CHAPTER 6

University-Engagement Research: Application of a Mixed Method Design of Community-Based Participatory Research for Communities' Well-Being

Antigoni Papadimitriou, Rosalyn W. Stewart, and Constantine Frangakis

Introduction

The wide range of activity incorporated in universities' and colleges' community engagement suggests that a precise definition of the public mission is difficult and that organizing and balancing external collaborative activities, university policies, and practices is a complex task (Papadimitriou 2020). University-community engagement received a special attention on

This chapter results from the project Building School and Community Capacity Through Citizens' Engagement that is funded by the Johns Hopkins University, Schools of Education, Center for Safe and Healthy Schools (CSHS) Seed Grant Program. The views expressed in this publication are the sole responsibility of the authors and can in no way be taken to reflect the views of the project's funding institutions. The funding institutions cannot be held responsible for any use which may be made of the information contained therein.

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A. Papadimitriou, M. Boboc (eds.), *Re-envisioning Higher Education's Public Mission*,
https://doi.org/10.1007/978-3-030-55716-4_6

many campuses as an activity related to the university's public mission. Maurrasse (2010, p. 223) states that university-community engagement is the "process that brings together groups of stakeholders from neighborhoods, city, or region (including individuals, organizations, business, and institutions) to build relationships and practical collaboration with a goal of improving the collective well-being of the area and its stakeholders." Other researchers (Burkardt et al. 2004; Pollack 2015) echo that university-community engagement has been more rhetorical (more like window dressing) rather than activities over the last 25 years. On the other hand, Block (2008) directly links quality to the nature of community partnerships and he explains that universities, "by encouraging faculty and students to work in partnership with communities, can enhance the scope and quality of research, provide better learning opportunities, and increase their social relevance and efficacy" (p. 1). Hall and Tandon (2014) also share the view that university community engagement may sometimes actually contribute to improvements in higher education institutions, especially to their teaching and research functions. Additionally, communities, funding agencies, and universities are increasingly involving community stakeholders as partners in research to provide direct knowledge and understanding of the community needs. Drahota et al. (2016) highlight that effective university community and stakeholder engagement supplements the accomplishment and importance of research by using the experience of those most connected to the community of interest and results in the development of more sustainable and adaptable interventions and research. In this sense, universities and colleges themselves can benefit from collaborative, equal partnerships with communities.

A. Papadimitriou (✉)
School of Education, Johns Hopkins University,
Baltimore, MD, USA
e-mail: antigoni.papadimitriou1@gmail.com

R. W. Stewart
Johns Hopkins School of Medicine, Baltimore, MD, USA
e-mail: rstewart@jhmi.edu

C. Frangakis
Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, USA
e-mail: cfranga1@jhu.edu

University-engagement research benefits the communities as well as higher education institutions, however, such research, and especially the process of community engagement has been less frequently described in the literature (Groark and McCall 2008; Primavera 2004; Sandy and Holland 2006). Additionally, for over 20 years, community-based participatory research (CBPR) and other methods of community-engaged and collaborative research have employed interdisciplinary mixed and multimethod designs (Creswell and Plano Clark 2011) to create outcomes that are meaningful to communities (Israel et al. 2013; Trickett and Espino 2004; Wallerstein et al. 2008). From the mixed methods (MM) perspective, researchers noted that to expand the field of MM research, studies of how the methodology intersects with other research approach, like participatory and action research approaches (Hesse-Biber and Johnson 2013; Lucero et al. 2018; Plano Clark and Ivankova 2016) are needed. Other scholars, (DeJonckheere et al. 2018) underscored that "there is a need to understand the ways in which researchers are interesting in MMR with CBPR, identify the rationales for using this design, and describe current challenges in order to guide future researchers who use this advanced application" (p. 2). In this backdrop, the purpose of the current chapter is to report on a cross-disciplinary university-engagement MM research of the character of CBPR for healthier and safer communities in Baltimore, Maryland. Recognizing the variation within CBPR practices and processes, the authors developed an MM design to capture the characteristics of the community for the health and safety outcomes and to propose interventions for the community needs. The chapter, first, familiarizes readers with CBPR, then provides details about the project's backdrop, mixed methods design, and finally, lessons learned and suggestions for future research to improve collaboration within scholars in different academic departments (social science, public health, and medicine) as well as with community leaders and residents. The chapter is written from the perspective of sharing academic empirical knowledge in order to apply the fruits of scholarships to pressing well-being community issues beyond the walls of academia.

Community-Based Participatory Research (CBPR)

By definition, community-based research refers to the "process that brings researchers and community members together to collaboratively conduct research on a problem of concern to the community" (Radda et al. 2003, p. 204). As opposed to traditional forms of research, community-based

studies are unique in that the emphasis is placed on the egalitarian collaboration between researchers (university faculty members), community leaders and residents, and the shared quest to address a community issue (e.g., Harris 2006; Israel et al. 1998).

CBPR is an effective way to study health disparities and the social determinates of health. Health disparities are defined by the National Institutes of Health as the difference in the incidence, prevalence, mortality, and burden of diseases and other adverse health conditions that exist among specific population groups (Braveman 2006; Dehlendorf, et al. 2010). Examples of health disparities include health outcome differences between racial/ethnic groups, men and women, people with different educational levels and/or levels of income, and between neighborhoods. Health disparities arise from inequities that exist between groups of people and they are shaped by differences in living conditions as well as social structures and processes (Commission on Social Determinants of Health 2008). These social structures (location of grocery stores and liquor stores, for example) can be systematic and the result of policies, practices, and social norms that tolerate or promote unfair or inequitable distribution of and/or access to resources, wealth, and social power.

The World Health Organization (WHO) notes that health disparities arise from social determinants of health. The WHO defines social determinates of health as "the conditions in which people are born, grow, live, work and age" and "are shaped by the distribution of money, power and resources at global, national and local levels" (WHO 2020). Social determinants are "the unfair and avoidable differences in health status seen within and between countries" (WHO 2020).

The differences between health disparities or inequities and social determinants of health are:

- Health disparities: unjust and avoidable. Stemming from inequitable distribution of social, economic, environmental, and political resources, policies, and practices.
- Social Determinants of Health: revolve around resources and opportunities. Access to (healthy) food, safe housing, healthcare, safe neighborhoods, high quality education, employment opportunities, and public transportation.

It is the limited access to and control over components of social determinants of health by particular groups that result in health disparities.

Table 6.1 Health disparities

System factors	*Patient factors*
Access to healthcare	Competing priorities
Primary care/physician shortage	Mental illness
Lack of insurance or inadequate insurance	Urban violence risk
Affordability of medications	Substance abuse disorder
Clinic hours	Cultural issues
Access to specialty care	Distrust of the healthcare system.

Source: authors

CBPR can be utilized to help recognize the existence of disparities that are amenable to intervention and for developing those interventions. The realities of social determinants are that there are both system factors and individual (people) factors that give rise to social determinants (Table 6.1).

Individualization of medicine and personal differences in care plans are the best approach to caring for individuals because they take into account social determinants. Sir William Osler[1] summed this concept very well with this statement, "it is much more important to know what sort a patient has a disease than what sort of a disease a patient has." Knowing about individuals, their likes and dislikes, as well as their particular social determinants, allow for treatment and management plans to include their personal preferences as well as addressing social determinants giving rise to improved health outcomes.

Using CBPR methods to address social determinants and health inequities or disparities has an ultimate goal: to improve outcomes. Addressing disparities to improve outcomes can be completed using quality improvement methods. This can be illustrated by the six fundamental aims of high-quality health care (Ballard et al. 2004). The acronym coined by Baylor Health Care System, STEEEP (Ballard 2013), summarizes these aims:

Safe: avoids injuries from care that is intended to provide help

Timely: reducing wait times and care delays for both those receiving care and those giving care

[1] The Canadian-born physician William Osler (1849–1919) was a renowned diagnostician and clinician. He was one of the pillars upon which the Johns Hopkins Hospital was constructed in 1888, where he later became professor of medicine at the medical school. Sir William Osler (2008) *The quotable Osler*, Philadelphia: American College of Physicians.

Effective: provide evidence-based medicine services and avoid services or practices that are not likely to be of benefit.
Efficient: avoiding wasteful practices, including wasting equipment and supplies or ideas, energy, and time.
Equitable: providing care with unvarying quality regardless of personal characteristics (for example, gender identity, race/ethnicity, geographic location, preferred language, or socioeconomic status).
Patient Centered: respectful and responsive to patient preferences, needs, and personal values.

CBPR as research method can help develop health care matters, such that a safer patient experience, that is, reliable, consistent, and responsive to individual patient needs. The resulting care is more integrated and available, providing required needs and services including preventive, primary, acute, and chronic care. Recipients of care benefit because care received is valuable and efficacious. Care delivery developed through CBPR processes generally address problems that are of concern to the community (Israel et al. 2005). Clinicians benefit from high-quality care with increased personal satisfaction, greater productivity, and by providing care that promotes improved health, increased longevity, decreased pain, and suffering.

CBPR can help inform healthcare systems about processes and can promote positive change (IOM 2001). The Institute of Medicine's book *Crossing the Quality Chasm* notes, "Quality problems occur typically not because of failure of goodwill, knowledge, effort or resources devoted to the health care, but because of fundamental shortcoming in the way healthcare is organized" (IOM 2001, p. 25). CBPR can inform health care systems how they need to change in order to better address the needs of their community. Thus, CBPR is a mechanism for healthcare quality improvement.

While healthcare nearly continually strives to improve, there are many different mechanisms for improvements. Some methods are internal to the healthcare system, and involve the community as research subjects. Universities who use these processes should be careful not to have their research subjects feel as if they are 'experiments.' Communities should not feel like they are part of an assessment without any direct benefit—evaluate and leave. There is a continuum of research involving community. Research can be performed on communities, in communities or with communities (NM Cares 2019). CBPR is research performed with the

community. CBPR is a partnership with communities and it promotes lasting engagement. The Kellogg Foundation defined CBPR as a collaborative approach to research that involves all partners equitably in every facet of the research process (Faridi et al. 2007). Fundamental to CBPR is the recognition that each partner has unique strengths that positively augment the research. CBPR in healthcare is where health system partners, with equal collaboration, with the healthcare institutions or universities and the community. CBPR can begin with a community concern or with a healthcare concern. Initial phases involve learning about individual lived experiences then progresses to use of mixed methods involving both qualitative and quantitative processes to tackle issues of inequity, inequality, injustice, and disparities. Key characteristics of CBPR include both:

Partnership: collaborative and equal in all aspects of research, including result dissemination, and
Mutual benefit: building on the strengths and resources of both the community and healthcare system.

The process in CBPR is equally important as the outcomes: co-learning with and from each other to lead to better results. The net effect is capacity building. Potter and Brough (2004) note that capacity building is the process by which community and organizations obtain and improve knowledge, attitudes, and skills, or develop tools, equipment, or other resources needed to deliver healthcare with the STEEEP aims. Capacity building allows healthcare systems to perform at a greater capacity (larger scale, increased efficiency, and/or greater impact). This is accomplished by focusing on problems of local relevance, mutually determined by both the community and the health care system. CBPR is a long-term commitment. The process itself is central to CBPR and involves a vested interest from both parties (Israel et al. 2005). This can be contrasted with research performed in the community (community-based research) or with symbolic inclusion (having a token member tangentially involved in research). CBPR is the process and not merely the research design. CBPR involves civil dialogue, open and bidirectional communication, transparent processes, full and shared accountability and above all, balanced participation. Communities and universities collaboratively develop the problem, hypothesis, research questions, methods, interpretation and analysis of results, and dissemination of results including publication (Shepard et al. 2002). CBPR also involves mutually agreed upon ethical standards;

institutions will have an institutional review board (IRB) and community will have an approval process. CBPR generally has a social change focus, affecting social determinants to diminish health disparities. Because of the partnerships that are developed through the CBPR process, outcomes are generally sustainable.

The next section provides the backdrop of the Johns Hopkins University's (JHU) university-community engagement project: "Building Community Engagement and Development in Greektown, Baltimore: A Data-based Approach" funded by JHU and designed to explore how public perception regarding quality of life (safety, community resilience, and health) in an inner-city neighborhood, can inform strategies of nongovernmental organizations in community engagement and development.

University-Community Engagement Research as an Application of CBPR at JHU

University-community engagement research reflects applied research and not traditional for possible publications in tier one journals and might well be a (de)motivator for junior faculty and those on tenure track, especially in research intensive universities. Thus, faculty to get involved in such projects need encouragement from their respective universities (Borkoski & Prosser in this book). Inspiration for this project arose from one of the authors' course "Leadership and Community Development" assignments and discussions with her students at JHU. Students were diverse—adult return professionals in law enforcement—coming mostly from the inner cities of Baltimore and Washington D.C. Students had to prepare "a community development project" of a community of their choice. They had to develop an understanding about many community issues facing society today. Students as well as faculty as citizens and leaders/citizens have a responsibility to understand and engage with social issues in their communities. Thus, one of the foundational components of becoming an advocate/active citizen is to learn and understand a social issue in depth and how it is impacting the community. Students, in order to propose "a community development project," had to collect data and analyze issues related to housing, poverty, race, ethnicity, nativity, language, heath issues, and public benefits, among other issues. Students were advised also to use other resources (i.e., newspapers, public data, personal information, etc.) to define the strengths and weaknesses of the selected neighborhood,

selected by zip code. The paper topic must be approved by the professor before students could start it.

However, moving from an innovative class project to a real university-engagement research project requires additional encouragement. This time a call for an internal university applied research seed grant was the "window of opportunity." However, in order to submit a grant proposal, faculty had to follow the rules of the funder: the project would need to focus on community issues in Baltimore, demonstrate collaboration among different schools (cross-disciplinary) within JHU, and also had to include a city (community-based organization) partner. In this way, faculty interested in university-engagement research needed to be innovative and flexible. As a principal investigator, one of the authors had to create a team in order to submit a grant proposal. One paragraph with the request "collaborators are needed for a community development project in Baltimore focus on health issues and wellbeing" was sent to JHU's School of Medicine director for internal distribution. In less than two hours, the author received replies from three faculty from the School of Medicine interested to meet and discuss further the project's goals. After communicaiton with the those three facuoty finaly one matched the rpusporse of the project and became the projects Co-Principal Investigator. Then it was obvious that the proposal "cried" for a Statistician, and this time the best option was a faculty from the Bloomberg's School of Public Health at JHU. One element was missing: a city partner. In such a case, we had to define a promising city partner (community-based organizations from Baltimore's communities) able to help and support the entire project from the development to execution and dissemination of the knowledge. In university-community engagement projects, the partnerships are very important and crucial factors. As a team, we submitted a grant proposal, however, without success. For more than two years, and changing city-partners, the team revised (taking into consideration comments) their proposals and resubmitted for a possible grant. University- community engagement research needs to satisfy reviewers and provide details in a length requested by the funders. This exercise was a learning opportunity with a "happy end" as the team was awarded more than one grant for different social issues projects. This story suggests that faculty interested in university-community engagement research need to demonstrate resilience, flexibility, and willingness to adopt changes. Also, they need to be creative to define cross-disciplinary researchers as well as community partners and, most importantly, to examine social issues to improve

community needs. The guiding questions to considering in the design of this student project were: What is the social issue/s? What is our response as leaders/citizens? How do we get involved? Students' projects mostly capture safety issues focused on various communities within Baltimore, also were areas that suggested health issues and disparities "data talk."

Project Design per Grant Application

An increasing number of studies indicate that community engagement is a critical component of successful evidence-based interventions (Baker et al. 2012; Rice 1993; Viswanathan et al. 2004). Other authors have published research reporting the successful application of CBPR in health research (Baker et al. 2012; Berkley-Patton et al. 2010; Henderson 2010). Our project has taken one more step and coupled health with social (wellbeing) research. As efforts are now advancing to include a cross-disciplinary approach in working with communities in creating interventions targeting multiple aspects of the community, including both safety and health, for example. In this light, there is an ongoing trial designed to increase walking safety with the long-term aim of improved cardiovascular outcomes (Wilson et al. 2010; Wilson et al. 2013). Such an approach involves early interventions targeted at increasing the knowledge and engagement of community leaders, parents, and community members, particularly marginalized families. The lack of CBPR can, in essence, lead to societal issues such as physical illness, mental distress, or even educational obstacles (Toumbourou and Gregg 2002). Additionally, parents and guardians can be the cornerstone of efforts to foster systemic health and safety outcomes embedded with resilient factors for children at early ages.

The goal was to obtain characteristics of quality of life in Baltimore, specifically in Greektown, by working with a cross-disciplinary and community partnering team to propose interventions that may improve safety, resilience, and health in the community. The overarching research question that guides this research project was: To what extent do community leaders and residents shape actions and policies about quality of life in their communities (Greektown, Baltimore)? From the inception of the research purpose to the implications of the research endeavor, CBPR participants live up to the intent of mutual collaboration by actively working with researchers for social change. Because CBPR is nested in true-to-life environments, its results—discussions, critiques, and writings about methods, ethics, and outcomes—inform us not only about the health and illness

features, but also of the resiliencies and strengths of the natural and built environments where people live, work, and play. Knowing *what* to ideally expect of CBPR begs the question of *how* to do it.

The grant proposal designed for over the course of 12 months included four phases:

Phase 1 (Three Months) University-Community Engagement Research, Partnership, Survey Design In the beginning, the research team identified the city partner, then together invited mostly community leaders from faith-based organizations and other board members from other community organizations in Greektown to identify potential community leaders/experts from the Greektown community. In order to identify leaders, the team (academics and city partner) composed a master list of potential leaders, then we invited 15–20 members to participate in a collaborative meeting at St. Nicholas church facilities. The purpose of these meetings was mainly to discuss community issues in order to design an appropriate questionnaire with indicators targeting the desired qualitative information of the community leaders/experts and team members. These procedures also used to engage community members in the research process and develop a strong relationship and trust between JHU researchers and community members.

Phase 2 (Five Months) Data Collection Community questionnaires distributed and collected via community partners' effort identified during **Phase 1**. The team used a hard copy survey tool; provided an envelope; and leaders returned to the research team the completed questionnaires.

Phase 3 (Three Months) Data Analysis The data will be assumed to arise from a design with the following structure. First, each resident in the community will be assumed to be more closely accessible by one leader, say L, as shown in the Table 6.2. Second, because not all residents respond to the survey, each resident is assumed to have a probability, say $e_{L,i}$ of responding, which will be estimated from easily obtainable neighborhood and other factors. Third, for all residents accessible by leader L and with common sampling probability, those who responded will be assumed to have similar distribution of predictors and outcomes as those who did not respond.

Table 6.2 Analysis plan

Leader id	*Resident id*	*Sampling probab*	*Predictors*	*Outcomes*
L	I	$e_{L,i}$	$X_{L,i}$	$Y_{L,i}$

Source: authors

Subgoals of the analysis will be to estimate how outcomes depend on predictors in the full community, namely, E $(Y_{L,j}|X_{L,I})$. To do this based on the above design and assumptions, we can regress the outcomes on the covariates of the responding residents, after weighting by the inverse of the sampling probability, and using a Generalized Estimation Equation (Liang and Zeger 1986), with leader as the cluster/stratum.

The questionnaire included also open-ended questions. The plan is to analyze qualitative. The team will look for themes about safety and wellbeing. This action can be considered as a more inductive approach which "seeks to discover and understand a phenomenon, a process or the perspectives and worldviews of the people involved" (Caelli et al. 2003, p. 3). Thematic analysis is a search for issues that emerge as being important to the description of the phenomenon (Daly et al. 1997). Boyatzis (1998, p. 161) defined a theme as, "a pattern in the information that at minimum describes and organizes the possible observations and at maximum interprets aspects of the phenomenon." The process involves the identification of themes through "careful reading and re-reading of the data" (Rice and Ezzy 1999, p. 258), while Fereday and Muir-Cochrane (2006, p. 82) considered it "a form of pattern recognition within the data, where emerging themes become the categories for analysis." The team will develop codes and then will analyze quantitatively.

Phase 4 (1 Month) Dissemination Shepard et al. (2002) suggest that the findings of CBPR can be successfully communicated to community residents, media, and policymakers. Such events can take place in the form of community meetings within the community organizations, local conferences, or workshops involving community partners. In this project, the research team will develop a report proposing specific, evidence-based intervention related to health issues and safety during meetings that will take place at St. Nicholas facilities. Those meetings will include also lectures about health issues and safety. The community leaders will decide how they will use the knowledge derived from the project.

Mixed Methods Design

"Building community engagement and development in Greektown, Baltimore" is a university-community engagement multistage sequential mixed methods (MM) study of CBPR (Papadimitriou et al. in preparation). Strand et al. (2003) underscore the rationale for using both qualitative and quantitative data in community-based studies. For those used to being quantitative or qualitative researchers, community-based research is both and neither. In the real world, philosophical differences over whether cold statistics or richly detailed stories provide better information are irrelevant. What matters is what information is needed to contribute to the social change effort, and this often calls for multiple methods of data collection. The project is not a static one, as each phase used a different approach that related to the aim and the mission of the project. This MM study begins with *Forming a CBPR partnership* stage, then involves a sequential qualitative exploratory design (Phase 1 University-community engagement, project partnership, survey design), and it leads to the *Dissemination* stage. This design suggests a connection of MM research with several of the Israel et al.'s (2013) core phases of CBPR, specifically:

1) *Forming a CBPR partnership*
   This stage of the MM project was related to Israel et al.'s (2013) core phase *Forming a CBPR partnership*. As an initiative that embraces university-community engagement research to examine community social issues, defined by the university's public mission, it intends to help community leaders to better understand the challenges faced by their community and design evidence-based interventions to address those needs. This assessment is done with the long-term aim of creating a cross-disciplinary and collaborative approach among scholars from various disciplines, such as organizational leadership (School of Education), healthcare professionals (School of Medicine), statisticians (Bloomberg School of Public Health), in cooperation with neighborhood (St. Nicholas, Greektown) community leaders to establish interventions geared toward improving safety and health outcomes.
2) *Designing and conducting research*
   This stage of the MM study was a combination of Israel et al.'s (2013) core phases of CBPR such as *Assessing community strengths and dynamics*, *Identifying Priority Local Health Concerns and Research Questions*, *Designing and Conducting Etiologic, Intervention, and/or Policy Research.*

At this stage in the MM design and during the community meetings, the team used a concept mapping approach (Burke et al. 2005). The guiding questions to consider during the meeting with community leaders were: What is the social issue? What is the root cause(s) of this issue? Why is this an important issue to address? How does it impact our community? Community leaders and research team underscored areas relevant to their community (Greektown) as related to quality of life, transportation, neighborhood strengths and weaknesses, public safety, and satisfaction with local criminal justice agencies. For the health and resilience component, the team discussed with the community leaders surveys used in health care settings that measure homelessness/unstable housing, personal perceptions of health, depression, pain, drug, alcohol, and tobacco use; and interactions with the health care system. Community feedback helped to develop the survey tool. The team piloted the survey with the leaders and residents. Findings from this stage were used to build the final quantitative and open-ended survey that was distributed among Greektown residents with the help of the community leaders. The research project was approved by the Institutional Review Board at JHU. Paper-based survey executed until February 2020.

3) *Dissemination*

This stage of the MM study originally related to Israel et al.'s (2013) core phase of CBPR *Disseminating and Translating Research Findings*. This stage represents an ongoing process, as the team will suggest interventions to the community. The team will share finding also with the university. The nature of the university-community engagement research requires such actions. Moreover, the team will publish the results in an academic journal (Papadimitriou et al. in preparation), in addition to a report for the community faith-based organization. Sharing the findings of such study, the authors beleive will influence future interventions and might will bring policy change. The community leaders will decide their future plans, however, the team is expected to support the leaders to decide what intervention strategy may be appropriate, help them to submit grant proposals for interventions, which is usually expensive, and also help with the selected interventions. Thus, the extension of the MM study will have to follow Israel et al.'s (2013) core phase of CBPR the *Designing and Conducting Etiologic, Intervention, and/or Policy Research*. The plan will be to use qualitative and quantitative data to develop community engagement and capacity building among university and community partners.

The overall MM design demonstrates the complexity in a university-community engagement research and suggests the importance of intersecting MM in CBPR for the community's wellbeing. Papadimitriou et al.'s (in preparation) multistage and sequential MM design supports Johnson and Onwuegbuzie's (2004, p. 20) statement of mixed methods being "an expansive and creative form of research."

Lessons Learned and Suggestions for Future Research

In this chapter, the authors acknowledge that the methodology of a university-community engagement research needs to be shared. Thus, academics involved in such activities need to maximize the yield, that is the scientific knowledge gained from such studies. First, from the university-community engagement perspectives, and in order to develop studies that contribute to the university's public mission, universities and colleges need to define ways to motivate and engage their faculty in community projects. Literature reveals that engaging faculty in such projects is an enduring challenge at many higher education institutions (Shields 2015). At research intensive universities, promotion and tenure might suggest basic research outcomes instead of applied research (Kaplan 2015). This challenge is covered by Borkoski and Prosser's study (in this book). The project included in this chapter suggests that a "top-down" effort is an ingredient to support the recipe for a meaningful university-community engagement research. In this particular case, in order to make an impact on Baltimore's communities, JHU has developed seed grants focused on community development, organized workshops to match academics with city-partners, developed multidisciplinary (or cross-disciplinary or interdisciplinary) awards, and other university-community-engagement support actions (i.e., support to organize conferences, etc.).

University-community engagement research projects need also to satisfy requirements set forth by grant reviewers and provide details requested by funders. There is a need to explain in detail all aspects of a study in order to familiarize these reviewers who, in most cases, are university faculty and not necessarily knowledgeable about community engagement research. Thus, faculty's responsibility is to explain why such projects are important and should not be taken for granted, which means that such explanations should be included in the research narrative. Concurrently,

universities interested in university-community engagement research projects should promote the work of their faculty by providing administrative support, that is, grant writing feedback, budget development, help with Biosketches, and other relevant practices in order to help them with grant proposals and the completion of the sponsored programs.

The list for suggestions of a meaningful university-community engagement research is not an exhaustive one, as there is always room for improvement. However, one issue that is worth mentioning is that the sustainability of such research projects ends when the sponsoring grant ends. Universities might need to develop strategies in a way that projects can be sustained. In this enlighten, publications focus on practices related to how university-community engagement research demonstrate sustainability are needed once the grants end.

University-community engagement research is a complex phenomenon. CBPR is a form of collaborative university-community engagement and, as such, provides the community with information necessary to enact changes for community needs and/or wellbeing. The research team combined the extended community contact and depth of qualitative research with the breadth of quantitative work. It used a multiple perspective survey tool that combined quality of life, safety, community resiliency, and health components. However, developing trust, cooperation, and readiness to devote the time and energy for participation is a challenge that researchers need to take into consideration for a successful project. Community members may lack time, resources, or motivation. Constant and effortless communication is a challenge in itself, but this can be compounded by language proficiency gaps. Scientific or specialized language may not be understood by community partners, or the community could be non-English speaking. Additionally, there can be logistic challenges. Transportation to community from institution or to institution from the community may be difficult. The community may lack or have limited transportation, or parking at the institution may be prohibited, difficult, or expensive. Additionally, determining which social determinant to be addressed is complex. Many issues are interrelated, such as housing and unemployment. Lastly, balanced involvement of the community may require significant training of community members to promote meaningful and equitable participation. Building and maintaining trust both between the university and community as well as at times within community partners are a substantial challenge (Israel et al. 1998; Minkler 2005). The current project had overcome the challenges most often faced in

CBPR by following guiding principles such as: (a) collaboration, (b) validation of the knowledge of community members and the multiple ways of collecting and distributing information, and (c) “social action and social change for the purpose of achieving social justice” suggested by Strand et al. (2003, p. 8).

Success with CBPR can be obtained by listening to the community. The purpose of CBPR is represented by process improvement and positive outcomes. The goal is to add value and make a positive difference. In the current case, the meetings took place at St. Nicolas facilities. Faith-based organization facilities are essential for such meetings as community leaders and residents feel secure. Quality community partnership development takes time. Faculty need to develop trust and collaboration with communities not only for the purpose of the project. Recognizing the community as a unit of identity, CBPR builds on the strengths and the social capital of the community by emphasizing the crucial aspect of community-defined social and health problems. Researchers need to define the unit of analysis and take into consideration available data for their community of studies. In the current case, the team used national data related to the community characteristics as well as health issues related to the specific community. If projects involve multigeneration participants, it will be ideal for conversations to occur in two languages, as it is very important to use the local language and translations into English. In this study, the researchers used questionnaires in English. However, it is important to translate into local language. Researchers also need to take into consideration the technique of data collection. Questions approved by IRB in online questionnaires or in medical facilities might not be applicable for paper-based questionnaires that were collected via community leaders. In such a case, the review committee (IRB) might have to eliminate sensitive questions.

Another issue of consideration is unexpected events. In this case, the team was expected to complete data collection in March 2020. However, external pressures like the covid-19 pandemic stalled this project, and all projects dealing with human subject research. Researchers in such a situation need to define alternatives avenues to complete their projects in consultation with the funders and honest communication with community leaders. In the current case, the project was extended, by submitting an amendment to use multiple data collection techniques (online and possible focus groups) beyond paper-based survey. Until February 2020, the team collected 80 questionnaires and it expects to complete the data collection and analysis in the fall of 2020. In such a case, the research team

needs to provide an additional perspective by comparing the data collected pre covid-19 pandemic with the post pandemic period.

As the aim of CBPR is to have all contributors benefit from their involvement, participation in the research process and dissemination of its outcomes should be transformative for both community members and researchers (academics). This is a win-win situation where faculty from various academic departments engage with community members. Researchers and community members join in a process of co-learning and, under these circumstances, can enhance collective professional and personal development. In the current case, the research team expects the meetings for sharing the findings to take place in the fall of 2020, either in person or by using online meetings with the community and in consultation with St. Nicholas church.

It is also important for researchers to clearly articulate their research design and procedures, and be prepared to "educate" reviewers on mixing approaches as they relate to conclusions about their topic. In this way, it will help others to understand the research design as well as contribute to the MM of a CBPR literature (Papadimitriou et al. in preparation). There is an urgent need for effective methods to facilitate adoption, dissemination, and implementation of research findings to benefit the population's health, safety, and well-being. Slow adoption rates and delays in translating evidence-based results to community action, call for better ways to bridge these gaps. Therefore, CBPR could reflect university-community engagement actions, and as such, aim to ensure universities achieve a public good and utilize their significant resources to help local, national, and also international problems and needs. Sharing challenges and methodological concerns of MM in CBPR are very useful resources.

Thus, this chapter is written to provide methodological issues and challenges with the hope that it will be useful to readers and suggests "beyond rhetoric" actions of a university-community engagement research.

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