

# Lessons Learned from Conducting Health Behavior Research in an Under-resourced, Urban Community

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## Abstract

Existing literature discusses challenges in conducting community-engaged health behavior interventions. However, discussions associated with the barriers to executing community-engaged health behavior research with vulnerable populations are limited in the literature. This current issue provides lessons learned for the purpose of improving community-engaged research within communities that are under-resourced. The lessons learned stem from challenges with the recruitment and enrollment procedures and study design with a previous qualitative community-engaged research project. The research recommendations proposed are geared toward students preparing to engage in dissertation research and early-stage investigators who are interested in conducting research in under-resourced communities.

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## Introduction

Community-engaged research is a process of inclusive participation that supports mutual respect of strategies, values, and authentic partnerships between an academic institution and community stakeholders, such as an agency, an organization, or health care system (Ahmed & Palermo, 2010). The partnerships inform all aspects of the research, and they assist with maximizing the expertise and resources of all stakeholders involved (Green et al., 2001). Community-engaged research is also an effective way to explore multidimensional experiences and contexts in depth (Fisher et al., 2019). Community-engaged research has been shown to bridge cultural gaps (Fisher et al., 2019; Saha et al., 2008), enhance the relevance of the research conducted (Balazs & Morello-Frosch, 2013), and promote the sustainability of research in the community (Fisher et al., 2019). Major health research institutions, including the National Institutes

of Health, regulate the inclusion of minority populations to ensure adequate representation of underrepresented populations in research studies, due to historic underrepresentation and rising health disparities. However, barriers to recruitment and engagement persist (Mendoza-Vasquez et al., 2016; Paskett et al., 2008). Barriers to recruitment and engagement sometimes result in studies generating small samples and findings not deemed to be publishable by the academic community.

Postdoctoral scholars and junior faculty in their first years of being an assistant professor sometimes find themselves in this position and are unsure what to do with their data. There is opportunity for senior researchers to communicate to junior scholars that the academic community would benefit from lessons learned and associated research recommendations through a publication. Further, providing the opportunities for undergraduate students to write up lessons learned from a research study, as publication

challenges the student to grow and excel in ways that traditional classroom courses cannot replicate (Hernandez et al., 2019). For graduate students and junior faculty scholars, turning lessons learned into lead-author publications that address data collection feasibility is a good opportunity to learn how to publish study design and research implementation fundamentals (e.g., Eigege et al., 2022; Hodgman et al., 2022; Kamdar & Hernandez, 2022). These types of publications can inform and improve health behavior research (Eigege et al., 2022; Kamdar & Hernandez, 2022), which is critical to reducing health disparities.

### **Brief Overview of Original Study and Who This Current Issue is Geared Towards**

This Current Issue article discusses lessons learned and associated research recommendations when conducting research in under-resourced, urban communities. The lessons that are described below stem from a qualitative research project focused on mothers' perceptions of how community and family factors influence the physical activity and healthy eating behaviors of their children. Despite multiple follow-up efforts of the research team, recruitment challenges limited the sample size. Out of the eight parents recruited that met all other eligibility criteria, only two parents completed interviews out of the originally proposed 5 to 6 parents. Consequently, this impacted the study outcomes. The research team consisted of a community partner, community advisory board (CAB), and a doctoral student who was collecting the data as a dissertation requirement. Therefore, the lessons learned and associated research recommendations described below are geared toward doctoral students preparing to engage in dissertation research, and early-stage investigators who are interested in community-engaged health behavior research for the purpose of

addressing health disparities in under-resourced communities.

## **Lessons Learned and Research Recommendations**

### **Recruitment and Enrollment Procedures**

**Matching on lived experiences.** Building trust and rapport with potential participants is critical in community-engaged research (Kumanyika et al., 2007). Rapport is built more quickly when a research team member is able to acknowledge similarities with the potential participants, such as being able to speak and provide study materials to the potential participants in their preferred language (Hodgman et al., 2022), or have something in common with the potential participants, such as being a mother. While being of the same race/ethnicity helps, being able to relate to particular minority or cultural experiences is more important (Rhodes et al., 2018). The participants from the project in which the lessons were learned were black mothers, even though the focus of the study was on mothers from economically under-resourced backgrounds. The interviews were conducted by an interviewer of the same gender, but not the same race, social class, or family structure. The interviewer did not have any prior direct relationships with the clinic, nor established rapport with parents being interviewed. Further, the mismatch in race and lived experience could have also contributed to poor rapport, creating barriers to recruitment.

Being attuned to minority or cultural experiences may sometimes mean depending on novice researchers who have valuable, relevant lived experiences, but who are often underrepresented in research programs in higher education due to systemic inequities (Dupree & Boykin, 2021). Although some racially minoritized undergraduate students may not have had the same access or

exposure to research training programs as their majority counterparts (Capri et al., 2017), they are still valuable to research teams. Their lived experiences surpass what can be learned from a methods course, a workshop, or a training program. Training underrepresented undergraduate students to recruit and collect data is feasible (Hodgman et al., 2022), and the diversity that underrepresented undergraduate students bring to research teams can make research teams stronger. Engaging scholars in the research process can provide a unique perspective that experienced researchers may overlook (Hernandez et al., 2019).

**Diversifying communication approaches.** During the recruitment phase of the study from which these lessons were learned, only a phone number was collected during the screening process. This could have limited engagement as well. Research studies that have collected email addresses in addition to phone numbers have been successful in enrolling participants (Hodgman et al., 2022). Requesting a preferred method of being contacted at the point of recruitment could have also provide more agency for potential participants to share which contact method works best for them to enhance the likelihood of engagement.

Further, phone calls to schedule the in-home interviews had a high non-response rate (no answer, no option for voicemail). After at least three follow-up phone calls, follow-up calls were discontinued. This also limited participation significantly. Hodgman and colleagues (2022) recruited adults in an under-resourced community and found phones to be disconnected within a week's time from when participants were recruited. Not recognizing the number from the research team's call, not wanting to answer an unknown number, or work schedule conflicts could have all been barriers to answering phone calls from the research

team. For researchers who need to use phone calls to recruit, screen, or enroll participants, communicating what kind of number would display on a participant's phone could be important (e.g., a Google Voice number, sharing the specific area code). Further, when research teams have been unable to speak directly to the participant, text messages have also been found successful in communicating the required information (Eigege et al., 2022). Relatedly, the senior author on this manuscript has previously partnered with a community organization that had the ability to send mass communication in the form of voice mails and text messages to inform clients of a study. This has been effective in increasing the pool of individuals that are eligible for the study. At the same time, mass communication increases the pool of ineligible individuals, requiring time from the research team to exclude individuals that do not meet the study criteria.

In addition, health behavior research has shown promise with using social media to promote both recruitment and sustained participant engagement (Rhodes et al., 2018). A study by Mitchell and colleagues (2014) showed that a sample of largely black single mothers were interested in receiving health behavior information via social media. Another study successfully used Facebook group messaging and mobile technology (text "e-blasts") to recruit black mothers to a study on breastfeeding (Dauphin et al., 2020). Furthermore, in 2020, 69% of individuals making less than \$30,000 per year used social media regularly and 74% of black adults used Facebook, Instagram, or some other form of social media (Pew Research Center, 2019). Meeting potential participants through mechanisms that they are most likely to engage with is important (Coker et al., 2009; Kumanyika et al., 2007), and social media may be an underutilized communication approach to recruiting hard-to-reach populations.

## Study Design

### **Collaborating with multiple community partners to meet the sample requirements.**

The sample from the project in which this Current Issue is drawn upon came from an emergency room at a large medical center. The fast pace of an emergency room, and the associated medical concerns that parents have when they arrive with their children, did not allow for trust and rapport building. The sole focus of an emergency room as the location for sampling could have led to prospective participants being missed. Patients in clinics or pediatric offices could have had more interests in the nature of the original proposed study. Relatedly, drawing a sample from a number of clinics or pediatric offices, rather than one location, does require greater project management but could have assisted with increasing the sample size.

**Utilizing a CAB to its fullest.** The research team in this study included CAB members who participated in developing and administering interview questions. However, the study team did not engage the CAB's expertise in other aspects of the study. For example, the CAB could have advised on community events for recruitment purposes (health fairs, church services), which could have generated a greater sample size (Kumanyika et al., 2007). Community-based participatory research (CBPR) is the most recognized form of community-engaged research and has been found to address stereotypes and harmful practices of research, as well as promoting community empowerment (Coker et al., 2009). Given that the original goal of the study was to examine mothers' perceptions of how community and family factors influence the physical activity and healthy eating behaviors of their children, utilizing the full scope of CBPR to include community partnerships and community involvement will be considered for future studies.

**Importance of interviewing participants in a familiar setting.** Interviewing participants from under-resourced, urban communities in locations that they frequently access and/or locations that they find comfort in is vital. Many times, researchers default to their own university setting. While this is convenient for researchers and research assistants, it presents participant burden in the form of unmet childcare needs, conflicting schedules with work, transportation challenges, and expensive and/or inconvenient parking (Eigege et al., 2022). Participants may also experience discomfort from engaging in an unfamiliar location (Eigege et al., 2022; Hodgman et al., 2022). In the study upon which these recommendations are based, in-home interviews were conducted to provide convenience to the families. Completion of the interviews within the home may have reduced logistical and transportation barriers, as well as allowed for the parent to participate even though they had young children at home. Other researchers have shown improved fidelity and participant satisfaction when conducting home interviews with parents of young children (O'Kane et al., 2019). Aside from participants' homes, community centers that participants frequently access have also demonstrated data collection feasibility (Hodgman et al., 2022). Therefore, designing studies with consideration of the unique needs of potential participants who reside in under-resource communities is important (Kumanyika et al., 2007).

### **Implications for Health Behavior Research and Publication Mentorship**

In this Current Issue, we provided a brief overview of lessons learned regarding conducting community-engaged, health behavior research in underserved communities and with hard-to-reach

populations. The lessons learned provide a starting point for discussion on improving recruitment and enrollment procedures and enhancing quality and rigor of the study design as a starting guide for doctoral students and early-stage investigators preparing their first primary research study. Implications from the lessons learned can help early-stage investigators and their mentors take active steps to increase engagement in health behavior research in order to give voice to historically underrepresented research participants and to address known disparities in health behaviors among vulnerable populations.

### **Discussion Questions**

1. What additional recruitment methods can be used? How can partnerships with elementary schools and universities (e.g., schools of medicine, social work, or nursing) assist with recruitment?
2. The original design of this study was a cross-sectional design; thus, challenges with long-term planned engagement and retention procedures were not discussed above. Based on the described lessons learned, what retention and engagement procedures could be considered when conducting research in under-resourced communities?

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