Recruiting Participants into Pilot Trials: Techniques for Researchers with Shoestring Budgets

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Abstract

Limited research has focused on recruitment strategies for health promotion researchers conducting small-scale pilot studies. Such research is important because small studies often have limited funding streams and personnel resources. Accordingly, many techniques implemented by large-scale studies are of limited use to smaller research projects. This article provides an overview effective participant recruitment techniques for pilot studies with limited funds and personnel resources. Recruitment techniques were derived from the first author's experience in recruiting participants during his doctoral and postdoctoral studies, the over 25 years of research experience of each of the co-authors, and an extensive review of the literature. Five key recruitment techniques are discussed: 1) leverage existing social networks and personal contacts, 2) identify and foster collaborations with community gatekeepers, 3) develop a comprehensive list of potential recruitment platforms and venues, 4) create recruitment materials that succinctly describe the purpose of the study, and 5) build respectful and trusting relationships with potential participants. Implementation of the proposed techniques can lead to enhanced recruitment, as well as retention among study participants.

Keywords: Recruitment, pilot study, participants

Introduction

Recruitment of participants into research studies is an essential part of the research process. No matter how creative, innovative, or potentially science-altering a research project may be, if researchers are unable to recruit participants into the study, the study is destined to fail and its potential impact on the field of science is lost. While all researchers face recruitment challenges, recruiting participants can be particularly difficult for junior investigators (i.e., graduate students, postdoctoral fellows, and early-career faculty) and faculty at non-R01-based institutions (i.e., teaching-based universities, liberal arts schools) due to limited monetary and personnel resources. Graduate students are commonly tasked with implementing small-scale research projects for their master's thesis or doctoral dissertation. Many times, these studies are unfunded or have limited funding from the student's academic advisor. Likewise, junior-level faculty at

research-intensive institutions are becoming increasingly required to conduct pilot studies to obtain preliminary data to support larger grant applications (e.g., NIH K or R series mechanisms). Funding for these projects often come from the investigator's start-up package and/or institutional seed grants (if available), which provides minimal support for participant recruitment efforts. Faculty members at teaching-based and/or liberal art universities face similar challenges, as their institutions frequently lack programs and the infrastructure to support both intramural and extramural grant applications.

Numerous published articles have discussed strategies, techniques, and best practices to recruit participants into research studies (Fayter, McDaid, & Eastwood, 2007; Lovato, Hill, Hertert, Hunninghake, & Probstfield, 1997; Ross et al., 1999; Treweek et al., 2013; UyBico, Pavel, & Gross, 2007). However, the majority of these articles have examined recruitment

techniques for large-scale randomized controlled clinical trials (i.e., social marketing campaigns, TV and radio advertisements, and mass telephone recruitment). Few articles have discussed recruitment strategies for small-scale pilot studies. Since most pilot or preliminary studies have limited monetary and personnel resources, many of the recruitment strategies employed by large-scale research trials are not feasible for researchers with limited resources.

The goal of this article is to provide health promotion researchers with techniques on how to recruit participants into research studies with limited funds and personnel resources. We frame this piece to be particularly useful to junior investigators in the social and behavioral health sciences. However, experienced researchers in fields other than the health sciences can also benefit from the strategies discussed. Recruitment strategies presented are derived from the first author's experience (RPJ) in recruiting participants during his doctoral and postdoctoral studies (Joseph, Keller, Adams, & Ainsworth, 2015; Joseph et al., 2014; Joseph et al., 2013), the over 25 years of research experience of each of the two co-authors (BEA, CK), and an extensive review of the relevant literature on participant recruitment strategies in to research trials (Aitken, Gallagher, & Madronio, 2003; Brown et al., 2015; Crawford Shearer, Fleury, & Belyea, 2010; Fayter et al., 2007; Gul & Ali, 2010; Keller et al., 2014; Lovato et al., 1997; Mills et al., 2006; Ross et al., 1999; Russell, Maraj, Wilson, Shedd-Steele, & Champion, 2008; Tramm, Daws, & Schadewaldt, 2013; Treweek et al., 2013; UyBico et al., 2007).

Five Strategies to Optimize Participant Recruitment for Researchers with Limited Resources

We propose five strategies to enhance participant recruitment when monetary and personnel resources are limited: 1) leverage existing social networks and personal contacts, 2) identify and foster collaborations with community gatekeepers, 3) develop a comprehensive list of potential recruitment platforms and venues, 4) create recruitment materials that clearly and succinctly describe the

purpose of the study, and 5) build respectful and trusting relationships with potential participants.

Leverage Existing Social Networks and Personal Contacts

The social relationships and personal contacts of a researcher are key resources to leverage and enhance participant recruitment efforts. A researcher's social contacts are not only a free resource to help with study marketing and recruitment, but in in many instances, they are enthusiastic to help with recruitment. Example social contacts researchers can look to assist with recruitment include: work colleagues, friends, casual acquaintances, and family members. When approaching personal contacts to help with recruitment, researchers should briefly describe the main purpose of the study and provide them with a study recruitment flier so they can quickly determine if they are able or willing to assist with recruitment efforts. For personal contacts willing to help with recruitment, researchers should provide them with both paper and electronic versions of the study recruitment flier(s). Paper recruitment fliers can be used by social contacts to personally distribute to their friends, colleagues, family members, etc. and to post in visible areas at their workplace, church, and/or other social/organizational institutions in which they belong. Likewise, electronic recruitment fliers can be can emailed to one's social contacts, posted on social media accounts (i.e., Twitter, Facebook), and distributed via email listservs.

Enlisting social contacts to help distribute study fliers can greatly increase the reach of recruitment efforts. However, this strategy may not be appropriate for all research studies. For example, if an investigator is conducting a randomized pilot trial where participants are assigned to different behavioral interventions, having a large representation of participants from a single organization or social group (which is a potential outcome of convenience sampling) may interfere with randomization, treatment fidelity, and participant confidentiality. Likewise, having social contacts assist with recruitment may lead to undue influence on participant recruitment. Investigators should emphasize with social

contacts that their role is to simply disseminate recruitment fliers, not to pressure or coerce potential participants into joining a study.

Identify and Foster Collaborations with Community Gatekeepers

Enlisting community gatekeepers to assist with recruitment is an ideal strategy to maximize the reach of recruitment efforts when funds and personnel resources are limited (Lovato et al., 1997; Russell et al., 2008). Gatekeepers are individuals who are well-respected, trusted, and often sought after for advice among members of their community and can have both formal and informal roles within a community (Russell et al., 2008). Formal gatekeepers can be local religious leaders, politicians, and/or high-ranking members of a workplace, community, or social organization. Informal gatekeepers are individuals with no formal leadership roles within a community, but still have a large amount of influence, such as the elders in a neighborhood. Recruiting community gatekeepers to assist with recruitment efforts is a valuable strategy for all types of research studies; however, this strategy may be particularly useful for studies focused on underserved or traditionally hard-to-reach populations (i.e., low-income, racial/ethnic minorities, older adults) (Crawford Shearer et al., 2010; Lovato et al., 1997). To identify gatekeepers within a specific community, researchers should consult with their professional colleagues, local service organizations, and members of the community to identify the individuals who are highly respected, socially connected, and have influence on the opinions and behaviors of community.

Once identified, enlisting the help of community gatekeepers is not always an easy task. Given a gatekeeper's social status, authority, and influence over their community, they will only be willing to help with recruitment if they feel the project will truly benefit the population they serve. It is critical that the researcher gain the trust of gatekeepers and fully explain the purpose, procedures, and public health impact of the study. If a gatekeeper is not convinced that the researcher is genuine and trustworthy, and

that the project will ultimately benefit his/her community, then there is a high likelihood that he/she will not endorse the project and assist with recruitment efforts.

Various strategies can be used to enlist the help of gatekeepers within a community. Perhaps, the best strategy is to establish a relationship with community gatekeepers prior to requesting any help with a specific research study. Volunteering within a community and being visibly present among community members is a great way to get to know and begin building a relationship with the community gatekeepers, as well as the community in which recruitment might occur. However, we acknowledge that researchers are often tasked with recruiting for a study with limited time to develop such relationships. In these cases, researchers can identify a community contact that has as established relationship with a community gatekeeper. If a researcher can foster "buy-in" from the community contact for the research project, he/she may be able to introduce you to the community gatekeeper and advocate on the researcher's behalf for the gatekeeper to help with recruitment. Another strategy is to approach gatekeepers with a formal leadership role at a community agency and propose a "quid pro quo" collaboration. In the context of the current article, we refer to a "quid pro quo" collaboration as a mutually beneficial pairing between a researcher and a community agency, where the agency provides access to community members and/or helps with recruitment in return for the researcher providing a service to the agency. For example, in a previous study examining health risk behaviors among Hispanic women (Stein, Chen, Corte, Keller, & Trabold, 2013), researchers developed a collaborative relationship with a local Latino community advocacy agency. The agency allowed the researchers to enter their community centers and recruit participants in return for the researchers providing: 1) a presentation of the proposed study and recruitment plans to the agency's board of directors, and 2) four hour-long Spanish language health promotion in-services to community members at the community centers on how to complete HCA and Medicare applications. Development of this collaboration

was free-of-cost and both the researcher and agency benefited from the relationship.

We note though, that when working with a community, it is a researcher's responsibility to foster a collaborative and equitable partnership, promote trust and transparency of the research process, and ultimately conduct research to help enhance the health of the community (Hebert et al., 2015; Mikesell, Bromley, & Khodyakov, 2013). Therefore, engaging and/or volunteering with a community with the sole purpose of gaining access to participants are not only ethically questionable, but also damaging to the larger research enterprise. That said, we present this recruitment strategy from the viewpoint that researchers are conducting research within a community with the long-term mission of improving the health of the community (i.e., not to just complete a study). Prolonged engagement with the community before, during, and after a study is conducted is critical to accomplishing this task and maintaining the integrity of the researcher, as well as the science community as a whole.

Develop a Comprehensive List of Potential Recruitment Platforms and Venues
Creating a list of all potential recruitment channels is another strategy health promotion researcher can use to ensure they exhaust all available resources to recruit for their study. While this seems intuitive, we find that few researchers actually sit-down and take the time to develop a comprehensive list. Development of this list should begin during the early stages of planning a research project, as it allows time for the list to be modified and new potential recruitment platforms to be identified. Researchers should consult with their colleagues, friends, social networks, and community gatekeepers to identify potential recruitment platforms and consider both in-person (i.e., distributing recruitment fliers/recruiting face-to-face) and mediated (i.e., posted flyers, listservs, etc.) recruitment strategies. For in-person recruitment sites, "high traffic" areas for potential study participants are ideal. Example sites include: public libraries, community events (i.e., health fairs, festivals), and churches. Social organizations such as

rotary clubs and fraternities/sororities are also excellent venues for researchers to consider, as most have pre-established communication channels to disseminate recruitment materials/information. For mediated or passive recruitment of participants, researchers should identify frequently viewed and high traffic locations to post recruitment fliers. Example mediated recruitment platforms: community message/bulletin boards, newspapers, organizational/community/neighborhood email listervs, social media platforms (i.e., Facebook, Twitter), crowd sourcing websites, and online forums (i.e., Craigslist).

Create Recruitment Materials that Clearly Describe the Purpose of the Study
The visual appeal and information provided on study recruitment materials will have a direct impact on participant recruitment. For researchers with limited budgets, print-based recruitment fliers are ideal for recruitment efforts. Recruitment fliers can be developed by researchers at low-cost and can be distributed using both in-person (i.e., face-to-face distribution) and mediated (i.e., postings in public places, email distribution, website postings) recruitment efforts. Recruitment fliers will likely be potential participants' first time to hear about and/or be introduced to the study. Therefore, fliers should be visually appealing, clearly and succinctly describe the purpose of the study, and include the contact information of the researcher and/or study staff. Below, we briefly describe aspects researchers should consider when developing recruitment materials for a study. Example recruitment fliers are presented in Figures 1 and 2.

Visual Appeal. The visual appeal of recruitment materials is equally as important, if not more important, than the information included on the materials. Images and text used in recruitment materials should be aesthetically pleasing and easy for potential participants to read (National Cancer Institute, 2004). Text should be in large, bold letters and in a font that is easy-to-read (i.e., Arial, Times New Roman). Calligraphy,
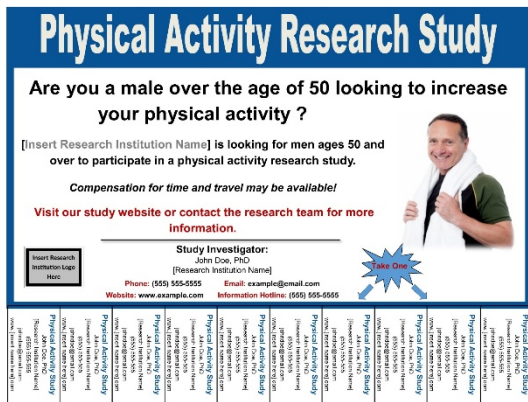
Figure 1.

Figure 1. Example recruitment flier with "tear off" tabs. Potential participants can remove tabs at the bottom of the flier and use the information to contact study staff or learn more about the study

Figure 2.

Figure 2. Example recruitment flier that can be used for both mediated (i.e., email distributions, social media postings) and in-person recruitment.

overly embellished, and/or cursive fonts should be avoided, as these are often difficult to read. Incorporating images that help depict the purpose of the study can also be beneficial in drawing attention to recruitment materials. For example, if as researcher is recruiting older men

for a physical activity study, including an image of an older man on the flier may help recruitment efforts (see Figure 1). Moreover, including the logo of the institution which a researcher is affiliated can also help build credibility for the study. When deciding on a color scheme, chose one with a light background and bold colored font. This will draw the readers' eyes to the text of the recruitment materials and allow them to quicker read the recruitment materials.

Study Description. The description and purpose of the study should be simple, straightforward, and easy for potential participants to quickly identify (i.e., avoid the use of technical or scientific terms) (National Cancer Institute, 2004). One way to do this is to frame the purpose of the study in the form a question. For example, if the purpose of a study is to examine the effectiveness of a health and wellness program for postpartum women, a headline on recruitment materials could be, "Are you a new mom looking to improve your health?" (see Figure 2). Additional information to include on recruitment materials are key inclusion criteria, such as the age, race/ethnicity, and sex requirements. Succinctly describing the purpose of the study on recruitment materials will not only pique potential participants' interest, but also help reduce the number of potential participants who do not meet key requirements for enrollment from contacting study staff (which will save the time and money of the researcher).

Contact Information of Study Staff. Another important item to include on recruitment materials is the contact information of the researcher and/or study staff. Basic information should include: the researcher's name, affiliation, phone number, and email address. This will allow potential participants to contact the researcher in a manner they feel comfortable. For recruitment fliers designed to be posted in public spaces, including "tear off" tabs that include the study name and the researcher's contact information (see Figure 1) are ideal to ensure potential participants have the researcher's contact information readily available if they are interested in participating in

the study. Additionally, it may be beneficial to create a unique website and/or automated telephone information hotline that further describes the purpose of the study (in potential participants' preferred language) and allows potential participants to self-complete an eligibility screener. There are a number of inexpensive and/or free websites that researchers can utilize to assist in these tasks (i.e., SurveyMoney.com, Weebly.com, web.com). Allowing participants flexibility to access information about the study and self-complete an eligibility screener at their convenience reduces the workload of the investigator and helps expedite the recruitment process.

Pre-testing Recruitment Materials. Once draft recruitment materials are developed, it is important for researchers to pre-test them with members of the target study population. Pre-testing can be accomplished through a variety of strategies (i.e., one-on-one interviews, focus groups). Pre-testing will help ensure information presented is aesthetically pleasing, clearly stated, and culturally appropriate. For a comprehensive list points to consider when pre-testing recruitment materials, we refer readers to the National Cancer Institutes, "Making Health Communication Programs Work" guidebook (Section 2) (National Cancer Institute, 2004).

Build a Respectful and Trusting Relationship with Potential Participants
One of the most important things researchers can do to enhance participant recruitment is to create respectful and trusting relationships with potential study participants (Aitken et al., 2003; Russell et al., 2008). While developing such relationships will require extensive effort from researchers, it can be done at no monetary costs. Developing meaningful relationships with potential participants can also help reduce attrition among those enrolled (Crawford Shearer et al., 2010; Tramm et al., 2013) and increase the likelihood of participants to referring their family, friends, and colleagues to the study. Here, we outline three no-cost strategies to help foster a respectful and trusting relationship with potential study participants.

Respond to Study Inquiries in a Prompt and Courteous Manner. When potential participants inquire about a study, the single best thing a researcher can do to facilitate recruitment is to quickly respond to their inquiry and thoroughly answer any questions or concerns they may have. In our studies, we make every effort to return participants calls/emails within the same day of the inquiry. If inquiries are made later in the evening (i.e., after approximately 7:00pm), we contact them first thing the next morning. Quickly responding to potential participant inquiries demonstrates that the researcher is attentive to the needs, questions, and concerns of study participants, and that he or she is interested in the potential participant enrolling in the research study. Further, since this may be the first interaction many individuals will have with the researcher, it represents an opportunity to make good impression with potential participants.

When responding to participant inquiries, we find it is important to personalize the response. For example, when participants call or email study staff to request more information about the study, it is imperative to tailor the response to the individual. This can be accomplished by using a salutation that includes the potential participant's name and by specifically answering his/her question at the beginning of the phone conversation or email text. Once a potential participant's specific questions are answered, the researcher may want to provide more general information about the study, as research suggests that lack of study-related information is a key reason why individuals do not participate in research studies (Ross et al., 1999). Communications that are not tailored to the individual can lead to potential participants being disinterested in the study.

Screen and Enroll Participants as Quickly as Possible. After responding to potential participant inquiries, every effort should be made to immediately screen them for eligibility and enroll them into the study. Potential participants, just like researchers, have busy lives. Therefore, they can forget about their interest in the study or delay participation if researchers do not maintain contact and enroll

them into the study in a timely manner. Simplification of the eligibility screening process so that eligibility is quickly determined is also an ideal strategy to expedite participant enrollment (i.e., avoid in-person physical exams, blood draws, etc. to determine eligibility if possible). The location where informed consent, study assessments (i.e., baseline, follow-up assessments) and intervention sessions are held should be easily accessible for study participants (Fayter et al., 2007; Russell et al., 2008). Study recruitment should not begin unless a researcher is prepared to immediately begin enrolling participants. Delays between the first contact with participants and eligibility screening/enrollment can negatively impact participant's recruitment and should be avoided.

Communicate with Potential Participants Using their Desired Form of Communication. Participants will have a preference regarding the mode of communication in which they would like to interact with researchers. Some will prefer telephone conversations, while others will prefer email or text message communication. It is important for researchers to ask each potential participant their preferred method of communication and use this preferred method throughout the recruitment and study enrollment process. Communicating with potential participants using their desired form of communication is a courteous and simple strategy to enhance recruitment without any additional cost or effort by researchers.

Final Thoughts
This article provides health promotion researchers with strategies to recruit participants into small-scale research studies. The techniques discussed require minimal monetary resources and can be done by individual researchers without the help of additional staff members. On the other hand, the techniques will require significant labor and time commitments from individual researchers. While this is not ideal, especially for junior faculty members, it is unavoidable for researchers with limited resources.

When implementing recruitment activities, researchers should continually evaluate their efforts and adapt their strategies to ensure they are maximizing the number of participants enrolled, while minimizing their individual time and workload burden. This will require researchers to "think on their toes" and modify recruitment strategies if previous efforts are not resulting in increased participant enrollment. Likewise, not all study populations will respond similarly to specific recruitment techniques (Gul & Ali, 2010). A strategy that was successful with one population may not translate into success with another population. Formative research (either formal or informal) with members of the study population can help guide a researcher on best way to allocate their recruitment resources.

The recruitment techniques discussed were heavily influenced from our health promotion research experience, which is based in the social and behavioral sciences. Therefore, we recognize that the techniques presented may not be applicable to researchers conducting clinical/medical trials or laboratory research. Nor do we intend to supersede any regulatory policies of specific Institutional Review Boards (IRBs) that may not allow researchers to implement some of the recruitment techniques discussed (i.e., enlisting community gatekeepers and/or a researcher's personnel contacts to help with recruitment efforts). Investigators should ensure all recruitment procedures are approved by their IRB prior to implementation.

In summary, recruitment of participants into research studies is necessary for study success. The limited resources available for researchers conducting small-scale research studies can greatly impact their ability to successfully recruit participants into their trials. The tools and techniques discussed in this current article provide a "starting point" for health promotion researchers to use when recruiting participants into their small-scale research studies.

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