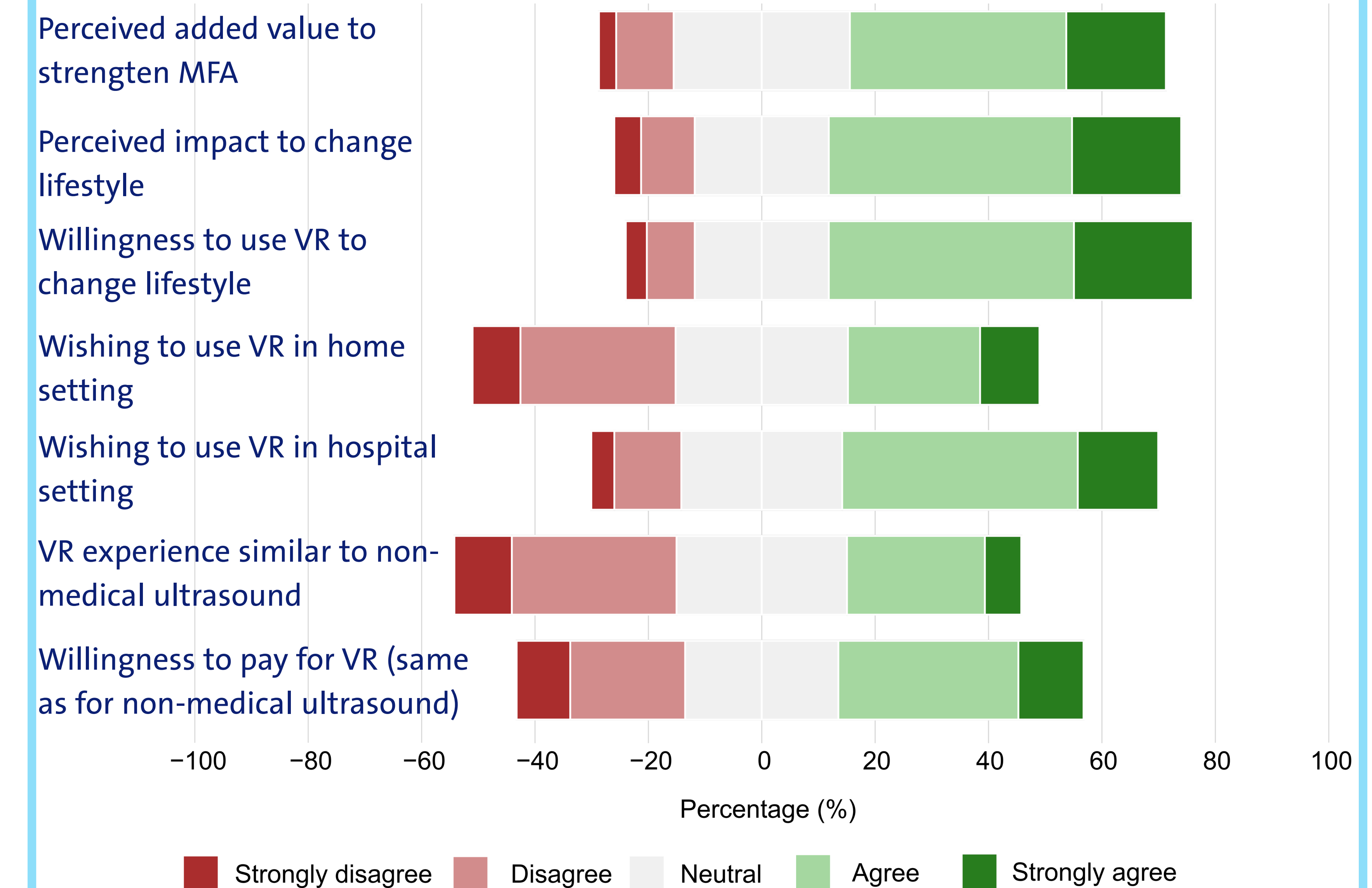


Figure 2. Implications for future research



Conclusions

Women have positive perceptions on first-trimester VR fetal visualization, so VR might offer an opportunity to support early MFA. The results can help designing a future intervention study using VR to enhance MFA.

Contact details

C.S. (Lotte) van den Aardwegh
MD, PhD candidate
c.vandenaardwegh@erasmusmc.nl

