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Feasibility of recruiting peer educators for an online social networking-based health intervention

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Abstract

Objective—This study aims to determine the feasibility of recruiting peer leaders to deliver a community-based health intervention using social media.

Method—We recruited sixteen African American and Latino men who have sex with men (MSM) as peer leaders for either an HIV prevention or general health intervention using social media. Inclusion criteria required that peer leaders were African American or Latino MSM health communication experts experienced using social media. To receive certification, peer leaders attended 3 training sessions on using social media for public health. Questionnaires asking about health knowledge and comfort using social media to discuss health-related topics were provided at baseline and post-training to ensure that peer leaders were qualified post-training. Repeated measures ANOVA models and χ^2 tests tested for differences in peer leader knowledge and comfort using social media pre- and post-training.

Results—After training, peer leaders were significantly more comfortable using social media to discuss sexual positions. There were no significant differences pre- and post-training on other comfort or knowledge measures, as at baseline, almost all peer leaders were already comfortable using social media.

Conclusion—Results suggest that peer leaders can be recruited who are qualified to conduct health interventions without needing additional training. The discussed training plan can further ensure that any unqualified peer leaders will be prepared after training. To our knowledge, this is the first study to suggest that peer leaders can be recruited as peer health educators to communicate using social media.

Keywords

Online social networking technologies; health intervention; peer leader

INTRODUCTION

Community peer leader interventions have been found to be effective methods for increasing health behaviors in the United States and abroad ¹⁻³. These interventions involve training peer leaders in a health topic (and/or recruiting peer leaders with prior experience) and sending them into the community to change social norms and behavior ^{4, 5}. Peer health interventions allow peers to provide social support to outreach participants, including emotional, appraisal, informational, and instrumental support (Heaney and Israel, 2002). Peer leaders, especially those who are influential popular opinion leaders in their communities, can often provide more (or more easily received) support than non-peer educators because of their ability to communicate information and feelings in a culturally and socially appropriate manner ³. Peer health interventions have been successfully used in areas as diverse as bicycle safety ⁶, drug prevention ⁷, and sexual attitudes and behaviors ³. For example, a peer leader intervention aimed to reduce sexual risk behaviors resulted in increasing condom use up to 16% and decreasing unprotected anal intercourse up to 25%, with sustained behavior change seen at follow-up up to 3 years later ^{8, 9}. While these studies suggest that peer leader community-based interventions are effective in promoting health behavior change, researchers are looking for cost-effective alternatives because community-based health interventions can require considerable time and money.

The increasing use of online social networking technologies allows them to be a possible platform for scaling community-based interventions, especially interventions that make use of social networking principles. The earliest social networks began in 1997 and quickly began attracting millions of users. However, between 2002-2006, as social networks such as Friendster, Myspace, and Facebook were created and became popular, the number of social network users quickly grew into the hundreds of millions ¹⁰. As of 2010, there are over 2.1 billion online social network profiles, and this number is expected to reach over 3.6 billion by 2014 ¹¹. While a digital divide initially existed, making people of high socioeconomic status more likely to use the Internet, now people of all racial, sexual, and economic backgrounds are increasingly using the internet and social networking technologies ¹²⁻¹⁴. Due to its popularity and the ability for rapid and widespread communications, online social networking technologies might be particularly well-suited as a platform for rapidly and cost-effectively scaling peer leader health interventions, including programs that target ethnically and racially diverse populations.

Because of the success of HIV-related peer interventions, there is a need to determine the feasibility of recruiting peer leaders to use social networking technologies to promote HIV prevention. For example, peer leaders in a community-based HIV prevention intervention are typically recruited, receive training in HIV prevention, and are sent out in the community to promote HIV prevention communication and behavior change. If this process could be conducted through an online community (such as through an online social networking technology), then the time and resources needed to deliver such an intervention could be reduced considerably. If peer leaders could be recruited without needing face-to-face interviews, then this process could be made even more efficient.

While peer health experts have been successfully recruited for offline peer health interventions, and non-peer health advisors have used Internet chat rooms as venues for sending health information^{15, 16}, no research exists as to whether peer leaders can be recruited for a peer-based online social networking health intervention. This paper uses data from the HOPE UCLA study, the first NIH-funded study to scale a community-based HIV prevention intervention using social media, to explore whether peer health experts can be recruited to use social media for delivering a peer health intervention.

METHODS

SAMPLE AND METHODS

Sixteen peer health educators were recruited from referrals from community-based outreach organizations and specific key-word searches on online social networking profiles. As these peer leaders were going to be educating Los Angeles-based African American and Latino men who have sex with men (MSM), having this same background was listed as an inclusion criterion to be a peer health leader. Community-based outreach organizations were given recruitment fliers to distribute. The fliers provided information that UCLA is conducting a health-related study and needs peer health outreach workers who: 1) are over 18 years of age, 2) are existing popular opinion leaders or capable of being leaders in their community, 3) are interested in educating others about health through online social networks, 4) are male, 5) have had sex with a man in the past 12 months, 6) are African American or Latino, 7) live in the Los Angeles area, and 8) are experienced using Facebook. For the peer leaders who were recruited from online social networks, we searched on Facebook and Myspace for groups focused on health community outreach. We contacted the administrators of these groups, sent them fliers if they requested, informed them about the eligibility criteria and asked them to refer any eligible people to contact us.

According to the HOPE UCLA randomized, controlled trial protocol, peer leaders were randomly assigned to be a peer health educator who would deliver either HIV prevention or general health information to participants. While all peer leaders were initially expected to have expertise in HIV/general health knowledge and be comfortable using social media technologies, we set up 3 training sessions (carried out over a 3.5 week period) for the HIV group and 3 sessions for the general health group to ensure peer leaders would have the skills needed to be certified as social media peer health educators. Each of the training sessions lasted 3 hours, provided food for the peer leaders, and was based at UCLA. Peer leaders were given a peer leader training guide at the first training session, with an overview of topics and logistical information about the study and how to be an effective peer leader. The first training session covered essentials of epidemiology and public health (e.g., HIV incidence/prevalence and risk factors was taught to the HIV group peer leaders; obesity, nutrition and stress were taught to the general health group peer leaders). The second training session for both groups covered methods of communicating sensitive topics that were specific to their group. The final training session for both groups focused on ways to use social media for communication, along with general study logistics. Each peer leader was then evaluated through both surveys and observation to make sure he was qualified to receive certification as a HOPE UCLA peer leader.

The primary purpose of the surveys was to inform as to whether peer leaders were qualified and ready to use social media to communicate health information. A questionnaire was given to peer leaders at the start of the training to assess whether they possessed all the skills that had been stated in the inclusion criteria. No differences were expected for participants who already had the skills stated in the inclusion criteria, however, the post-training survey was provided to ensure that any participants who were not prepared would receive the skills or comfort they had lacked prior to training. The questionnaire was the same for both the HIV group and general health group. Questionnaires were designed to ensure proficiency in: general knowledge about HIV and general health (measured with a series of true/false questions to assess HIV and general health knowledge), experience using social networking technologies (through yes/no questions on whether they have ever sent messages or wall posts on Facebook), and comfort using these technologies for health outreach. Comfort questions were measured with 5-point Likert scales (1= very uncomfortable, 5= very comfortable) assessing their comfort (such as how comfortable they would be to use social networking technologies to talk to another person about sexual risk behaviors or nutrition principles). For peer leaders to receive certification that they were qualified to conduct the intervention, they needed to have a passing score (above 70%) on the health and HIV knowledge questions, report being comfortable or very comfortable using social media for health communication outreach, and receive approval from the peer leader trainer that they were prepared for social media health outreach.

STATISTICAL ANALYSIS

Mean and standard deviations of the test scores for general health and HIV knowledge were calculated for each peer leader group out of a possible 100 points for each exam. Repeated measures ANOVA models were used to assess differences in the mean scores for each exam before and after training and to detect any differences based on peer leader training assignments. Peer leader comfort levels were recoded into dichotomous outcomes combining responses of “very comfortable” and “comfortable” into one category, and “very uncomfortable,” “uncomfortable” and “average” into another category. The proportion of peer leaders indicating comfort on each topic was compared before and after the training program using χ^2 tests (McNemar’s test).

RESULTS

All peer leaders were living in Los Angeles, over 18 years old, and African American (n = 7) or Latino (n = 9) males who had had sex with a man in the past 12 months. All participants reported having extensive offline health outreach experience as well as at least basic experience using online social networking technologies.

Table 1 shows the results of the HIV and general health knowledge scores. The test scores overall were above a passing level both before and after training. There were no significant differences found in the scores on either the general health or HIV knowledge tests before and after the training program. There were no significant differences between people’s knowledge about HIV or general health within groups. Most peer leaders gave the same responses on the exam before and after the training program.

Most of the peer leaders displayed comfort using social media before the training program. The proportion of peer leaders who were comfortable using each of the social media tools did not significantly change after the training program. After the training program, all peer leaders described themselves as at least comfortable using each social media device (Table II).

After the training, the majority of peer leaders also rated themselves as comfortable discussing each of the topics (Table III). There was a significant increase in the proportion of peer leaders who felt comfortable discussing sexual positions after the training ($p=0.0313$). There was no significant change after training in the percent of peer leaders who felt comfortable discussing other topics. After training, over 85% of peer leaders were comfortable using social media to discuss each health-related topic.

DISCUSSION

Results suggest both that peer health educators can be recruited and trained to use social media for health behavior change, and that with the increasing prevalence of social media usage, peer leaders can be recruited without needing extensive training. Using very focused inclusion criteria, study personnel recruited peer leaders who already had extensive knowledge about health communication and social media outreach. Focused training sessions ensured that peer leaders who were not already qualified were ready to be peer leaders by the end of training, as post-training over 85% of peer leaders were comfortable using social media to discuss every health related topic.

It is possible that the lack of statistical differences between pre- and post-training may be related to the small sample size of the peer leader group rather than a ceiling effect that recruited peer leaders were already qualified. However, the data suggest that recruited peer leaders can at the very least, be qualified and comfortable using social media for health communication methods after the proposed training. For example, pre- to post-training comfort levels using social media for health outreach increased for every topic. While most changes between comfort levels before and after the training program failed to be significant, this was likely due to the already high proportion describing themselves as comfortable discussing the topics before the training.

The study is limited by the small sample size and by the specialized sample of peer leaders who were recruited based on self-report of being experienced in health communication outreach and social media. With a larger sample, we might have recruited peer leaders who were less specialized in social media and health behavior change and had more varied experience. In this case, our results may have differed as we could have observed pre- and post- training differences in knowledge and comfort using social media for health behavior change. However, because the peer leader training combined traditional evidence-based peer leader training with innovative social media methods, we believe that focused inclusion criteria combined with social media health communication training would be enough to ensure that peer leaders would be qualified to deliver an online social networking-based health intervention. Next, it is possible that the items measuring social media comfort and usage were not detailed enough to detect differences between peer leaders. For example,

there are many ways of using social media (such as chatting, messaging, posting links) and the measures of comfort might not have assessed every possible method for measuring communication using social media. While this is a possibility, we believe that the peer leaders were qualified by the end of training as their training certification was based not only on responses to the final questionnaire, but also based on the peer leader trainer's approval that they could reliably and effectively use social media for health outreach. Future research on social media will help to develop additional items for measuring comfort and ability to use social media. Another possible limitation is that while this study may have shown that peer health educators are comfortable and knowledgeable using social media for health behavior change, the success of the intervention is still unknown. This is the first set of studies to document the HOPE UCLA project, designed to assess whether social media can be used to deliver a community-based health intervention. The present methods might be particularly important for informing future work, as the target populations for this study have been difficult to recruit for online studies.

CONCLUSION

Results of this study suggest that peer health educators can be recruited and trained to lead population-focused health behavior change interventions using online social networking technologies. Because of the increasing use of social media, it is possible that peer health educators can be recruited without needing extensive training. This ability to conduct community and public health interventions using online communities could lead to improvements in the cost-effectiveness of public health delivery.

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References

1. Castaneda H, Nichter M, Nichter M, Muramoto M. Enabling and Sustaining the Activities of Lay Health Influencers: Lessons From a Community-Based Tobacco Cessation Intervention Study. *Health Promotion Practice*. 2010; 11:483–92. [PubMed: 18540006]
2. Medley A, Kennedy C, O'Reilly K, Sweat M. Effectiveness of Peer Education Interventions for HIV Prevention in Developing Countries: A Systematic Review and Meta-Analysis. *AIDS Educ Prev*. 2009; 21:181–206. [PubMed: 19519235]
3. Mellanby AR, Newcombe RG, Rees J, Tripp JH. A comparative study of peer-led and adult-led school sex education. *Health Education Research*. 2001; 16:481–92. [PubMed: 11525394]
4. Rogers, E. *Diffusion of innovations*. 4 ed. Free Press; New York: 1995.
5. Maiorana A, Kegeles S, Fernandez P, et al. Implementation and evaluation of an HIV/STD intervention in Peru. *Eval Program Plann*. 2007; 30:82–93. [PubMed: 17689315]
6. Hall M, Cross D, Howat P, Stevenson M, Shaw T. Evaluation of a school-based peer leader bicycle helmet intervention. *Inj Control Saf Promot*. 2004; 11:165–74. [PubMed: 15764103]
7. Cuijpers P. Effective ingredients of school-based drug prevention programs. A systematic review. *Addict Behav*. 2002; 27:1009–23. [PubMed: 12369469]
8. Kelly J, Lawrence JS, Diaz Y, et al. HIV risk behavior reduction following intervention with key opinion leaders of population: an experimental analysis. *American Journal of Public Health*. 1991; 81:168–71. [PubMed: 1990853]

9. Lawrence JSS, Brasfield T, Diaz Y, Jefferson K, Reynolds M, Leonard M. Three-year follow-up of an HIV risk-reduction intervention that used popular peers. *American Journal of Public Health*. 1994; 84:2027–8. [PubMed: 7998654]
10. Boyd DM, Ellison NB. Social Network Sites: Definition, History, and Scholarship. *Journal of Computer-Mediated Communication*. 2008; 13:210–30.
11. Radicati, S. Social networking report. The Radicati Group, Inc.; 2010.
12. Horrigan, JB.; Smith, A. PIP Broadband. Pew Internet & American Life Project. 2007.
13. Harris Interactive. Gays, Lesbians and Bisexuals Lead in Usage of Online Social Networks. 2007.
14. Young SD, Rice E. Online Social Networking Technologies and HIV Knowledge, Sexual Risk Behaviors, and Testing for Sexually Transmitted Infections. *Aids and Behavior*. in press.
15. Rhodes SD. Hookups or health promotion? An exploratory study of a chat room-based HIV prevention intervention for men who have sex with men. *AIDS Educ Prev*. 2004; 16:315–27. [PubMed: 15342334]
16. Rhodes SD, Hergenrather KC, Duncan J, et al. A pilot intervention utilizing Internet chat rooms to prevent HIV risk behaviors among men who have sex with men. *Public Health Reports*. 2010; 125:29–37. [PubMed: 20408385]

Table 1

Mean and standard deviations of HIV and general health test scores by assigned peer leader group (out of 100 possible points).

	Mean Pre-Training Test Score (SD) ¹	Mean Post-Training Test Score (SD)
HIV Knowledge – HIV Peer Leader Group	89.63 (8.16), n=9	89.44 (5.41), n=8
HIV Knowledge – General Health Peer Leader Group	88.57 (6.47), n=7	89.52 (8.77), n=7
General Health Knowledge – HIV Peer Leader Group	72.84 (9.80), n=9	73.61 (8.27), n=8
General Health Knowledge – General Health Peer Leader Group	72.22 (7.17), n=7	76.98 (7.47), n=7

¹SD refers to standard deviation

Table 2

Percent of peer leaders responding “Comfortable” or “Very Comfortable” to using specific social media tools before and after training

Social Media Tool	Percent Comfortable Using Tool at Baseline	Percent Comfortable Using Tool Post-Training
Chatting on Facebook	93.75%	100%
Posting on a Facebook wall	93.75%	100%
Sending a Facebook message	93.75%	100%
Sharing a link on a Facebook wall	87.5%	100%

Table 3

Percent of peer leaders responding “Comfortable” or “Very Comfortable” discussing various topics before and after training

Question	Percent Comfortable Discussing Topic at Baseline	Percent Comfortable Discussing Topic Post-Training
Talking about cultural barriers in HIV prevention	93.75%	100%
Talking about Sexually Transmitted Infections (STIs)	68.75%	93.33%
Talking about sex with men	68.75%	100%
Talking about sex with women	68.75%	100%
Talking about sexual health	93.75%	93.33%
Talking about sexual partners	62.5%	93.33%
Talking about sexual positions	43.75%	93.33% *
Talking about stigma against HIV/STI	87.5%	100%
Talking about alcohol or drug use during sex	62.5%	86.67%
Talking about condom use	81.25%	86.67%

* Indicates significant difference at $p < 0.0$