9-2010

Adaptation of a Lay Health Advisor Model as a Recruitment and Retention Strategy in a Clinical Trial of College Student Smokers

Shiloh Jordan Varvel
University of Missouri

Nikole J. Cronk
University of Montana - Missoula

Kari Jo Harris
University of Montana - Missoula, kari.harris@umontana.edu

Anne B. Scott
University of Missouri

Published in final edited form as:
Health Promot Pract. 2010 September ; 11(5): 751–759. doi:10.1177/1524839908325065.

Adaptation of a Lay Health Advisor Model as a Recruitment and Retention Strategy in a Clinical Trial of College Student Smokers

Shiloh Jordan Varvel, MEd,
Doctoral candidate in counseling psychology at the University of Missouri in Columbia, Missouri

Nikole J. Cronk, PhD,
Research assistant professor at The University of Montana and adjunct assistant professor at the University of Missouri in Columbia, Missouri

Kari Jo Harris, PhD, MPH, and
Associate professor in the School of Public and Community Health sciences at The University of Montana in Missoula, Montana

Anne B. Scott, PhD
Recently completed her predoctoral internship at Duke University, and her PhD from the University of Missouri in Columbia, Missouri

Abstract

This study describes and provides results from a process evaluation of a lay health advisor (LHA) model to enhance participation in a clinical trial of the effectiveness of motivational interviewing on smoking cessation in college fraternity and sorority members. The implementation of the model had two phases: (a) the selection and training of LHAs as liaisons between research staff and participants and (b) LHAs' roles in recruitment and retention. Perceptions of the LHA model were explored using survey questionnaires. Trial participants (N = 118) and LHAs (N = 8) were generally satisfied with the model and identified LHAs as helpful to participation. Seventy-four percent of chapter members were screened and 73% of participants received three of the four motivational interviewing sessions. These results indicate the LHA model was well received and met the needs of the research project.

Keywords

lay health advisors; college students; clinical trial

RECRUITMENT AND RETENTION IN COLLEGE SORORITY AND FRATERNITY POPULATIONS

College students are a frequently studied population whose behaviors are often the focus of empirical research (Peterson, 2001). Members of sororities and fraternities (also referred to as Greek-life students) have been identified as having higher concentrations of negative health-related behaviors, such as binge drinking and cigarette smoking, compared to the general student population (McCabe et al., 2005; Molasso, 2005; Wechsler et al., 2002). Greek-life students are therefore an important and appropriate group for health related research and interventions.

However, similar to difficult to reach populations in the community, there are aspects of the Greek student population that may prevent participation in health initiatives and pose difficulties in obtaining participant recruitment and maintaining retention.

To adequately gain access to a desirable population, it is helpful to be familiar with the specific challenges to garnering participation in health initiatives and research (Eng, Parker, & Harlan, 1997). These barriers include involvement in multiple activities (Pike, 2000), scheduling conflicts and difficulty scheduling intervention sessions, and gaining access to an organization's designated meeting time (Eng et al., 1997). Above all, members may be suspicious of outsiders entering their chapters to collect data that they may never see again or that may not be viewed as beneficial to their organization, such as recent empirical studies that highlight the Greek-life system as a group of students higher in binge drinking frequency (Pike, 2000; Wechsler et al., 2002). It is not surprising that focus groups of Greek-life members (N = 85) revealed they are hesitant to participate when they suspect that health research will result in further bad publicity (Harris, Wilson, & Ahluwalia, 2002). Overall, gaining access to Greek-life organizations can be challenging for researchers and health professionals.

Use of Lay Health Advisors as a Recruitment and Retention Strategy

The success of a clinical trial or other health intervention initiative relies on the target population receiving the intervention of interest (Hulley et al., 2001). To maximize potential impact, researchers and health care providers employ numerous strategies to help reduce attrition (Corrigan & Bogner, 2007; Glanz, 1999). The use of lay health advisors (LHAs) is one example of employing an inside member of the target population to assist in the implementation of an intervention. Whereas the application of the LHA model varies across studies, LHAs are fundamentally identified as members of the target population who serve as a link between members of their community receiving the intervention and the system or agency responsible for providing the intervention (Eng et al., 1997; Meister, Warrick, Zapien, & Wood, 1992).

LHA model implementation ranges from LHAs directly providing the service or treatment to trial participants, to using their natural helping skills to connect individuals from the community with the treatment delivery system (Berkeley-Patton, Fawcett, Paine-Andrews, & Johns, 1997; Eng et al., 1997). The purpose and responsibilities of LHAs are similar to those of community health workers, peer educators, and natural helpers. These groups have been involved in improving health knowledge and behaviors for a range of health issues including: disease control and management (e.g., Mukherjee & Eustache, 2007), eating habits (e.g., Kunkel, Bell, & Luccia, 2001), and substance use (e.g., Caron, Godin, Otis, & Lambert, 2004). Whereas the term may vary depending on the population of interest (e.g., peer educators are more often used in high school and college populations than community health workers), the purpose and diversity of their roles are highly similar.

As with community health workers, peer educators, and natural helper research, studies analyzing the use of LHA models have shown them to be effective in communicating health messages and providing needed health education in diverse and underserved populations (Cauffman, Wingert, Friedman, Warburton, & Hanes, 1970; Kegler & Malcoe, 2004; McLean, 1994; Ozer, Weinstein, Maslach, & Siegel, 1997; see Lewin et al. for review, 2007). Traditionally, the LHA model has been used in clinical trials to deliver the intervention of interest (e.g., Elder et al., 2005; Paskett et al., 2006) with the majority of these studies identifying significant impacts of LHA-delivered interventions on targeted health behaviors. Whereas the role of LHAs as service providers is important, there are circumstances in which the delivery of the intervention requires expertise beyond that of the paraprofessional. In these instances, LHAs can take on a role of serving as a link between the research staff and the targeted group. Instead of being a part of the formal intervention, LHAs can serve as a means to access the targeted population and maintain participation throughout the duration of the intervention.

Implementation of an LHA Model With Greek-Life Students

In anticipation of difficulties in recruitment and retention, it is important to establish effective strategies for communicating with participants. An adaptation of the LHA model in a Greek-life college student community is one such strategy that employs an inside member of the chapter to act as a bridge between the research team and the Greek-life participants (Eng et al., 1997; Meister et al., 1992). LHA models rest on the assumption that utilizing social networks is an effective means of producing behavior change and disseminating healthy messages to the community of interest (Larkey et al., 1999). Sororities and fraternities possess many of the defining qualities of a social network, including their large size and the tendency for members to know one another, high frequency and ease with which members can contact one another, and the manner in which members provide social support to one another (Eng & Young, 1992). Using internal members of Greek-life chapters as LHAs capitalizes on the existing social network inherent to the Greek-life system. Furthermore, college students are already familiar with the concept of the LHA model, having been exposed to peers disseminating information in the form of peer education (Berkley-Patton et al., 1997) and other established liaison positions within their houses for various campus and community wide organizations and events. The purpose of this article is twofold: first, to describe the implementation of an adapted LHA approach in a group randomized trial of college student smokers and second, to evaluate this implementation from the perspective of both the LHAs and the participants in the trial.

METHOD

Description of Clinical Trial

The adapted LHA model was one of several recruitment and retention strategies (e.g., advocacy from leaders, financial incentives) used in an ongoing clinical trial examining the effectiveness of motivational interviewing (MI) on smoking cessation in college sorority and fraternity members. MI is a brief therapy approach in which participants are encouraged to evaluate their personal goals and motivations. It is a directive but nonjudgmental, collaborative intervention designed to enhance motivation for change (see Miller & Rollnick, 2002). Research has consistently identified MI as efficacious in the treatment of substance use and addiction (Burke, Arkowitz, & Menchola, 2003; Rubak, Sandbaek, Lauritzen, & Christensen, 2005), but has exhibited less effect on smoking (Butler et al., 1999; Colby et al., 1998).

In the fall semester of each of three successive academic years, 8 to 12 chapters are selected to participate in the trial for a total of approximately 500 participants. Participants have a maximum total of six contacts over the course of 6 months (two computer surveys and four MI sessions). Research staff attended the first or second chapter meeting of the year at selected chapters to administer brief screening surveys and invite eligible members to participate in the trial. Next, invited chapter members complete a computerized baseline assessment and are enrolled in the trial. Randomization to treatment (MI for smoking cessation) or comparison (MI for fruit and vegetable consumption) conditions occurs at the chapter level. Participants then complete a maximum of four sessions of MI with a trained health consultant and complete a computerized assessment at the end of treatment. Finally, participants complete a computerized assessment 6 months following randomization into the trial.

The implementation of the adapted LHA model occurred in two different phases: (a) the selection and training of LHAs and (b) LHAs' fulfillment of two primary roles to enhance recruitment (i.e., assisting in the recruiting process) and retention (i.e., providing ongoing support to ensure their fellow chapter members participated in all sessions). Because the

study is ongoing, the adapted LHA model presented and the results are from the first year of the trial.

Role of LHAs

One LHA was chosen from each of the eight participating Greek-life chapters and served in this role throughout the intervention, acting as a liaison between the research project staff and chapter members. Descriptions of the two roles of LHAs, recruitment enhancers and retention enhancers, are outlined in Table 1. Within these two roles, LHAs' responsibilities ranged from completing logistical tasks (e.g., reminding members of their upcoming sessions) to leadership (e.g., endorsing the study as valuable to both participants and the chapter). Such roles are similar to at least one prior randomized trial which used community residents to recruit participants and solicit feedback on how to work best with their population (Jeffries, Choi, Butler, Harris, & Ahluwalia, 2005). However, it is important to distinguish a critical difference between the LHAs in this study compared to LHAs from other clinical trials and health initiatives. These LHAs were not a part of a formal intervention delivery. Although they were integral contributors to the success of the project, they did not provide the direct counseling of the intervention being investigated. LHAs encouraged participants to attend their intervention appointments, but did not encourage participants to engage in any sort of behavior change. This distinct implementation of the LHA model in the current study (coupled with their involvement in both recruiting and retention) provides another potential way LHAs may be employed.

LHAs as Recruitment Enhancers

In the recruitment phase, LHAs worked with a designated member of the research team (LHA coordinator) to schedule the screening, which took place at a chapter meeting at the beginning of the fall semester. LHAs encouraged member attendance at the chapter meeting and promoted the study by identifying the opportunity to earn individual and chapter incentives. During the screening, LHAs briefly explained the purpose of the study, introduced the research team members, and endorsed participation in the study as beneficial to the chapter. The LHAs' involvement in screening was particularly important given the Greek population's potential mistrust of health research conducted within their chapters. Using an insider (i.e., LHA) to educate the chapter on the importance of the study may have given members more trust, ownership, and investment in the research project.

LHAs as Retention Enhancers

Throughout the intervention phase, LHAs remained in e-mail and telephone contact with the research team on a weekly and, at times, daily basis to discuss missed intervention sessions, extenuating circumstances and conflicts, and scheduling details as well as to help problem solve with the research team about ways to enhance participation. Throughout the project the LHAs were an important source of information for participants who had questions regarding the nature and purpose of the study. For members considering the possibility of withdrawing from the study, the LHAs were responsible for providing assistance and support in making that decision, consistent with the social support role traditionally provided by LHAs (Beam & Tessaro, 1994). Finally, the LHAs provided feedback to the research team such as barriers participants faced coming to sessions, morale of the chapter, and current chapter events, thereby forming an important bridge between the researchers and participants. For example, the LHAs were able to provide feedback on the effectiveness of the incentives, the convenience of session locations, and the participants' attitudes regarding the counselors who delivered the study intervention. Periodically, the LHAs met as a group, and provided feedback to the research team and one another regarding successful strategies they used to boost morale and remind members of their upcoming assessments and session appointments. The frequency of contact between LHAs and the research staff depended on

the particular LHA and the participation of their chapter members. Some chapters had members with more regular attendance, making frequent contact with the LHA less urgent, whereas other chapters were characterized by more missed sessions, necessitating more frequent contact between the research team and those LHAs.

Selection and Training of LHAs

LHAs were hired for the study in the spring semester preceding their chapter's participation in the fall semester. The LHA coordinator organized a meeting with the presidents of the chapters selected to participate in the first year of the intervention to familiarize them with the study and the LHA job description. Presidents were asked to announce the LHA position in their chapters, approach individual members about applying for the position, and nominate individuals they thought would do an exemplary job. The research team interviewed all interested applicants, rating the applicant on his or her level of commitment, ability to work well with the research team, approach to smoking and health, ability to generate ideas for engaging fellow chapter members, and prior experience motivating or organizing chapter members.

Specifically, the team looked for applicant qualities that would enable them to fulfill their duties of enhancing recruitment and retention (see Table 1). Ideal applicants were proactive, outgoing, responsive, and dependable and also possessed good organizational skills. In addition, the team sought applicants who could maintain the chapter's morale and keep members enthusiastic about the project. Applicants were partly evaluated based on their ability to generate creative strategies for keeping members invested in the study and their accessibility by chapter members (e.g., living in the chapter house). Additionally, the favored applicants demonstrated an ability to successfully lead others. The team hypothesized that the image and reputation of the LHAs would be an integral part of the success of their influence. Therefore, the staff selected individuals who were respected by fellow chapter members, as well as highly involved in their chapters. These hiring criteria are consistent with previously studies in which LHAs are the natural helpers and leaders within a community (Berkeley-Patton et al., 1997). By considering these qualities throughout the hiring process, the team ensured that the LHAs could manage the logistics of acting as a liaison and maintain positive morale and enthusiasm for the project.

As with other projects using the LHA model (Berkeley-Patton et al., 1997; Meister et al., 1992), the LHAs in this study received training to fulfill their roles effectively and ethically. Training in the ethical conduct of research was particularly important because of the direct contact LHAs had with participants and their dual-roles of both working for the study and being members of their Greek-life chapters. Prior to the start of the trial, LHAs received a training manual and met for 4 hours as a group to learn about the nature of the study and responsibilities of LHAs. Specifically, the training included: (a) study protocols for each phase of the study (screening through follow-up) with specific duties of the LHA outlined in each phase (e.g., organizing screening meeting, sending reminders to participants), (b) how to answer their chapter members' questions inclusive of sample questions and role plays, (c) steps for increasing retention (e.g., announcing study at chapter meeting each week), and (d) requirements for maintaining contact with the research team. Furthermore, LHAs received training on protecting human participants and the definition of and importance of avoiding coercion, through an online training module provided by the University's Institutional Review Board. The research team was also available on an as needed basis for any subsequent issues.

Financial Incentives

LHAs were provided with fleeces jackets bearing the project logo and compensated $250 for their work. In addition, they were able to earn two bonuses of $75 each if their chapters achieved 85% or greater participation at the end of the fourth intervention session and again at the 6-month follow-up assessment for a possible total of $400 compensation.

Evaluating Use of LHA Model

Both study participants and LHAs completed questionnaires about their experience with the LHA model. As part of a larger 6-month follow-up computer survey, trial participants completed a 16-item questionnaire, consisting of both Likert-scaled, ranging from 1 (*strongly disagree*) to 10 (*strongly agree*), and multiple choice items. The Likert-scored items were aimed at identifying the participants' comfort level with, confidence in, and satisfaction with their LHAs. The questionnaire also identified the amount of contact a participant had with his or her LHA as well as the type of contact the participant preferred. In addition, LHAs completed a demographic form and 22-item questionnaire at the completion of the study that consisted of open-ended, Likert-scaled, and multiple choice questions that were similar to questions posed to participants. Four items (identified in Table 2) were reverse written and scored to avoid response bias. These items were aimed at understanding their overall experience as LHAs including satisfaction with the job, strategies implemented, and contact with participants.

RESULTS

Description of Participants and LHAs

The results reported here are from two samples: (a) participants in a smoking cessation program (N = 118) and (b) LHAs (N = 8). Both samples were comprised of undergraduate Greek-life members from eight different chapters at a large Midwestern university. The majority of trial participants (97.5 %) were White, which is slightly more homogeneous than the racial composition of the campus (84% White; University of Missouri-Columbia Division of Enrollment, 2006). Participants ranged in age from 18 to 22 years (M = 21, SD = .93), with the sample split almost evenly across gender (53% male). Participants spent approximately 7 hours per week involved in Greek-life activities (M = 7.14, SD = 6.56) and approximately 2 hours per week in non-Greek-life campus activities (M = 2.46; SD = 3.71).

The sample of LHAs consisted of four males and four females (one from each sorority and fraternity participating in the trial). They ranged in age from 20 to 22 years old (M = 21, SD = .925). The majority of the LHAs were Caucasian (N = 7) and one LHA was Asian American, with a combined average grade point average of 3.49 out of 4.00 (SD = .41). LHAs all reported holding leadership positions in their respective chapters currently or in the recent past.

Recruitment and Retention

Recruitment rates were high with 74% (900/1209) of chapter members successfully screened. Of those members who were eligible to enroll in the study, 81% (197/242) agreed to complete the baseline assessment. Ultimately, 76% (149/197) of those invited to participate successfully completed the baseline assessment and were enrolled into the study. Once enrolled, 73% (109/149) of participants completed at least three of the four intervention session. Furthermore, t tests indicated only one significant difference in mean score responses between participants not retained in the study (i.e., completed two or less intervention sessions) and those participants retained in the study (i.e., completed three or more intervention sessions). Nonretained participants reported slightly lower agreement (M

= 7.00, *SD* = 3.67) compared to retained participants (*M* = 8.04, *SD* = 2.76) that their LHA did not imply negative consequences for withdrawing from the study (see Table 2).

Perceptions of the LHA Model

In general, participants reported having positive experiences with their LHAs, finding them useful to their participation in the study (see Table 2). Responses to 9 of the 10 questions regarding participants' experiences with their LHAs were highly positive, with percentage of participants with responses of 7 or higher for these 9 items ranging from 68% to 89%. Means ranged from 7.71 to 9.05 out of a maximum of 10. The only exception was a lower mean score (*M* = 5.68) on the item in which participants were asked how comfortable they felt being honest with their LHAs regarding their feelings about the project.

LHAs reported overall high levels of satisfaction with their jobs, indicating they felt adequately reimbursed and that they would recommend the job to others (see Table 3). In open-ended questions, LHAs reported most enjoying being part of a larger team, meeting with other LHAs in group meetings, having more involvement with their chapter members, amount of reimbursement, and ease and flexibility of the job. They reported that negative aspects of the job included repeatedly reminding participants of appointments, tracking down missing participants, and at times feeling like they were bothering their friends.

Contact Between LHAs and Participants

There was variability in the amount of contact participants had with LHAs. On average, participants interacted with their LHAs about the project approximately 4 times (*M* = 4.06, *SD* = 2.83) over the course of the 6 weeks during treatment sessions and 2 weeks during follow-up assessment, with some participants having no contact with their LHAs and some having as many as 15 contacts. Consistent with participants' responses, each LHA reported having contact with each participant approximately 3 times over the course of the project (*M* = 3.12, *SD* = 1.86), with LHAs having more contact with participants who missed appointments. The majority of LHAs also reported using communication strategies such as e-mail, phone, and reminding participants of appointments at chapter meetings and via house bulletin boards.

The majority of participants identified the most effective and preferred mode of contact from their LHA as e-mail (66.7% and 70.7%, respectively for effective and preferred), followed by cell phone (28.5% and 24.4%, respectively). On the other hand, the majority of LHAs (*n* = 6) reported e-mail as the most frequent mode of contact, in-person contact (*n* = 4) as the most effective mode of contact, followed by e-mail (*n* = 3) and cell phone (*n* = 2; one LHA indicated two responses).

DISCUSSION

The purpose of this investigation was two-fold: (a) to describe the implementation of an adapted LHA model within a smoking cessation trial with college students and (b) to evaluate the experiences of both the trial participants and LHAs within the model. The described methodology may provide other researchers with information to implement similar LHA models in other studies. The response from both the participants and LHAs provides insight into the ways the LHA model was perceived and how the model can be more effectively implemented.

Implementation of the Adapted LHA Model

In the ongoing trial, an adaptation of a traditional LHA model was employed to enhance recruitment and retention. LHAs in this study successfully aided in recruitment and retention

efforts, providing to be an important resource for research staff. Given their status as inside members of the Greek-life communities, LHAs were able to gain access to participants that research staff were denied. Retention rates in the first year of data collection were high and the active efforts of the LHAs were likely associated with this successful outcome.

Overall Experience of LHAs and Participants

In general, both LHAs and participants perceived LHAs as conducive to chapters' participation in the trial and were satisfied with the implementation of the LHA model. Participants reported their LHAs to be enthusiastic, helpful, knowledgeable, and approachable. LHAs also reported having positive experiences in their roles, indicating that they were adequately trained and reporting several positive aspects of the position. This indicates that the implemented LHA model not only met the needs of the research project, but was also a positive experience for participants and LHAs. Apart from having a positive impact on research outcomes, the satisfaction of different members of the chapter may help bolster the reputation of the research project on campus and thereby enhance the future recruitment and retention of participants. This may be particularly important for ongoing research projects or health initiatives in which knowledge of the research project is likely to spread by word of mouth.

Whereas LHAs had a positive impact on the satisfaction of participants, there were a few negative aspects of this role that are important to recognize. One downside was the reported lack of comfort of participants with being honest with LHAs about their true feelings about the project. Similarly, LHAs were uncomfortable in feeling like they were "nagging" their friends to participate. Although seemingly minimal, these are both drawbacks to the adapted LHA model that are important to recognize to effectively implement the LHA model and maintain the satisfaction of all involved. One possible way to remedy this difficulty is to increase the number of positive interactions shared between LHAs and participants. In training and in position protocol, LHAs can be encouraged to acknowledge when participants have been in attendance and highlight the benefits they are earning for the chapter. Such positive interactions may negate some of the negative feelings LHAs have from tracking down less compliant participants, while also serving to reinforce participation and increase the likelihood that LHAs will be perceived as facilitative rather than punitive. In turn, greater levels of satisfaction among LHAs and the perception of benefits by participants may result in increased rates of retention.

Contact Between LHAs and Participants

Based on participants' responses, LHAs were available, but not overly intrusive in their roles. Participants and LHAs reported having contact approximately three to four times, with the amount of contact ranging greatly. This may mean the adapted LHA model was more beneficial for some participants than others with some participants requiring more attention from LHAs. Because most contact was initiated by LHAs based on missed sessions, a low amount of LHA to participant contact may be reflective of positive retention results.

Furthermore, these results highlight the importance of in-person contact. Although participants identified e-mail as the most effective and preferred mode of contact, the majority of LHAs perceived in-person contact to be most effective. Although not conclusive, the data suggest that in-person contact may be most effective and raises the issues that there is a discrepancy between preferred versus effective modes of contact. Whereas researchers and health care providers are capable of calling and e-mailing participants, an LHA has the unique ability to engage participants by all means including face-to-face contact and, by virtue of their status, with perhaps more credibility. It might be

more effective for health initiatives to diversify methods used to contact college students and not rely on participants' preferred mode of contact alone.

In addition, participants were involved in Greek-life activities for an average of 7 hours a week, more time than spent on other campus activities. On average, participants were involved in their chapters, but this involvement in the chapter varied widely with some students not participating on a regular basis in either campus or Greek-life activities. The reported average amount of contact by both LHAs and trial participants seemingly indicates that the LHAs were able to maintain contact with participants, regardless of chapter involvement. Thus, the adapted LHA model was still useful for students of varying ranges of activity within the chapter.

Limitations

One potential limitation of the implemented LHA model, as well as evaluation results, is also the strength of having LHAs who are members of the chapter. Apart from being involved in the research project, LHAs are fellow chapter members, and often friends, of the participants they are helping to recruit and retain resulting in salient dual relationships. As recognized by LHAs who sometimes felt like they were nagging their friends, this may lead to difficulty for LHAs to adequately fulfill their roles. The LHAs may also be older or have executive positions (e.g., recruitment chair, president) that creates a power differential between participants and LHAs. Training and explicit discussion of dual roles, avoiding coercion, and study protocol likely helped avoid conflict between roles. In addition, because of these dual relationships, trial participants in this study may have been less inclined to provide negative feedback about LHAs. Although there were instances where participants reported dissatisfaction with LHAs, the majority of responses were very positive. Despite assurance of confidentiality, participants may not have felt comfortable providing negative feedback regarding members of their chapter who hold positions of power and esteem. Finally, the sample of LHAs was small and cannot be generalized to the experience of LHAs in other projects. The described implementation of the LHA model is an important piece of the recruitment and retention efforts, but was not the only strategy employed (see Cronk et al., 2008, for full description of recruitment and retention methods). Therefore, it is likely other strategies employed also contributed to the successful recruitment and retention of participants.

Conclusions and Implications for Practice

This study provides a description and several specific recommendations for implementing an adapted LHA model. Whereas the focus of this study is a clinical trial of college students, the LHA model can be implemented through the described methodology to enhance recruitment and retention for clinical interventions or other health initiatives in various communities. The tasks required for practice may be slightly different, but the necessary qualities (see Table 1), hiring, and training procedures of LHAs are similar. In addition, practical health initiatives can be bolstered by using these research recruitment and retention strategies to enhance participation and engagement in clinical efforts. An LHA is not just a liaison to relay information between groups, but serves as a part of the health initiative team. LHAs are advocates for the importance of the health information, serve to boost the groups' interest of the health topic, acknowledge the efforts of group members to participate in the health initiative, and reinforce the importance of the health initiative to group members. In this way, the implemented LHA model is appropriate for use with both research projects and applied health initiatives.

Acknowledgments

This research was supported by National Institutes of Health, R01 CA107191-01.

References

Beam N, Tessaro I. The lay health advisor model in theory and practice: An example of an agency-based program. Family & Community Health. 1994; 17(3):70–79.

Berkeley-Patton J, Fawcett SB, Paine-Andrews A, Johns L. Developing capacities of youth as lay health advisors: A case study with high school students. Health Education and Behavior. 1997; 24:481–493. [PubMed: 9247826]

Burke BL, Arkowitz H, Menchola M. The efficacy of motivational interviewing: A meta-analysis of controlled clinical trials. Journal of Consulting & Clinical Psychology. 2003; 71:843–861. [PubMed: 14516234]

Butler CC, Rollnick S, Cohen D, Bachmann M, Russell I, Stott N. Motivational consulting versus brief advice for smokers in general practice: A randomised trial. British Journal of General Practice. 1999; 49:611–616.

Caron F, Godin G, Otis J, Lambert LD. Evaluation of a theoretically based AIDS/STD peer education program on postponing sexual intercourse and on condom use among adolescents attending high school. Health Education Research. 2004; 19:185–197. [PubMed: 15031278]

Cauffman JG, Wingert WA, Friedman DB, Warburton EA, Hanes B. Community health aides: How effective are they? American Journal of Public Health and the Nation's Health. 1970; 60:1904–1909. [PubMed: 5528482]

Colby SM, Monti PM, Barnett NP, Rohsenow D, Weissman K, Spirito A, et al. Brief motivational interviewing in a hospital setting for adolescent smoking: A preliminary study. Journal of Consulting & Clinical Psychology. 1998; 66:574–578. [PubMed: 9642898]

Corrigan JD, Bogner J. Interventions to promote retention in substance abuse treatment. Brain Injury. 2007; 21:343–356. [PubMed: 17487633]

Cronk NJ, Davidson MM, Harris KJ, Golbeck AS, Catley D, Good GE. Recruitment and retention of college smokers in a group randomized trial. 2008 Manuscript submitted for publication.

Elder JP, Ayala GX, Campbell NR, Slymen D, Lopez-Madurga ET, Engelberg M, et al. Interpersonal and print nutrition communication for a Spanish- dominant Latino population: Secretos de la buena vida. Health Psychology. 2005; 24(1):49–57. [PubMed: 15631562]

Eng E, Parker E, Harlan C. Lay health advisor intervention strategies: A continuum from natural helping to paraprofessional helping. Health Education and Behavior. 1997; 24:413–417. [PubMed: 9247821]

Eng E, Young R. Lay health advisors as community change agents. Family & Community Health. 1992; 15(1):24–40.

Glanz K. Participation, retention and adherence: Implications for health promotion research and practice. American Journal of Health Promotion. 1999; 13:276–277. [PubMed: 10538641]

Harris, KJ.; Wilson, T.; Ahluwalia, JS. A qualitative analysis of college students' smoking: Perceptions and interest in change. Paper presented at the Eighth Annual Scientific Sessions for the Society for Research on Nicotine and Tobacco; Savannah, GA. 2002 February.

Hulley, SB.; Cummings, SR.; Browner, WS.; Grady, D.; Hearst, N.; Newman, TB. Designing clinical research: An epidemiologic approach. 2. Philadelphia: Lippincott Williams & Wilkins; 2001.

Jeffries SK, Choi W, Butler J, Harris KJ, Ahluwalia JS. Strategies for recruiting African-American residents of public housing developments into a randomized controlled trial. Ethnicity and Disease. 2005; 15:773–778. [PubMed: 16259507]

Kegler MC, Malcoe LH. Results from a lay health advisor intervention to prevent lead poisoning among rural Native American children. American Journal of Public Health. 2004; 94:1730–1735. [PubMed: 15451742]

Kunkel ME, Bell LB, Luccia BH. Peer nutrition education program to improve nutrition knowledge of female collegiate athletes. Journal of Nutrition Education. 2001; 33:114–115. [PubMed: 12031192]

Larkey LK, Alatorre C, Buller DB, Morrill C, Buller MK, Taren D, et al. Communication strategies for dietary change in a worksite peer educator intervention. Health Education Research. 1999; 14:777–790. [PubMed: 10585385]

Lewin SA, Dick J, Pond P, Zwarenstein M, Aja G, van Wyk B, et al. Lay health workers in primary and community health care. Cochrane Database of Systematic Reviews. 2007; (1):CD004015.10.1002/14651858.CD004015.pub2

McCabe SE, Schulenberg JE, Johnston LD, O'Malley PM, Bachman JG, Kloska DD. Selection and socialization effects of fraternities and sororities on US college student substance use: A multi-cohort national longitudinal study. Addiction. 2005; 100:512–524. [PubMed: 15784066]

McLean D. A model for HIV risk reduction and prevention among African-American college students. Journal of American College Health. 1994; 42:220–224. [PubMed: 8201135]

Meister JS, Warrick LH, Zapien JG, Wood AH. Using lay health workers: Case study of a community-based pre-natal intervention. Journal of Community Health. 1992; 17:37–51. [PubMed: 1564139]

Miller, WR.; Rollnick, S. Motivational interviewing: Preparing people for change. 2. New York: Guilford Press; 2002.

Molasso WR. A content analysis of a decade of fraternity/sorority scholarship in student affairs research journals. Oracle: The Research Journal of the Association of Fraternity Advisors. 2005; 1(1):1–9.

Mukherjee JS, Eustache FE. Community health workers as a cornerstone for integrating HIV and primary health care. AIDS Care. 2007; 19(Suppl 1):573–582.

Ozer EJ, Weinstein RS, Maslach C, Siegel D. Adolescent AIDS prevention in context: The impact of peer educator qualities and classroom environments on intervention efficacy. American Journal of Community Psychology. 1997; 25:289–323. [PubMed: 9332965]

Paskett E, Tatum C, Rushing J, Michielutte R, Bell R, Long Foley K, et al. Randomized trial of an intervention to improve mammography utilization among a triracial rural population of women. Journal of the National Cancer Institute. 2006; 98:1226–1237. [PubMed: 16954475]

Peterson RA. On the use of college students in social science research: Insights from a second- order meta-analysis. Journal of Consumer Research. 2001; 28:450–461.

Pike GR. The influence of fraternity or sorority membership on students' college experiences and cognitive development. Research in Higher Education. 2000; 41:117–139.

Rubak S, Sandbaek A, Lauritzen T, Christensen B. Motivational interviewing: A systematic review and meta-analysis. British Journal of General Practice. 2005; 55:305–312. [PubMed: 15826439]

University of Missouri-Columbia Division of Enrollment Management. Enrollment summary. 2006. Retrieved October 10, 2007, from the University of Missouri-Columbia, Office of the University Registrar Web site: http://registrar.missouri.edu/Statistics-Student_Information_and_Reporting/Fall_2006/index.htm

Wechsler H, Lee JE, Kuo M, Seibring M, Nelson TF, Lee H. Trends in college binge drinking during a period of increased prevention efforts: Findings from 4 Harvard school of public health college alcohol study surveys: 1993–2001. Journal of American College Health. 2002; 50:203–217. [PubMed: 11990979]

TABLE 1

Lay Health Advisor Roles, Tasks, and Necessary Qualities

Roles and Tasks	**Necessary Qualities**
Recruitment Enhancement	Proactive
Advertise and endorse the study in chapter and promote interest	Outgoing
Promote attendance at screening meeting	Responsive
Retention Enhancement	Dependable
Maintain regular contact with research team	Organized
Remind participants of appointments	Creative
Locate and contact missing participants	Accessible
Identified ways to enhance chapter participation	Positive/Promoting morale
Communicate to research team regarding relevant chapter-wide and participant-specific events	Regarded as a leader
Communicate to staff regarding perceptions of the trial among participants and within community	Respected in chapter
Answer participant questions and assist with participants contemplating withdrawal from the study	Highly involved in chapter

TABLE 2

Experiences of Retained and Nonretained Clinical Trial Participants With Lay Health Advisors

Clinical Trial Participants (N = *118*)	*Total* (N = *118*) Mean (SD)	*Nonretained* (n = *20*) Mean (SD)	*Retained* (n = *98*) Mean (SD)
Overall perceptions of LHAs			
LHA was enthusiastic.	8.33 (2.29)	8.30 (2.10)	8.34 (2.34)
LHA was helpful to participation.	7.33 (2.89)	7.65 (2.70)	7.27 (2.94)
Felt confident in LHA's knowledge of the project.	8.10 (2.44)	8.10 (2.10)	8.10 (2.51)
Felt comfortable asking LHA questions about the project.[a]	8.03 (2.57)	7.95 (2.30)	8.05 (2.63)
LHA knew how to answer questions about the project.[a]	8.67 (2.16)	8.95 (1.60)	8.61 (2.26)
LHA did not imply negative consequences for discontinuing participation.[a]	7.86 (2.94)	7.00 (3.67)	8.04[b] (2.76)
Felt comfortable being honest with LHA about the project.	5.68 (3.64)	5.35 (3.83)	5.75 (3.62)
Perceptions of contact with LHAs			
Felt satisfied with the amount of contact with LHA.	7.71 (2.61)	7.15 (2.62)	7.83 (2.61)
LHA was not difficult to contact.[a]	9.05 (1.93)	8.80 (1.99)	9.10 (1.92)
LHA did not make contact too frequently.[a]	8.60 (2.03)	7.95 (2.11)	8.93 (2.00)
Average amount of contact with LHA (number of encounters).	4.06 (2.83)	3.40 (2.80)	4.20 (2.83)

NOTE. Responses ranged from 1 (*Strongly Disagree*) to 10 (*Strongly Agree*).

[a] Item was reverse scored.

[b] *t* test of mean differences between retained and nonretained significantly different at $p < .05$.

TABLE 3

Experiences of Lay Health Advisors

***Lay Health Advisors* (*n* = *8*)**	**Mean**	**SD**
Satisfaction with participation in project	9.87	0.35
LHA helpful to participation of chapter in project	9.87	0.35
Adequate training and preparation for duties	9.75	0.71
Average amount of contact with participants (number of encounters)	3.12	1.86