Chapter 9 Gender Diverse Recruitment to Research Projects

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Participation of families, patients, and communities from diverse population groups in research in general is lower than participation of people from the dominant cultures in the United States (Halbert et al., 2008). The lower participation of minority groups is problematic from both a scientific and a social justice viewpoint. In health research, for example, from a scientific standpoint lack of participation of a specific subgroup, such as ethnic minorities, prevents the exploration of specific ethnic differences in patterns of disease (Burchard et al., 2003; Cooper, Kaufman, & Ward, 2003; Krieger, Chen, Waterman, Rehkopf, & Subramanian, 2005). In turn, the lack of study of the biological and social patterns of disease and risks among diverse ethnic and racial groups leads to the inability to identify differential risks among ethnic groups. Furthermore, although it is widely recognized that health disparities between ethnic groups are overwhelmingly environmental in nature (e.g., due to differences in socioeconomic status, education, culture, lifestyles) (Institute of Medicine, 2003; Sankar et al., 2004), the lack of studies of diverse groups of people prevents us from identifying the key causal elements of the disparities.

This knowledge is critical as we move forward to apply multidisciplinary approaches to prevent, treat, and control diseases and to promote physical and mental health. Indeed, the limited participation of a diverse population in studies of risk factors for psychological and social problems will lead to inadequate consideration of a broad base for solutions to problems of all sorts. For example, if we do not identify the social and behavioral diversity related to health patterns, we reduce the likelihood that changing and improving these patterns will be solved through social and behavioral means. One thing is clear: if we do not recruit diverse samples into our studies, we impede progress toward an accurate understanding of the psychological issues described in all of the chapters in this handbook and reduce the likelihood that we will be able to reduce disparities of all sorts.

Recruitment and sampling are the most critical phases of any study in which we want to compare two or more groups of people on our outcome variables. We have all heard jokes about psychological knowledge being based only upon evidence from rats and college sophomores. Although this largely has been true historically, psychologists now recognize that generalizability from research samples requires that those samples be more representative of the general population than most college student samples are likely to be. Given that the majority of psychology majors in the United States now are women, specific attention to the recruitment of male participants is needed if research is conducted on campus. Furthermore, from a social justice standpoint, it is important to create research settings that have equitable access to participation for all persons, independent of ethnic background

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and other social status and structural variables. There is some evidence that people who participate in research projects, specifically clinical trials, report better health outcomes than do people who do not participate in research (Kandzari et al., 2005). There are many hypotheses as to why this would be true, including (1) a self-selection bias in the groups recruited, such that recruited people are healthier than people not recruited, and (2) the high-quality prevention, treatment, surveillance, and follow-up provided to participants in clinical trials versus the more variable quality provided to the general public. It is therefore important to come up with methods to improve access to research participation for disadvantaged minorities for these reasons.

How to go about recruiting diverse populations into research studies is the key question. Part of the challenge is due to inconsistency in defining "diversity." What is diverse enough? Another issue is the early decisions that investigators make about recruitment that lead to diversity or not. In this chapter we present the basic types of recruitment, an overview of the recruitment process, and research examples that specifically used strategies to identify diverse recruitment samples for research.

Types of Recruitment

There are multiple approaches to recruitment and each of these has a specific purpose and specific procedures. Selection of a specific method often implies a need within a study to produce a certain type of sample with specific characteristics. These decisions are often guided by the purpose and focus of the study and the resources that are available to support recruitment. For example, research on promoting health behaviors (e.g., diet, physical activity) among cancer survivors would necessitate recruiting a clinical population. However, one could decide to use an existing registry, or specific cancer clinics, and the samples within the existing registry or clinics would help to define the diversity of the study sample. Decisions about the source of participants must involve tradeoffs about generalizability, costs, and other resources that may be needed to support recruitment efforts. All of the recruitment methods and approaches have strengths and weaknesses, and sometimes studies use combinations of these methods to reach their recruitment goals. For an excellent introduction to the types of sampling, as well as other methodological issues, see http://www.socialresearchmethods.net or consult a standard text on clinical trials and survey methods (e.g., Aday & Corenlius, 2006).

Population-Based Recruitment

Population-based recruitment focuses on recruitment of a study sample that is likely to be the most representative of the population to which inferences are being made. This method will ask people at random, and without bias, to be a part of a study so that the sample can tell us something about the larger population from which it was recruited. Most studies of disease risk attempt to recruit a population-based sample (Aitken, Gallagher, & Madronio, 2003). This is because the investigators want to have the same distribution of health issues, behaviors, and ideas as are found in the general population. There are several different resources that are available to support population-based recruitment methods. These may include national registries or existing cohorts of people, disease registries at hospitals or clinics, patient populations within managed care settings, voter registration lists, and motor vehicle registration lists. The steps involved in using population-based recruitment methods include making a decision about what the population is (e.g., young people in transition, sexual minorities, adults living independently). One of the issues to consider about diverse

recruitment is that, if a broad range of people, such as ethnic minority or older people, are not recruited systematically into a study from a population where they are present, then the study sample cannot be a population-based sample. In other words, we will never understand how different kinds of people approach the topic if we do not recruit them into the study. Often we know this by calculating response rates and cooperation rates for recruitment efforts with an accepted method of calculation such as aapor.com.

Purposive Recruitment

Purposive recruitment is in some ways the opposite of random: In purposive recruitment investigators try to recruit a certain demographic or social category of person. If the study needs 30- to 50-yearold women, then recruiting just those types of people into the study is purposive recruitment. Of course, there may be other things that are missed in purposive sampling because it is not random. For example, recruiting the first 30 members of the target group to walk through a door of a hospital or library may yield only early risers, or people who are likely to visit a hospital or library. Therefore, bias is often an inherent part of purposive sampling. If purposive recruitment is indeed not random, then we have lost the ability to generalize with confidence to the larger population. This may be a positive attribute of a study, as we may only want to hear from people who have something in common with the first 30 people to walk through the door of a hospital or library in any given day. The real issue to guide recruitment efforts is "Who do I want to know about and why?" This underscores the need for constant checking to see that diversity is maintained in equal proportions to the general population during recruitment as one way to help insure a generalizable population or, alternatively, that the purposive nature of the sample (i.e., the focus) is maintained throughout.

Convenience Sampling

Convenience sampling is exactly what it sounds like: selecting participants because it is convenient to access and recruit them, with no attempt to represent the general population or to gather up a specific, purposive sample. College students in a Psychology Department Subject Pool; people who scan Craigslist; customers of hair salons, barber shops, laundromats, or LGBT book stores; members of clubs and professional or civic associations; and listserv subscribers are examples of convenience samples. Convenience samples are easier to recruit and often require less intensive work from a resources perspective, but they lack either the representativeness of population-based sampling or the focus of purposive sampling. The benefit of convenience recruitment is that it is usually quicker and easier than other methods of recruitment. The negative elements are that there is no ability to represent a population and no ability to describe a focused group of individuals. However, for some uses they can work well. Demographic diversity can be managed by combining several different types of convenience samples. However, one convenience sample is not usually a good method of insuring sample diversity, as it is never really "convenient" to recruit a diverse group of participants into a study.

How to Choose a Recruitment Strategy

The first difficulty is in how to choose a recruitment method that matches the important research questions of the study. This matching process occurs before the study begins and is based on

scientific and practical decisions. Often, population-based recruitment is expensive and labor intensive. Therefore, we might ask whether it is needed for a particular research project. Could we understand what we want to know by using a different method of recruitment? For example, if the purpose of the study is to develop a better understanding of the range of issues and concerns of individuals who live in a specific community, then convenience sampling may be adequate for recruitment into the study. If the purpose of the study is to understand the extent of a psychological problem in that community, then population-based recruitment would be more appropriate.

The second difficulty emerges after the initial decision has been made. That is, how do we implement and maintain that recruitment method throughout the study? We do it by selecting only people who fit into the recruitment method. This is accomplished through a combination of recruitment rules and eligibility criteria. The rules of recruitment could be something like this: "Only select every fourth person who comes through the door." This recruitment rule attempts to keep investigator preference out of the choice of persons to approach, in that the recruitment staff does not approach only people who seem friendly. Another rule might be "Ask three of the initial participants' close friends to participate." This rule leads to an in-depth understanding of a friendship circle, but perhaps it will not lead to results that can be generalized with confidence. Finding the answer to the question that the investigators have identified often relies on recruiting an appropriate sample through rules such as these.

Eligibility criteria are qualities about the person that are seen as desirable for study. But, eligibility criteria also serve to keep people out of the research sample. If only people who have experienced one episode of dating abuse are allowed in a study, then the study's findings are only relevant for people who have experienced at least one episode of dating abuse. This is often neither good nor bad, but simply descriptive of the study sample. Making conscious choices about who is eligible or invited into the study will help in the long run to improve the quality of research.

A Model of Recruitment

The process of recruitment, which is filled with large and small decisions about what procedures to use, is where we insure that we get the recruited sample that we need and want for our studies (Ruffin & Baron, 2000). A large amount of recruitment planning must be done before the proposal is written and before recruitment begins. This key period could be used to prepare scientists, staff, data systems, and the target population itself for the recruitment effort. Later parts of this diagram illustrate how much of a project's activities over time (in direct relationship to resources) are spent on recruitment. It is probably the single most resource-heavy and time-consuming activity of any project.

Regardless of the type of recruitment used for a study, one can divide recruitment into three broad stages, each with a set of activities and each with needed decisions that affect the diversity of the sample recruited. These are called preparatory stage, contact stage, and enrollment stage. Each is described below.

Preparatory Stage

The preparatory stage is the period before contact is ever made with a potential participant. Important variables at this stage are general issues, such as trust and mistrust of research, researchers, and the organizations involved (e.g., the medical care system, the university). Often researchers do not pay enough attention to this stage of recruitment, as it frequently entails building trust and visibility

over time by applying a social marketing or a community-based approach of engaging community members in discussions about a broad range of topics that have nothing to do with any specific research question. People's opinions and the reputation of research in general, as well as the research institution and researchers in particular, can enhance or reduce recruitment abilities. Engagement of the community or target population before beginning recruitment efforts is one way to know what prevailing perspectives exist in the target population and to begin to promote the idea of research as a positive step toward addressing specific problems (Hubbard, Kidd, & Donaghy, 2008). Other activities during this preparatory stage could include developing and evaluating recruitment materials and procedures and hiring staff to recruit participants.

Contact Stage

The contact stage is the period where the research team makes contact with potential participants via one or more of the several means of contact, such as in person, by telephone, in writing, or electronically. This first invitation is often to determine the participants' initial interest and eligibility (fit with the requirements of the study). The initial contact stage is often one way for outsiders to tell what type of recruitment method is being employed by the research team. If the contact is made at random from a list or a group of participants, then the recruitment method is likely to be population based.

Specific barriers to recruitment exist across all stages of recruitment (Ford et al., 2008) but often are present in the contact phase. Barriers can exist for participants, for recruiters, and for systems of research that exist and that support recruitment. For example, at the participant level, there may be cultural or linguistic barriers that prevent patients in a clinical setting from understanding the offer of a clinical treatment trial. At the recruiter level, there may not be enough time to approach all of the potential participants for a study with in-person methods; however, resorting to written methods might not work as well for older people, who respond better to in-person discussions of an opportunity. At the system level, differential health-care access for some ethnic minority groups means that recruiting through providers' offices reduces the likelihood that such groups will hear about interesting research opportunities. In order to recruit diverse samples of individuals, no matter what the type of recruitment, these barriers must be considered and addressed, or else recruitment will not yield diversity.

In general, the contact process must identify eligible participants and encourage them to continue with the recruitment process. Participation is not for everyone, and there will always be individuals who cannot, or do not want to, participate. The goal of the contact process is to describe the research in a way that outlines the participation process as a positive experience, or as a contribution to science or to the community, and encourages eligible individuals across demographic subgroups to take a closer look at possible participation. It is likely that many such efforts will be required to recruit a truly diverse sample. For example, the barriers to recruitment reported by adolescents are different than those reported by children or adults (Burke, Albritton, & Marina, 2007). This means that a full understanding of the range of barriers that exist for multiple subgroups may be necessary in order to contact and engage a fully diverse sample.

Enrollment Stage

The enrollment stage is when researchers make the final decisions about eligibility and participants decide whether or not to participate. The same barriers often exist in this stage as in the contact stage,

and these barriers can interfere with participation on the part of the participant, as well as the recruiter and the system. Enrollment often entails agreement by the participant to complete the requirements of the study and agreement by the researcher to follow through with promises of benefits to the participant and to ensure safety procedures to minimize risk to participants. As with the contact phase, misunderstandings, poor communication, and inadequate planning can derail participation at this stage and reduce the possibility of recruiting a diverse sample.

What Has Research Yielded for Diverse Recruitment?

How have we done in applying these principles to the recruitment of diverse samples of women and men to research? Put another way, what is the report card on diverse recruitment of samples in research? A brief review of the literature suggests that remedial efforts or "summer school" classes are needed. Many research projects do not meet their recruitment goals for diversity, and, therefore, many fall short of the ideal or proposed study sample (Ford et al., 2008; Gotay, 2001). In response to the somewhat dismal progress in this area, many investigations have been conducted in various ways to improve the diversity of those recruited into scientific research. For example, UyBico, Pavel, and Gross (2007) examined ways of enhancing sample diversity in cancer research. They noted that targeted social marketing processes, a campaign to promote the specific study to a target audience, seemed to be most effective in enhancing initial recruitment efforts with no loss to follow-up. These types of strategies hold promise for the design and evaluation of future recruitment efforts.

A model proposed by Paskett and colleagues (Paskett, Katz, DeGraffinreid, & Tatum, 2003) indicates how researchers might consider the design of interventions to improve recruitment of diverse samples. At each of the levels in their model, there are opportunities to improve diversity in research. For example, at the larger level, increasing awareness of the research during the preparatory phase is a positive activity that provides answers to questions of critical importance to the target population. Increasing communication skills between the participant and the recruiter would improve the likelihood of accurate information exchange between the two parties and might also help to reduce any mistrust between them. Many of the interventions described in this chapter target one or more of the levels in the model, which can be used as a guide in identifying opportunities to improve recruitment in future studies.

Research Examples

In this section we present different examples of attempts to enhance and insure diverse recruitment into research projects. In each of these examples, specific efforts were made to change procedures that could affect the proportion of ethnic minorities in the research sample.

Studies of Psychological Phenomena: The Psychology Department Subject Pool

The undergraduate psychology subject pool is a large and widely used source of participants for the basic psychological research that many academics conduct. Estimates are that between 50 and 75% of our basic science knowledge of how people think, feel, and behave come from studies of college undergraduates who are completing a requirement in their lower level psychology classes to

participate in research projects. The goals of this effort are twofold: to provide an educational opportunity for psychology students about psychological research methodology and to provide easy access to a reasonable sample of participants for psychology professors and students who are conducting research. The idea that most aspects of human behavior can be studied in undergraduates and applied to the rest of the world has not been directly tested, though it has been challenged often (e.g., Sears, 1986). Growing awareness of the importance of subgroup differences in people's responses to stimuli of all kinds indicates that we should exercise caution about overuse of this recruitment strategy. Demographic differences between college students and other populations of interest are one source of potential differences (e.g., in cognitive functioning or behavioral responses). Age, life stage, socioeconomic status, educational level, and other differences may play a role in influencing the responses of college students, as compared to other groups in the general population.

Diversity in a Large Clinical Trial: The Women's Health Initiative

The Women's Health Initiative (WHI), sponsored by the U.S. National Institutes of Health (NIH), was a 15-year population-based study that focused on three primary causes of illness and death among postmenopausal women: breast and colorectal cancer, cardiovascular disease, and osteoporosis (Women's Health Initiative Study Group, 1998). There were two main arms of the study: a clinical trial (CT) and an observational study (OS). The clinical trial randomized menopausal women, ages 50–79, into three different interventions. The first was to assess the impact of a low-fat diet on the incidence of breast or colon cancer. The second examined the association between hormone therapy and cardiovascular disease. The third was a study of vitamin D and calcium supplements on hip fractures. As mentioned earlier, minority populations are often difficult to recruit into clinical trials, as are people of older ages. An important aspect of this study was the deliberate and intensive recruitment of ethnic minority women, which was successful: 18.5% of the women enrolled in the trial were Asian/Pacific American, African American, Native American, or Latina (Hays et al., 2003). The number of minority enrollees is representative of the population, which is necessary to generalize study findings.

Several steps were taken to ensure adequate numbers of minority participants in both study arms. First, the study set goals for recruitment before beginning and then structured its funded centers to meet the goals. The study spanned 40 clinical centers across the United States, 10 of which were chosen because they had a concentration of potentially eligible minority women within their geographic service area (Hays et al., 2003; Rossouw & Hurd, 1999). Site-specific staff and culturally sensitive study resources were utilized for recruitment of potential enrollees. Another outreach measure was to use existing enrollees as peer advocates. Larkey and colleagues (Larkey et al., 2002) described the decision to enlist lay advocates, known as Embajadoras, to assist in the recruitment of Latinas in Phoenix, Arizona. Finally, women who were ineligible for the CT arm were repeatedly given opportunity to participate in the OS arm. This was an efficient way to capture the strength of minority enrollment among the 100,000 target OS participants. Women also were allowed to participate in more than one CT intervention. Each of these strategies helped the overall WHI meet the diversity recruitment goals, although centers varied in how much they contributed to that goal.

Specific Strategies for Enhancing Diversity in Recruitment

The Cancer Genetics Network (CGN) spans several centers and is a clearinghouse for genetic and environmental data thought to contribute to cancer outcomes. The CGN study teams across the

country determined in 2003 that the recruited sample of almost 10,000 families was not diverse enough to address important hypotheses. Therefore, they focused their efforts for 2 years on testing minority recruitment strategies. Together, six strategies were tested by this group of investigators, and all are presented in the special issue edited by James, Yu, Henrickson, Bowen, and Fullerton (2008), which discusses several strategies to increase minority participation in cancer studies in order to provide diverse representation of genetic susceptibility. Authors of the articles highlight researchers' responsibility, not only to enroll target numbers of minority participants but also to engage community members and other partners for the purpose of "goal concordance" (James et al., 2008). Identification of shared, mutual expectations between the research community and the underrepresented minority populations is critical for reducing long-standing barriers to recruitment.

Trust building was embedded in the CGN minority enrollment process, but there were impediments including historical human subject violations and skepticism that the research actually would benefit the participants' community (James et al., 2008). Community-based participatory research (CBPR) is a way to extend the role of the study participants from the somewhat passive "compliant" to engagement in study design and feedback (Minkler & Wallerstein, 2003). CGN studies utilize this empowering strategy to incorporate the voice and expertise of community members. For example, Patterson and colleagues (2008) found it helpful to hire an African American nurse for the intervention staff, which made a trusted community member highly visible to potential participants. From the peer-to-peer perspective, community members could provide insight regarding cultural norms that might be barriers or incentives to enrollment and retention. CGN studies also have had minority enrollment success among those who have directly or indirectly experienced a diagnosis of cancer and by increasing the flexibility of the research protocol. This approach to testing the usefulness of minority recruitment strategies provided clear directions for how to build a better network, as well as scientific contributions to the field.

Recruitment Strategies for Sexual Minority Women: Insuring Diversity

Sexual minority women (SMW) have been differently defined, in that some use this term for women who self-report a lesbian or bisexual identity, others prioritize behavior (e.g., partnering with women), and many include both sexual minority identity and behavior. About a decade ago, the Institute of Medicine Committee on Lesbian Health Research Priorities (1999) released its land-mark publication that called for more research on lesbian health issues, including population-based studies to provide answers to some hypothesized disparities by sexual orientation. Many researchers answered the call and struggled with the question of how to recruit the "hidden population" of sexual minority women.

Traditionally, research on this population has relied on convenience or snowball recruitment methods, which means reaching SMW through organizations, events, and participant referrals (Fish, 1999). The biases of these approaches are widely known and acknowledged (Binson, Blair, Huebner, & Woods, 2006; Bowen, Bradford, & Powers, 2006; Bowen et al., 2004; Institute of Medicine Committee on Lesbian Health Research Priorities, 1999; Meyer & Colten, 1999). Results of research with community samples of lesbians have been criticized for over-representing predominantly White, highly educated, younger women (Ellis, Bradford, Honnold, & Barrett, 2001; Institute of Medicine Committee on Lesbian Health Research Priorities, 1999; Meyer, Rossano, Ellis, & Bradford, 2002). Recruitment from one community group, location, or event is insufficient because it only reflects a limited segment of the community. This has been demonstrated by studies focused on lesbians' smoking behavior. Smoking rates were higher when the sample was drawn from lesbian

bars than when the sample was drawn from a lesbian health conference (Hughes & Jacobson, 2003; Ryan, Wortley, Easton, Pederson, & Greenwood, 2001).

Some champion respondent-driven sampling as a solution. This approach eliminates or minimizes biases inherent in traditional chain-referral and convenience sampling methodologies and produces unbiased estimates of population size and composition (Heckathorn, 1997). The proponents of this methodology promise that information about the sample can be used to generate accurate estimates about the population despite the absence of a sampling frame (Heckathorn, 2002). It is noteworthy that, so far, respondent-driven sampling has been used to study sexual minority men and female sex workers (Abdul-Quader, Heckathorn, Sabin, & Saidel, 2006; Ramirez-Valles, Heckathorn, Vazquez, Diaz, & Campbell, 2005) in the context of HIV risk behaviors, yet as far as we know it has not been applied to SMW.

A particularly innovative example of estimating the lesbian population in one geographic location was the use of the capture–recapture method. This method is commonly used to determine the population of wildlife, which cannot be reasonably counted. This time it was applied to estimate the total lesbian population of one county (Aaron, Chang, Markovic, & LaPorte, 2003). Others have turned to the Internet to conduct surveys of SMW. This has its advantages, including that it allows for the recruitment of a geographically diverse population and for the inclusion of "closeted" individuals who are not reached through community recruitment methods (Riggle, Rostosky, & Reedy, 2005). Internet recruitment may result in online survey participation or may be limited to an online contact stage, followed later by enrollment and study participation off-line.

New and innovative recruitment strategies of SMW followed after the U.S. census counts of 1990 and 2000, which included information on same-sex partnered households. The U.S. census included detailed information on the relationship between different household members. This allowed same-sex members of a household to characterize their relationship as unmarried samesex partners, similar to the way cross-sex household members had the choice to characterize their partnered relationship as either married or unmarried. The U.S. census does not ask about familiar dimensions of sexual orientation, such as a respondent's identity (i.e., lesbian, gay, bisexual, heterosexual). Census data that identify same-sex partners have evolved as an important and reliable source from which one can infer information about the sexual identity of partnered household members (Black, Gates, Sanders, & Taylor, 2000; Ellis et al., 2001). The Census and the American Community Survey, which also included same-sex partnered household information, provided for a national estimate of SMW, the description of these households by various characteristics (e.g., age, race, presence of children; Gates, 2006; Ost & Gates, 2005). As the census made it possible to identify areas with a high concentration of SMW, it invigorated populationbased recruitment for health studies. For example, one research team tested the feasibility of identifying SMW for studies via random digit telephone dialing in an area with a high concentration of SMW (Meyer et al., 2002). Another team conducted a household survey in a SMW-rich area to identify differences in significant health-related outcomes by sexual orientation (Bowen et al., 2004).

The focus on SMW-rich areas certainly made the use of probability methods easier as it increased the odds of finding SMW, yet it remains a resource-intensive, and therefore costly, choice. Another issue is that focusing on SMW-rich areas identified through the census may bias the recruitment toward White populations as African American and Latino/a lesbian, gay, bisexual, and transgender (LGBT) couples cluster in different areas than White LGBT couples do (Gates, Holning, & Sears, 2006). A study that compared a community sample of SMW to census data on SMW from the same geographic location to identify biases in recruitment concluded favorably about the representational quality of the community sample of SMW (Boehmer, Clark, Timm, & Ozonoff, 2008). These findings and concerns about probability recruitment methods for SMW studies call for a

thoughtful and restrained use of probability methods, such as limiting its use to research questions that absolutely warrant this approach. Also, when the research question requires rich descriptive data, continued use of purposive and convenience recruitment is warranted, especially when researchers use rigorous recruitment methods and involve and consult the LGBT community in the design and recruitment processes.

Conclusions

There are many steps to recruitment of a diverse sample, from planning and funding to final enrollment steps. Planful diverse recruitment must be integrated into the beginning of any study and carried through at all levels. As previously discussed, recruitment is often the biggest time challenge in a study and one that must be given both scientific- and community-based attention. Use of strategies that have been found to work in other settings and collaborations with community leaders and colleagues from the target populations are critical to overall recruitment success.

It is possible to be successful; lack of diversity in recruited samples is a solvable and addressable problem. Teams of people have been able to recruit diverse samples. It takes knowledge about the target population, collaboration with the communities targeted, use of research findings and tested strategies in the recruitment efforts, and, ultimately, the necessary resources. But, it can be done. The examples above are some of the successful efforts to be found in the literature, and these examples should be seen as guides for future recruitment efforts in all areas of psychological research. Where there is a will, there is a way.

References

- Aaron, D. J., Chang, Y. F., Markovic, N., & LaPorte, R. E. (2003). Estimating the lesbian population: a capturerecapture approach. *Journal of Epidemiology and Community Health*, 57, 207–209.
- Abdul-Quader, A. S., Heckathorn, D. D., Sabin, K., & Saidel, T. (2006). Implementation and analysis of respondent driven sampling: Lessons learned from the field. *Journal of Urban Health*, 83(6 Suppl), 1–5.
- Aday, L. A., & Corenlius, L. (2006). Designing and conducting health surveys: A comprehensive guide. San Francisco, CA: Jossey-Bass.
- Aitken, L., Gallagher, R., & Madronio, C. (2003). Principles of recruitment and retention in clinical trials. International Journal of Nursing Practice, 9, 338–346.
- Binson, D., Blair, J., Huebner, D. M., & Woods, W. J. (2006). Sampling in surveys of lesbian, gay, and bisexual people. In I. Meyer & M. Northridge (Eds.), *The health of sexual minorities: Public health perspectives on lesbian, gay, bisexual, and transgender populations* (pp. 375–418). New York: Springer.
- Black, D., Gates, G., Sanders, S., & Taylor, L. (2000). Demographics of the gay and lesbian population in the United States: Evidence from available systematic data sources. *Demography*, 37, 139–154.
- Boehmer, U., Clark, M., Timm, A., & Ozonoff, A. (2008). Two means of sampling sexual minority women: How different are the samples of women? Journal of LGBT Health Research, 4(4), 143–151.
- Bowen, D. J., Bradford, J., & Powers, D. (2006). Comparing sexual minority status across sampling methods and populations. *Women & Health*, 44(2), 121–134.
- Bowen, D. J., Bradford, J. B., Powers, D., McMorrow, P., Linde, R., Murphy, B. C., et al. (2004). Comparing women of differing sexual orientations using population-based sampling. *Women & Health*, 40(3), 19–34.
- Burchard, E. G., Ziv, E., Coyle, N., Gomez, S. L., Tang, H., Karter, A. J., et al. (2003). The importance of race and ethnic background in biomedical research and clinical practice. *New England Journal of Medicine*, 348, 1170–1175.
- Burke, M. E., Albritton, K., & Marina, N. (2007). Challenges in the recruitment of adolescents and young adults to cancer clinical trials. *Cancer*, 110, 2385–2393.
- Cooper, R. S., Kaufman, J. S., & Ward, R. (2003). Race and genomics. *New England Journal of Medicine*, 348, 1166–1170.

- Ellis, J., Bradford, J., Honnold, J., & Barrett, K. (2001, June). *Identification and description of lesbians living in households reporting same-sex partnerships in public use micro-data samples*. Paper presented at the National Lesbian Health Research Conference, San Francisco, CA.
- Fish, J. (1999). Sampling lesbians: How to get 1000 lesbians to complete a questionnaire. *Feminism & Psychology*, 9, 229–238.
- Ford, J. G., Howerton, M. W., Lai, G. Y., Gary, T. L., Bolen, S., Gibbons, M. C., et al. (2008). Barriers to recruiting underrepresented populations to cancer clinical trials: A systematic review. *Cancer*, 112, 228–242.
- Gates, G., Holning, L., & Sears, R. B. (2006). *Race and ethnicity of same-sex couples in California*. Los Angeles, CA: The Williams Project on Sexual Orientation Law and Public Policy. UCLA School of Law.
- Gates, G. J. (2006). Same-sex couples and the gay, lesbian, bisexual population: New estimates from the American community survey. Los Angeles, CA: The Williams Institute on Sexual Orientation Law and Public Policy. UCLA School of Law.
- Gotay, C. C. (2001). Perceptions of informed consent by participants in a prostate cancer prevention study. Cancer Epidemiolology Biomarkers & Prevention, 10, 1097–1099.
- Halbert, C. H., Love, D., Mayes, T., Collier, A., Weathers, B., Kessler, L., et al. (2008). Retention of African American women in cancer genetics research. *American Journal of Medical Genetics*, 146A, 166–173.
- Hays, J., Hunt, J. R., Hubbell, F. A., Anderson, G. L., Limacher, M., Allen, C., et al. (2003). The women's health initiative recruitment methods and results. *Annals of Epidemiology*, 13(9 Suppl), S18–77.
- Heckathorn, D. D. (1997). Respondent-driven sampling: A new approach to the study of hidden populations. Social Problems, 44, 174–179.
- Heckathorn, D. D. (2002). Respondent-driven sampling II: Deriving valid population estimates from chain-referral samples of hidden populations. Social Problems, 49, 11–34.
- Hubbard, G., Kidd, L., & Donaghy, E. (2008). Involving people affected by cancer in research: A review of literature. *European Journal of Cancer Care*, 17, 233–244.
- Hughes, T. L., & Jacobson, K. M. (2003). Sexual orientation and women's smoking. Current Women's Health Reports, 3, 254–261.
- Institute of Medicine. (2003). Unequal treatment: Confronting racial and ethnic disparities in healthcare. Washington, DC: National Academy of Press.
- Institute of Medicine Committee on Lesbian Health Research Priorities (Ed.). (1999). Lesbian health: Current assessment and directions for the future. Washington, DC: National Academy Press.
- James, R. D., Yu, J. H., Henrikson, N. B., Bowen, D. J., & Fullerton, S. M. (2008). Strategies and stakeholders: Minority recruitment in cancer genetics research. *Community Genetics*, 11, 241–249.
- Kandzari, D. E., Roe, M. T., Chen, A. Y., Lytle, B. L., Pollack, C. V., Jr., Harrington, R. A., et al. (2005). Influence of clinical trial enrollment on the quality of care and outcomes for patients with non-ST-segment elevation acute coronary syndromes. *American Heart Journal*, 149, 474–481.
- Krieger, N., Chen, J. T., Waterman, P. D., Rehkopf, D. H., & Subramanian, S. V. (2005). Painting a truer picture of US socioeconomic and racial/ethnic health inequalities: The public health disparities geocoding project. *American Journal of Public Health*, 95, 312–323.
- Larkey, L. K., Staten, L. K., Ritenbaugh, C., Hall, R. A., Buller, D. B., Bassford, T., et al. (2002). Recruitment of Hispanic women to the women's health initiative: The case of embajadoras in Arizona. *Controlled Clinical Trials*, 23, 289–298.
- Meyer, I. H., & Colten, M. E. (1999). Sampling gay men: Random digit dialing versus sources in the gay community. *Journal of Homosexuality*, 37(4), 99–110.
- Meyer, I. H., Rossano, L., Ellis, J. M., & Bradford, J. (2002). A brief telephone interview to identify lesbian and bisexual women in random digit dialing sampling. *Journal of Sex Research*, 39, 139–144.
- Minkler, M., & Wallerstein, N. (2003). Community based participatory research For health. San Francisco, CA: Jossey-Bass.
- Ost, J., & Gates, G. (2005). The gay and lesbian atlas. Washington, DC: The Urban Institute Press.
- Paskett, E. D., Katz, M. L., DeGraffinreid, C. R., & Tatum, C. M. (2003). Participation in cancer trials: Recruitment of underserved populations. *Clinican Advances in Hematology & Oncology*, 1, 607–613.
- Patterson, A. R., Davis, H., Shelby, K., McCoy, J., Robinson, L. D., Rao, S. K., et al. (2008). Successful strategies for increasing African American participation in cancer genetic studies: Hopeful signs for equalizing the benefits of genetic medicine. *Community Genetics*, 11, 208–214.
- Ramirez-Valles, J., Heckathorn, D. D., Vazquez, R., Diaz, R. M., & Campbell, R. T. (2005). From networks to populations: the development and application of respondent-driven sampling among IDUs and Latino gay men. AIDS and Behavior, 9, 387–402.

- Riggle, E. D., Rostosky, S. S., & Reedy, C. S. (2005). Online surveys for BGLT research: Issues and techniques. Journal of Homosexuality, 49(2), 1–21.
- Rossouw, J. E., & Hurd, S. (1999). The women's health initiative: Recruitment complete—looking back and looking forward. *Journal of Women's Health*, 8(1), 3–5.
- Ruffin, M. T., & Baron, J. (2000). Recruiting subjects in cancer prevention and control studies. Journal of Cell Biochemistry, 34(supp), 80–83.
- Ryan, H., Wortley, P. M., Easton, A., Pederson, L., & Greenwood, G. (2001). Smoking among lesbians, gays, and bisexuals: A review of the literature. *American Journal of Preventive Medicine*, 21, 142–149.
- Sankar, P., Cho, M. K., Condit, C. M., Hunt, L. M., Koenig, B., Marshall, P., et al. (2004). Genetic research and health disparities. *Journal f the American Medical Association*, 291, 2985–2989.
- Sears, D. O. (1986). College sophomores in the laboratory: Influences of a narrow data base on social psychology's view of human nature. *Journal of Personality and Social Psychology*, 51, 515–520.
- UyBico, S. J., Pavel, S., & Gross, C. P. (2007). Recruiting vulnerable populations into research: A systematic review of recruitment interventions. *Journal of General Internal Medicine*, 22, 852–863.
- Women's Health Initiative Study Group (1998). Design of the women's health initiative clinical trial and observational study. *Controlled Clinical Trials*, 19, 61–109.