Feasibility and acceptability of HIV prevention mHealth intervention among young men who have sex with men in South Korea

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Introduction

Meth

In South Korea, HIV incidence has increased by 50% over the past 10 years.¹ Of the 12,320 people living with HIV, 10% were diagnosed in 2017.¹ This is in stark contrast with other high-income countries, where new infections are decreasing.²

Among those newly diagnosed with HIV in Korea, 91% were men. Of those men, 64% had male to male sexual contact.³ This indicates men who have sex with men (MSM) are disproportionately impacted by HIV in Korea.

High rates of HIV testing and condom use can prevent the spread of the disease. However, 38% of MSM in Korea never tested for HIV in their lifetime and the condom use rate was low.⁴ An intervention is needed to expand the accessibility of HIV testing and increase condom use. Methods

We conducted an online study with Korean young men who have sex with men (YMSM) (ages 18-35) living in the Seoul Metropolitan area between September and November 2020. All study procedures were approved by the IRB at the University of Pennsylvania (protocol #843154).

Eligibility

To participate, participants had to selfreport: (1) male sex at birth and male gender identity; (2) an age of 18 to 35 years; (3) an HIV-negative or HIV-unaware serostatus; (4) living in the Seoul Metropolitan area; (5) Korean nationality; and (6) sexual minority identity.

Recruitment

Participants were recruited through advertisements on a geosocial networking dating application, the largest gay community website in Korea (ivancity.com), and a gay Korean influencer's YouTube channel (youtube.com/c/chcheolssoo). Figure 2. Perceived usefulness of topics in an mHealth HIV/AIDS prevention intervention among young men who have sex with men in South Korea (n=179)



mHealth interventions have great potential for HIV prevention among MSM.⁵ However, there have been no HIV prevention studies utilizing mHealth among MSM in Korea.

The utility of an mHealth approach is particularly promising among 18to 35-year-olds in Korea because technology ownership and use is the highest in the world.

This study examined participants' acceptability and willingness to receive HIV prevention interventions through mHealth approaches.

Procedures

Participants who responded to the ad were directed to an eligibility screener hosted on Qualtrics. If eligible, participants received an email with links to the study consent form and survey. Participants electronically signed the consent form which included the goals of the study, the study procedures, and participants' rights and responsibilities. Participants were emailed a copy of the signed consent form once they completed the survey. Participants took 25 minutes on average to complete the survey.

Measures

180 YMSM answered questions related to their technology use, socio-demographic characteristics, HIV prevention behaviors, and sexual behaviors.

Data analytic strategy

Descriptive statistics were used to summarize socio-demographic characteristics, health information seeking patterns, and acceptability and willingness to engage in mHealth HIV prevention interventions.

Figure 3. Likelihood of using features in an mHealth HIV/AIDS prevention intervention among young men who have sex with men in South Korea (n=179)



Figure 1. Example of recruitment advertisement on YouTube.





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본 연구는 남성과 성관계를 갖는 젊은 한국 남성들의 사회심리적 요인과 건강 행동 간의 연관성을 파악하고 HIV 예방 모바일헬스케어에 대한 인식을 조사합니다.

이를 통해 본 연구는 한국 성소수자의 건강 불평등 해소를 위한 효과적인 프로그램 개발의 학술적 근거를 마련하고자 합니다.

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Results

We recruited 180 Korean YMSM (aged 18 to 35) living in the Seoul Metropolitan area. Participants' mean age was 26.5 years (SD=4.2) and 52.8% of the sample were university graduates. Most identified as gay (91.7%); less than half (42.2%) reported having a partner and an income greater than minimum wage (41.9%). Two-thirds (67.2%) had tested for HIV in their lifetime.

Most participants owned a smartphone (99.4%) and searched online for health information (80.4%) in the past 12 months including HIV-related topics (49.1%), sexuality (42.5%), fitness or weight issues (42.5%), well-being (27.9%), medication or medication side effects (18.4%), and drugs or alcohol (14.5%).

Korean YMSM perceived the following HIV prevention topics as useful if an mHealth HIV/AIDS prevention intervention were available: HIV testing (92.7%), PrEP use (92.7%), living with HIV (86.0%), healthy living (79.2%), safer sex (75.3%), condom use (71.9%), creating social change (69.7%), love & relationships (57.3%), and life skills (52.3%).

Conclusion

Korean YMSM indicate high acceptability for mHealth intervention approaches for HIV prevention.

The absence of mHealth interventions for Korean YMSM, combined with rising HIV incidence in this population underscores the urgent need for new HIV prevention approaches in Korea.

Creating an mHealth HIV prevention intervention that focuses on HIV testing/care, PrEP uptake, and access to expert resources may contribute to reductions in the HIV disparities observed among YMSM in Korea.

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When asked what features would be important in an mHealth HIV prevention intervention, participants wanted an mHealth HIV/AIDS prevention intervention that allowed them to ask HIV/STI/sex questions of HIV care providers (84.3%), locate trusted HIV testing and care resources (79.8%), order in-home HIV tests (79.2%), engage in online-delivered psychological counseling (79.2%), participate in discussion boards where participants can communicate each other anonymously (71.4%), message other users (70.2%), and read brief articles on health and wellness tailored for MSM (56.2%). Less than half prioritized gamification features (42.7%). immunodeficiency virus testing for men who have sex with men in South Korea. *Osong public health and research perspectives, 6*(3), 192-200.

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