WeChat reminders to improve the willingness to undergo voluntary medical male circumcision for HIV prevention among men who have sex with men: a randomized controlled trial

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Introduction

Evidence from observational studies demonstrates the potential association between voluntary male medical circumcision (VMMC) and lower HIV prevalence among men who have sex with men (MSM). High prevalence of smartphone and WeChat usage provides an unprecedented opportunity for mobile-based health information interventions in China. The objective of this randomized controlled trial was to evaluate the efficacy of WeChat-based health information intervention in increasing the willingness of VMMC for HIV prevention among MSM in China.

Methods

MSM who were HIV-negative, uncircumcised and aged 18 or older were recruited between January and March 2019 from six cities in China. During a 6-month intervention period, health education information concerning HIV and other sexually transmitted infections (HIV/STIs), foreskin health, and male circumcision, was sent to participants in intervention group twice a week via WeChat. Participants in control group only received information about HIV/STI health education with the same frequency and duration as the intervention group. An online, self-completed questionnaire was used to collect baseline and post-intervention data. The prevalence of willingness to undergo VMMC comparing two groups was assessed after intervention. This trial is registered with Chinese Clinical Trial Registry, number ChiCTR1900020981.

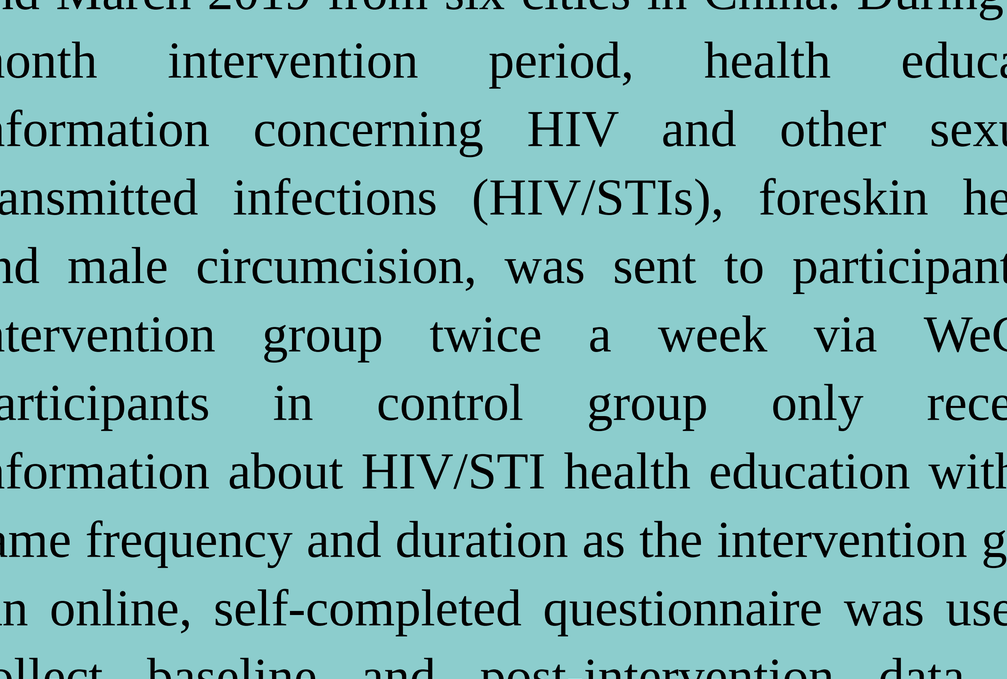

Figure 1 . Cognition changes related to VMMC between the two groups of participants at baseline and follow-up

Results

- 444 MSM were recruited, 305 of whom reported that their foreskins could completely or partially cover glans in the absence of erection, and 319 (155 in intervention group and 164 in control group) of whom underwent the full 6-month period of intervention.
- No statistically significant differences in baseline characteristics were found between drop-outs and non-drop-outs.
- Compared with the control group, participants in the intervention group were more likely to perceive that long foreskin would cause premature ejaculation (aOR=2.54, 95%CI 1.20-5.58) and that circumcision could reduce the risk of HIV/STI infection (aOR=2.28, 95%CI 1.09- 4.90).
- The willingness to be circumcised showed no significant change ([29.7% vs 26.2%], *P*=0.510).
- The main reason of reluctance for circumcision among MSM was that glans can be fully exposed during erection.

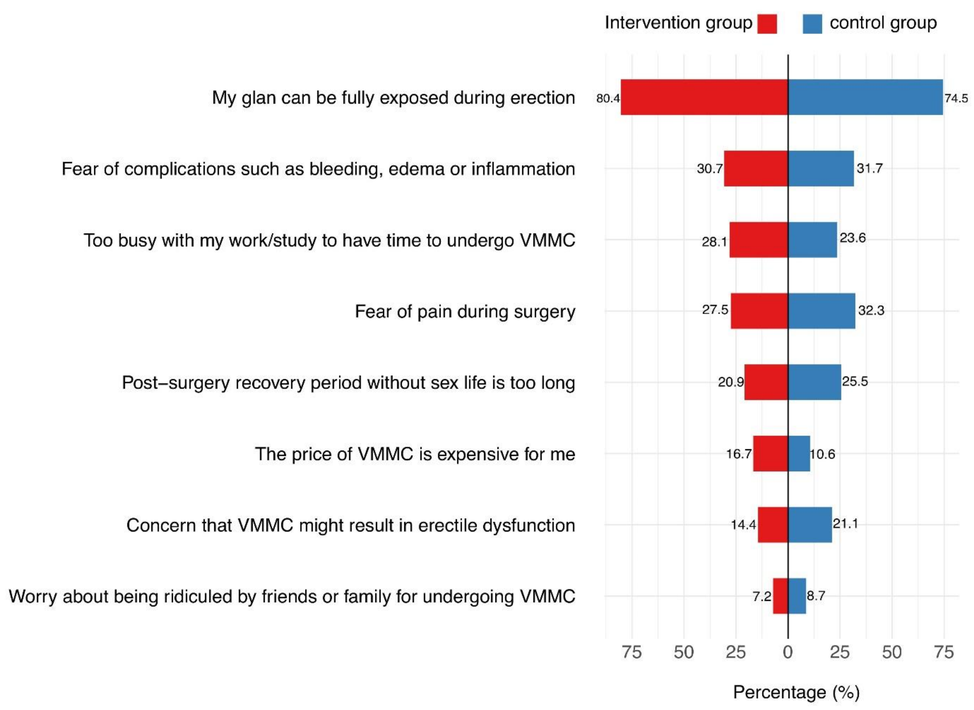

Figure 2 . Composition of the possible reasons for not taking up VMMC

Conclusions

WeChat reminders may not improve the willingness to undergo VMMC for HIV prevention among MSM, but it increased circumcision-related sexual health knowledge.

Key words

Circumcision; Health intervention; Men who have sex with men; HIV prevention