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Faculty Beliefs, Perceptions, and Level of Community Involvement in Their Research: A Survey at One Urban Academic Institution

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Abstract

Health researchers are increasingly interested in how best to engage communities in their health-related research studies. To help determine how researchers have interacted with community members in their research, we conducted a survey of full-time faculty from the Johns Hopkins Medical Institutions regarding researchers' beliefs and experiences with community-based research. Approximately 41% of respondents who conducted human subject studies had enrolled local residents in their research. Researchers whose studies were based in the surrounding community were significantly more likely to involve community members in all stages of their research (e.g., selection of the problem, project planning, data collection, interpretation and dissemination of results, or developing an intervention) than were faculty whose studies enrolled community members as research participants but whose studies were not set in the community. Over 90% of all faculty respondents agree that community involvement improves the relevance of their research, although almost 60% had not done so. Most faculty value community involvement, but they want more institutional support for such activities and they seek better skills to involve community. Few studies have surveyed researchers who enroll community members as research participants to document practices regarding community involvement in the research process. Given that the majority (73.6%) of faculty responded that they intend to include local residents in their upcoming studies, future research to evaluate interventions designed to facilitate community involvement, especially in the inner city, would help stakeholders identify best practices for involving and engaging communities in health research.

Keywords

community-based participatory research; participatory research; ethics; academic-community partnerships; survey; faculty views

There is much current interest in incorporating the input and perspective of community members into research studies that target particular communities. Both federal funding and NIH Clinical Translational and Science Awards (CTSA) now require community engagement as part of a large-scale academic research infrastructure—a clear recognition of the new role that community engagement has, or should have, in at least some types of academic research. Many approaches have been used to involve community partners into the research process. While *community* is traditionally viewed in the domain of public health, clinicians (Jones & Well, 2007) more broadly are starting to incorporate strategies to involve community input and perspective in their research, due, in part, to the potential to improve research recruitment, relevance, and quality (Freeman et al., 2006; Viswanathan et al., 2006).

Community-based participatory research (CBPR) is perhaps the most widely recognized approach for engaging communities in research (Travers, 1997; Sullivan et al., 2001; O'Fallon et al., 2003; Wallerstein & Duran, 2006). In reality, the level of involvement falls on a spectrum of strategies to involve and engage communities, ranging from collaborative development of the research question and study priorities, to hiring community staff and developing community advisory boards, to involving community in dissemination activities. Recognizing that increased attention to community involvement increases the quality, recruitment, and retention in research, the ethics literature has recently been devoting increased attention to community involvement in research (Minkler, 2004; Chen et al., 2006; Bastida et al., 2010). Community engagement can be seen as a means to put into action ethical duties of respect, reducing harm, and fairness.

The principles of CBPR (Israel et al., 1998) help create an ethically rigorous approach to community-based research (Travers, 1997). Its guiding principles seek to incorporate community at all levels of research (Israel et al., 1998) and to treat communities with respect, build capacity, and improve health outcomes (Buchanan, Miller, & Wallerstein, 2007). These principles become especially pertinent for inner-city communities in which socioeconomic and health inequities may influence perceived power imbalances, and exacerbate the typically tenuous relations between academic and community partners (Fleishman, Levin, & Meekin, 2001; Goldberg-Freeman et al., 2007).

However, community-academic partnerships can be difficult, and there are many reports exploring the dynamics of such partnerships. For example, a national survey of academic health science faculty from eight health professional schools and universities involved in community-based research found that faculty believed strong institutional leadership, familiarity with community-based organizations, and positive public and local community perceptions about their academic health research center determined whether a university became significantly involved in community-based research (Seifer & Calleson, 2004). Their research also showed that CBPR, in particular, was most likely to happen when there were long-term community-academic relationships, where the importance of CBPR in tenure and promotion policies was recognized, and where funding existed for community-based research.

While Seifer's work is the only systematic survey of academic researchers' perspectives of which we are aware, several anecdotal accounts from single institutions report more

informally on their own collaborations with surrounding communities. Such researchers have made recommendations to facilitate CBPR, but have also described academic challenges such as community distrust, institutional constraints, competing goals, and insufficient funding (Chavez et al., 2003; Israel et al., 2005; Yonas et al., 2006; Seifer, 2006; Nyden, 2003; Calleson, Seifer, & Maurana, 2002; Steiner et al., 2005; Kennedy et al., 2009). In addition, some literature exists documenting the challenges from community members' perspective in forming academic-community collaborations, such as complexities of sharing power, and the lack of sustainability and dissemination once the project is completed (Ahmed et al., 2004; Plumb, Price, & Kavanaugh-Lynch, 2004; Lantz et al., 2001; Wolff & Maurana, 2001; Butterfoss, 2006; Goldberg-Freeman et al., 2007).

Absent from the literature, however, are systematic assessments of how researchers actually involve community in their research, what works, what doesn't, and how the nature of the research influences how communities are involved. Further, existing articles tend to focus on CBPR itself—a particular approach—rather than on a broader spectrum of strategies to engage community members in academic health research. To address these gaps in the literature, we conducted a survey with faculty researchers from one large academic medical institution to determine the degree to which community residents are recruited to be part of that medical institution's health studies and, when they are, whether and how community members or organizations are engaged or explicitly involved in any part of the research. This survey was conducted as one of several activities of an academic-community partnership created in 2003 with funding from the National Institute of Environmental Health Sciences. This "Environmental Justice Partnership" (EJP) includes academic faculty and staff from the Johns Hopkins Medical Institutions (JHMI) and a community board, comprised of residents, leaders, and representatives of community-based organizations from the surrounding community of East Baltimore. The EJP sought to document both community and faculty perspectives and experiences of working together (Goldberg-Freeman et al., 2007; Kennedy et al., 2009). This publication documents the results of one of these activities, a quantitative survey with JHMI faculty on their experiences working in and with the local community in their academic health research.

Methods

Setting

This research was conducted in East Baltimore, Maryland, by the Environmental Justice Partnership (EJP), which was funded by the National Institute of Environmental Health Sciences (NIEHS) as part of an initiative to create academic-community partnerships around health research. Despite the proximity to Johns Hopkins Medical Institution (JHMI), a world-renowned hospital and the largest recipient of NIH funding, East Baltimore is an underserved community that exhibits some of the worst rates of morbidity and mortality in the U.S. (Fox et al., 2004; Baltimore Neighborhood Indicators Alliance, 2004; Farfel et al., 2003; Maryland Department of the Environment Childhood Lead Registry, 2000; JHSPH Center for Injury Research and Policy, 1999). Since its inception in January 2003, the EJP has sought to bring together Johns Hopkins researchers and East Baltimore community stakeholders for sustained dialogue and partnership building and to increase communication about and dissemination of research results to the local communities.

Sample

Since there is no existing roster of faculty who enroll residents from the surrounding East Baltimore community in their research, this survey targeted all full-time faculty from the Johns Hopkins Schools of Medicine, Nursing, and Public Health, and from the Kennedy Krieger Institute, a nonprofit independent affiliate of Johns Hopkins specializing in pediatric

disorders of the brain and spinal cord. Faculty were considered eligible if they worked full-time and if they conducted research. Specifically, there were two screening/eligibility questions included at the beginning of the survey: (1) Do you have a full-time faculty position at either the School of Nursing, Public Health or Medicine, or the Kennedy Krieger Institute? (2) Have you ever conducted research at Johns Hopkins either as an investigator or as a member of a research team? Only faculty who answered “yes” to both of these questions were asked to continue and complete the survey. For purposes of this analysis, respondents also had to reply within the survey that the research they conducted included human subjects.

Faculty who responded that their research included human subjects were asked if they had ever involved East Baltimore residents in their research. Those who answered affirmatively were then asked whether the study specifically targeted East Baltimore residents or whether local residents were included incidentally in research projects that did not specifically target East Baltimoreans. For this manuscript, only faculty who reported that they had ever enrolled East Baltimore residents in their human subjects research, either explicitly or incidentally, were included in the sample.

Recruitment

The survey was conducted from March to May 2005. Participants were recruited via mass e-mail mailings. Johns Hopkins administrators who manage faculty list-servs for each of the four participating Johns Hopkins Schools and Divisions were asked to send our invitational e-mail message to all full-time faculty explaining the purpose of the study, the nature of the questions, and voluntariness of participation. According to administrators from the four divisions, 2,930 faculty received recruitment e-mails that directed them to a link to the web-based survey tool administered through SurveyMonkey.com (2005). Three reminder e-mails were sent at weeks 2, 4, and 6. The third reminder came from the relevant Dean’s office for each Division and described the importance of the survey to the relevant School or Division for knowing more about research in the neighboring community.

Survey

We developed a cross-sectional, anonymous, web-based survey to be completed by eligible faculty. The survey included 35 multiple-choice questions, designed to capture faculty members’ experiences and beliefs regarding the conduct of research in the neighboring urban community of East Baltimore. In addition, this survey sought to compare the experiences and beliefs of researchers whose studies were *set* in the community and targeted to local residents (“community-based”) with those whose studies enrolled local residents but were not set in the community (“institution-based”). Specifically, we wanted to: (1) determine the degree to which researchers have included residents of the surrounding urban communities as participants in their studies; (2) document in what ways researchers have involved local residents and/or community stakeholders in various stages of the research process and whether this varied by whether studies were community-based versus institution-based; (3) document researchers’ beliefs about community involvement and determine whether this varied by whether or not studies were community-based; and (4) identify faculty researchers’ perceptions about what might facilitate community involvement in research.

As such, the survey included questions about study design, residents’ involvement at various stages of the research, researchers’ experiences in the surrounding community, and beliefs about community involvement in research. Further, in response to concerns sometimes heard anecdotally, we asked questions examining whether researchers felt safe walking in the surrounding community and/or felt helpless when they saw conditions of the local

community. Likert scale items were used for belief items. The draft instruments were reviewed by members of the EJP community board, revised, and then additionally reviewed and/or pilot tested with three additional faculty. This study was approved by the Institutional Review Board of the Johns Hopkins Bloomberg School of Public Health.

Analysis

Data were exported from Survey Monkey to an Excel database for data cleaning. For this manuscript, only respondents who reported that they had ever involved East Baltimore residents in their human subjects research were included in the sample.

Simple frequencies are presented for the descriptive study aims. For several analytic aims, respondents who had conducted “community-based” research were compared to respondents whose “institution-based” research had included local residents, but whose research was not set in the community and did not target local residents (e.g., clinical trial in a hospital setting that incidentally included local residents). Bivariate chi-square analyses were used to compare experiences, beliefs, and practices between these two groups. A small number of questions were asked uniquely of each group, resulting in some analyses with different numbers of respondents.

For all analyses, independent categorical variables with multiple-response options such as years associated with the institution, age, and position were collapsed into meaningful categories. In addition, Likert scale questions were collapsed into disagree and agree. The data were analyzed using STATA 8. An alpha of 0.05 was considered statistically significant. Community partners of the Environmental Justice Partnership were presented with initial findings and asked to review and provide comments on this manuscript.

Results

Of the e-mails sent to 2,930 faculty, 715 (24%) respondents completed the survey. Those who were not full-time faculty (36), who did not conduct any research (39), who did not conduct human subjects research (164), or whose research did not include local community residents (185) were excluded from the analysis. Thus, a total of 291 respondents had ever conducted human research that included local residents. These 291 respondents form the sample for this analysis.

These respondents were most likely to be from the School of Medicine (62.9%), followed by the School of Public Health (25.8%), the School of Nursing (7.6%), and the Kennedy Krieger Institute (3.8%), which reflects the ordering by size (from largest to smallest) of the four Divisions and Schools. Most respondents were white (87.9%) and slightly more than half were men (56.1%). The majority (60.8%) had been associated with JHMI for 10 years or more, as part of their training, as an employee, or both. (See Table 1.) Statistics are not available on the proportion of JHMI faculty, overall, who conduct human subjects research involving local residents, so we are unable to determine the degree to which our sample is generalizable to the population of interest. The following sections highlight themes of interest for this study.

Community Involvement in Research

Of the 291 respondents who ever included local residents in their research, 40.9% reported collaborating with local community leaders or organizations. Those whose research was community-based were significantly more likely to report collaborating with local community leaders or organizations than those whose research was institution-based (82.8% vs. 30.5%, $p < .001$). Approximately one-third of the 291 respondents reported hiring local residents as research staff (38.2%), although, again, faculty whose research was community-

based were significantly more likely to have reported hiring local residents as research staff than those whose research was institution-based (65.5% vs. 31.6%, $p < .001$).

Faculty were then asked at which stages of research planning, execution, or analysis, if any, they had involved local residents in their research (Table 2). Overall, faculty were most likely to involve local residents in recruiting subjects (49.3%) and were least likely to involve local residents in helping to analyze data (7.0%). Researchers whose studies were community-based were significantly more likely to have included community members in all stages of the research process than faculty whose studies were institution-based. For example, 68.4% of faculty conducting community-based research reported involving local residents or organizations in designing the study methods or procedures, compared with 19.2% of faculty conducting institution-based research. Faculty conducting community-based research also were more than four times as likely to have included local residents and/or organizations in disseminating their findings (49.2% vs. 12.2%, $p < 0.001$).

Faculty Perceptions or Beliefs about Community Involvement and the Community Generally

Overall, 85.3% of respondents agreed that involving community improves the quality of research, and 90.9% overall agreed that community involvement improves the relevance of research (Table 3). Researchers did not differ in their likelihood of agreeing with these statements based on whether their research was community-based or institution-based. However, respondents whose research was community-based tended to be more likely to agree that local residents have knowledge and skills that can enhance academic research (96.3% vs. 80.8%, $p < 0.006$) and to agree that research can make a difference in the local community (92.3% vs. 83.5%, $p < 0.09$); the vast majority of both groups, however, agreed with these statements.

Faculty also were asked their views and beliefs about East Baltimore more generally. Faculty whose research was community-based were significantly more likely to agree that they felt safe walking in the community (44.4% vs. 30.4%, $p < 0.048$) and were significantly less likely to feel helpless when seeing conditions in the local community (48.2% vs. 63.4%, $p < 0.040$). Further, faculty who felt safe walking in the community and faculty who did *not* feel helpless when seeing local conditions were significantly more likely to have collaborated with community members, to have involved community members in various stages of the study design and conduct, to have believed community involvement improves both the relevance and the quality of academic research, and to have believed that research can make a difference in the local community. For example, researchers who felt safe walking in the community were significantly more likely to have collaborated with local leaders to conduct their research compared with those who did not feel safe walking in the local community (54.4% vs. 35%, $p < .002$). Relatedly, those who said they feel helpless when seeing conditions of the local community were significantly less likely to have collaborated with local leaders (33.3% vs. 53.6%, $p < .001$). Those who said they felt safe walking in the local community also were significantly more likely to have involved community members in designing study methods (44.0% vs. 21.4%, $p < .001$) and those who felt helpless seeing local conditions were significantly less likely to have involved community members in designing study methods (22.4% vs. 38.9%, $p < .003$).

Faculty Perceptions of Institutional Involvement in the Local Community

Almost all respondents (96.8%) agreed that the institution should be more involved in the community. Respondents whose research was community-based, however, were significantly more likely than those whose research was institution-based to believe that

community leaders are open to more institutional involvement in the local community (87.0% vs. 63.4%, $p = .001$).

Facilitators of Community Involvement in Research

Faculty agreed that a variety of factors could increase community involvement in research (Table 4). Factors recommended most frequently were having more grant and institutional funding to support community involvement (57.7%) and having more information on community organizations (51.5%). Respondents whose research was community-based were significantly more likely than faculty whose studies were institution-based to agree that reducing other academic responsibilities, increasing their funding, and receiving more information on community-based organizations, resources, and contacts would increase their community involvement.

The majority of all respondents said they intended to enroll local residents in their future research (73.6%), and the majority also reported being interested in gaining more skills for involving communities in their research (74.0%).

Discussion

This survey is the first, of which we are aware, to document how and to what degree researchers, from different fields and disciplines who enrolled community residents in their study samples, involved community stakeholders in research planning, execution, analysis, or dissemination. Specifically, this survey attempted to document the practices and attitudes of several hundred faculty from a large, academic, urban medical center regarding their work in and with the urban community in which they are situated. This research complements our previous work in which interviews and focus groups were conducted with community stakeholders regarding experiences and attitudes about academic research and academic-community partnerships (Goldberg-Freeman et al., 2007), and in which qualitative interviews were conducted with selected faculty about best practices and challenges in conducting community-based research (Kennedy et al., 2009).

Approximately 40% of full-time faculty respondents who conducted human subjects research had ever enrolled local residents in their research. Among these faculty, 20% reported that their research was community-based; the remaining 80% conducted institution-based research that did not specifically target local residents. Faculty whose studies were community-based were significantly more likely than those whose studies were institution-based to have collaborated with local leaders or organizations, hired local residents on their research team, and involved community at multiple stages of their projects. While perhaps not surprising that researchers who worked directly in the local community more regularly involved community, not previously known was the magnitude of this difference, and the stages of the research process in which community were most likely to be involved. Faculty whose research was community-based also reported more positive beliefs about community involvement, felt safer walking through the local community, and were less likely to feel helpless about local conditions. Because this is a cross-sectional study, we do not know the direction of these associations. That is, we do not know whether a history of community involvement *led* to researchers feeling safer walking in the local community or whether, simply, a higher baseline feeling of safety allowed researchers to more easily reach out and collaborate. Sadly, perhaps the long history of distrust in academic-community relations contributed to the finding that, even among those who conduct community-based research, fewer than half felt safe walking in the local community.

Undoubtedly, the stark contrast between prestigious healthcare institutions coexisting next to underserved communities can cause conflicts for any person who walks the neighborhood

(Fleishman & Barondess, 2004). This complex dynamic exists in several such settings in the U.S. (Foreman, 1994; Foreman, 2004), and JHMI in East Baltimore is but one example. Indeed, there exists a historical distrust of the institution, and in particular the research it conducts, even though most of the residents receive their health care at JHMI (Windham, 2004). This long-standing distrust is multifactorial (Goldberg-Freeman et al., 2007), and it may be exacerbated by the vast socioeconomic differences between JHMI and the East Baltimore community. Most of our faculty respondents were white (87.9%), compared to a predominately African American demographic (94%) in the surrounding East Baltimore community (Census 2000). Furthermore, nationwide surveys show that most faculty salaries at academic teaching institutions range from \$75,000 to \$100,000 (Studer-Ellis, 2000; Lewin, 2010) compared to a median household income of \$15,493 in East Baltimore (Census, 2000).

However, among the most encouraging findings of our survey were that the vast majority of all researchers believed community involvement improves both the relevance and quality of research and believed that the institution should be more involved in the local community. This finding is important. Many advocates for community-based research believe that providing the skills, support, and funding to increase community engagement is needed to encourage others who may believe in CBPR principles but lack the impetus to put them into practice.

Unfortunately, while researchers conducting community- based studies were often 2–3 times as likely to involve community at multiple stages, in absolute terms, the majority of studies involved community members only in the most procedural of study tasks, such as recruiting subjects and collecting data.

There were several limitations to this study. First, it was conducted within one institution, and while existing literature from other settings validates some of our findings, we do not know if the results of this study would be replicated in another setting. Further, the vast majority of JHMI faculty do not conduct human subjects research (most do basic science and laboratory research) and this may explain why such a small proportion responded. Participation also was voluntary, and it may be that respondents who chose to respond were more likely to involve community in their studies or believe strongly in the importance of community engagement. Respondents interested in this subject might have been more likely to answer the survey, possibly skewing the data analysis. Additionally, all responses were self-reported, and we were not able to validate responses. Our research may have suffered from a misclassification bias in that we categorized research as community-based or institution-based from a series of questions about the nature of respondents' research. We recognize that our definitions appear to make clear distinctions between community-based versus institution-based research when designs and settings may more realistically fall along a broad spectrum. As such, we may have overestimated or underestimated differences between these two groups. Some of our survey may have been subject to a social acceptability bias, in which case the degree of community involvement might have been over- reported. We are also unable to assess from our questions the frequency with which community partners engaged in a particular activity, such as dissemination. Rather, we measured whether or not a certain activity ever happened with community involvement, instead of how regularly. Nonetheless, this study contributes important information from researchers from a variety of disciplines on views about community engagement and, as far as we know, is the first to compare the practices and views of those who conduct community-based research with those involving community members in institution-based human research.

Our data also cannot explain *why* community-based research was more likely to involve community members in these multiple and important ways. It may be that researchers who were interested and willing to conduct research in the environs of the community (rather than, for example, the clinic) already believed in the importance of the principles of CBPR and/or community involvement and were predisposed to include community in these various ways. Alternatively, conducting community-based research may have resulted in community requests for greater involvement, or led faculty in subsequent studies to increase their community involvement based on relationships that they formed.

Best Practices

We believe that documenting how and to what extent researchers involve community in their community-based research might help guide initiatives focused on improving academic-community partnerships. Lessons learned from existing literature, and our research with faculty and community, have started to build a framework of how to develop a community-based project that successfully includes all stakeholders.

Specifically, future research could build on this study to develop a conceptual model to shed light on factors promoting or hindering faculty engagement with community residents. Indeed, our study did not attempt to measure individual attributes of investigators that might affect effectiveness and willingness to include community. Individual investigators may differ in their capacity to connect and build rapport with those from different backgrounds. While such differences, if they exist, may be somewhat personality-dependent, it also is possible that greater familiarity with community members, organizations, or activities would help to bridge and facilitate communication even among those who find this more challenging.

While significant differences were seen in the practices and views of these two groups of researchers in almost every category measured, even those who conduct community-based research and have the greatest levels of community involvement describe multiple areas in which community members have little to no involvement in their research. As such, one might want to build on the practices reported by some respondents, as well as in the literature, that perhaps represent the “low hanging fruit.” For example, it was surprising how few faculty reported engaging in dissemination activities with the community. Developing and disseminating to the community appropriate materials regarding study findings and related health information is relatively easy and inexpensive. Further, dissemination activities not only provide direct benefit to surrounding communities, they also show communities respect for their involvement; dissemination also is a relatively easy way to involve community members in an important research task and demonstrate the value of the research to their community. Other evidence (Kennedy et al., 2009) shows that once faculty begin to develop relationships with members of the surrounding community, continued and deeper involvement is more straightforward. Initiating more venues, including roundtable or small group dialogue simply for talking, listening, and *meeting* each other, may itself lead to relationships that become relevant in future academic-community partnerships. These efforts would also go far in fostering trust and reducing social barriers. However, the availability of faculty time for such “non-research” activities also probably depends in part on the level of institutional valuing of community involvement.

Relatedly, and consistent with the literature (Kennedy et al., 2009), our survey showed a desire by faculty for greater institutional support, such as recognition and funding for community-based research or institution-wide community boards available to researchers in different fields. Nyden specifically suggests modifying tenure and promotion guidelines to recognize “collaborative, interdisciplinary, and inter-institutional research as credible

scholarship” and developing appropriate measures of CBPR scholarship so it is appropriately evaluated and viewed as rigorously as any other research (Nyden, 2003). Ways to facilitate community involvement, including CBPR in particular, have been offered by other scholars and include educating key stakeholders, seed grants for CBPR, and identifying champions of CBPR who can be recruited to university faculty positions (Ahmed et al., 2004; Yonas et al., 2006; Seifer & Calleson, 2004). It also is likely that the CTSA awards will have some impact on the academic prestige accorded to those who conduct CBPR.

Community advisory and research boards are another tool by which to involve the community in research. Community advisory boards (CABs) often are designed to assist with particular studies (Morin et al., 2003), whereas community research boards are designed to give community voice and infrastructure to any number of studies conducted in their local community. For example, the University of Pittsburgh Center for Minority Health has one such board (University of Pittsburgh Center for Minority Health, Community Outreach and Information Dissemination Core, 2007); and our own Partnership has begun training members to work in this capacity as well.

In general, it would be useful if funders contributed to this effort by allowing or requiring budget line items for community members to be involved in numerous research-related tasks. Indeed, having funders *require* community involvement in certain aspects of research can be highly productive; such mandates in the past have been critical in the creation of community advisory boards, for example, and they serve as a highly effective policy tool for changing usual research practice. Furthermore, funding agencies could enhance researchers’ capacities to disseminate findings by both requiring dissemination and providing funding for the development and distribution of culturally appropriate materials. The EJP, for example, has worked very closely with the Maryland Institute College of Art, to create engaging and user-friendly materials for health education and research dissemination. Although some agencies (e.g., NIEHS, the Robert Wood Johnson Foundation, and the Centers for Disease Control and Prevention) provide funding for CBPR-related projects, our data show that faculty still view insufficient funding for CBPR or other community engagement activities to be a barrier. In fact, even faculty engaged in community-based research responded that increased funding would be the greatest facilitator to conducting more community-based research. Additionally, such recommendations included reducing researchers’ other academic responsibilities to allow more engagement with the community, and receiving more information on the organizations and resources available in the community. All of these suggestions, however, address individual activity, not the institutional need for a corporate shift in research priorities and direction towards community engagement and empowerment.

Research Agenda

Federal funding now dictates that some funds be devoted to community engagement activities at large academic medical institutions as part of their core research infrastructures. Surely, the expectation is that this dedicated funding will allow for some sustained dialogue and involvement, as well as introducing the idea that engaging the community at various stages of research should be institutionalized into large-scale research programs. This requirement will be an important change to follow and evaluate.

This research highlights the contrast between faculty who target research to specific communities and in community-based settings and faculty who enroll community members in institution-based studies that recruit participants more broadly. Interestingly, however, whether their research was community-based or institution-based, respondents almost

uniformly agreed that involving community residents improved both the quality and relevance of research. Respondents almost uniformly believed that academic institutions should be more involved in their local communities. Future research to evaluate such intended involvement, especially in the inner city, would help stakeholders identify best practices for involving and engaging communities in health research.

Interestingly, the number of faculty who did not feel safe walking in the community and also felt helpless about conditions in the community suggests that issues of trust need to be addressed. As touched on earlier, issues of trust are also consistent with results from our community assessment in which several community members mentioned trust as a barrier in research collaboration. Developing workshops to discuss this history and constructive steps to move forward, or concrete tasks to accomplish together (e.g., community workdays), may be useful, but it is also true that the building of trust is a long road and requires long-standing commitments. Further attention should be devoted to evaluating interventions to recognize how to most effectively facilitate further involvement, foster trust, and allow investigators to achieve the involvement that they themselves value and believe will improve the quality of their health-related studies.

Educational Implications

This survey is the first of its kind to document the experiences and attitudes of faculty of different disciplines related to community involvement in their local research projects. Our findings suggest that investigators value the involvement of community, want better skills to involve the community, and want their institution, similarly, to more significantly involve community. Many of our faculty respondents said they would like more skills in how to involve communities, or facilitated venues for reaching out to communities. The EJP, as one strategy for example, began hosting a “Day at the Market” at a nearby, city-wide covered market. During this monthly “Day at the Market” event, EJP community members share health-related information, and also bring two or three Johns Hopkins researchers to talk about their work and answer questions from passersby. Additionally, educational modules could be developed to raise awareness for those not involved in CBPR or community engagement and alternate modules to guide those investigators seeking to incorporate more community involvement into their research. Multiple interventions likely will be useful, and arguments about “best” strategies may not be productive. Undoubtedly, the first step is a firm commitment not only by individual researchers, but also by their institutions, to identify a set of strategies that seem most appropriate for their setting, to work with individual and organizational partners where initial linkages already exist, and to begin to carefully but consistently work to institutionalize different ways of engaging community as part of the institutional approach for locally based research. Engagement comes in many forms, but the act itself of involving communities, talking through study goals to reach a shared understanding, and listening to concerns is deeply respectful and can also lead to concrete changes in the name of improving fairness and reducing avoidable harms.

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Biographies

Clara Goldberg-Freeman, M.H.S., C.H.E.S., worked as project manager of the Environmental Justice Partnership for five years. The Partnership's main objective is to develop equitable and sustainable dialogue and partnerships between the university's researchers and the various communities of East Baltimore. As project manager, Clara's main role was to strategize and facilitate capacity-building activities for community and academic partners to increase collaborative and equitable research partnerships. She is currently working at home raising her two young children.

Nancy Kass, Sc.D., is the Phoebe R. Berman Professor of Bioethics and Public Health at the Johns Hopkins Bloomberg School of Public Health and the Johns Hopkins Berman Institute of Bioethics. Dr. Kass conducts empirical research in bioethics, public health, and health policy. Her publications address HIV/AIDS policy, genetics policy, public health ethics, informed consent, and U.S. and international research ethics.

Andrea Gielen, Sc.D., is Professor in the Department of Health, Behavior, and Society at the Johns Hopkins Bloomberg School of Public Health. Dr. Gielen is also Director of the Center for Injury Research and Policy. The application of behavioral sciences to childhood injury control and domestic violence prevention programs, and the relationship between violence and HIV risk, are areas of special focus. Dr. Gielen's current research includes community interventions to improve home safety; translation research to disseminate proven injury-prevention interventions; and stage-tailored clinical interventions for survivors of domestic violence living with or at risk for HIV/AIDS.

Patricia Tracey, B.A., is the Community Relations Coordinator with the Johns Hopkins NIEHS Center in Urban Environmental Health, Community Outreach and Education Core (COEC), which serves to translate research findings into educational programs and environmental health policy. Ms. Tracey is a native East Baltimorean and has had 12 years of experience managing community-based research, outreach, and educational projects in East Baltimore. She has also been a leader in shaping community input into the East Baltimore Redevelopment Plan, and has focused on environmental justice issues such as lead poisoning, demolition, and air quality. Ms. Tracey has trained and supervised many community outreach workers, helped conduct qualitative research and environmental assessments, and has been a guest speaker at many seminars for graduate students at Johns Hopkins University and many community forums. She has been a member of the Environmental Justice Partnership since its inception.

Barbara Bates-Hopkins, a native East Baltimorean and community advocate, is the Community Relations Coordinator for the Johns Hopkins Center in Urban Environmental Health. Ms. Bates-Hopkins has over 10 years of experience in organizing and developing programs such as neighborhood improvement projects, sanitation initiatives, and leadership development. She has experience in community-based research, outreach, and educational projects in East Baltimore as related to environmental justice issues in the development and

dissemination of educational materials. She has co-facilitated community-based participatory research project workshops, focus groups, and training sessions. Her other interests include drug prevention, community mediation, youth, and faith-based initiatives. Ms. Bates-Hopkins serves on the Environmental Justice Partnership Board.

Mark Farfel, Sc.D., was Associate Professor of Health Policy and Management and Environmental Health with a joint appointment in Environmental Health at the Johns Hopkins Bloomberg School of Public Health (JHSPH) at the time of this study. He helped found InterAction, a JHSPH outreach program to help Johns Hopkins public health and medical students become more effectively involved in community service, research, and social justice activities. His research focused on disease prevention with vulnerable populations, urban environmental health, community health, and environmental justice. Dr. Farfel is currently Director of the World Trade Center Health Registry, Division of Epidemiology, in the New York City Department of Health and Mental Hygiene.

TABLE 1

Demographic Characteristics of Faculty Respondents.

	n	%
Gender	271	
Male		56.1
Female		43.9
Race/Ethnicity*	265	
African American		4.9
American Indian		0.8
Asian/Pacific Islander		7.5
White		87.9
Latino		3.0
Years Associated with Institution	291	
<5		10.0
5–10		29.2
>10		60.8
Age	271	
>30		0.01
31–40		31.7
41–50		34.3
51–60		24.7
>60		8.5
Position	291	
Professor		26.5
Associate Professor		22.3
Assistant Professor		35.4
Other		15.8

* Respondents could select more than one response.

TABLE 2

Frequency of Local Residents' Involvement in Various Stages of Research for the Total Sample and by Setting Collaboration.

Stages of Research Collaboration	Community-based research n = 57	Institution-based research n = 229	Total*	
	% Yes	% Yes	% Yes	P-value
Recruiting subjects	86.0	40.2	49.3	P < .0001
Designing study methods/procedures	68.4	19.2	29.0	P < .0001
Collecting data	66.7	18.3	28.0	P < .0001
Planning for data collection after grant is awarded	52.6	23.1	23.1	P < .0001
Developing an intervention	47.4	13.1	19.9	P = .0001
Disseminating research findings	49.2	12.2	19.6	P = .0001
Developing a strategy for disseminating results	42.1	11.4	17.5	P = .0001
Deciding what to study	38.6	12.2	17.5	P = .0001
Writing grant application	36.8	11.8	16.8	P = .0001
Interpreting results	36.8	8.7	14.3	P = .0001
Analyzing data	14.0	5.2	7.0	P = .0001

* Not everyone answered this question.

TABLE 3

Faculty Researchers' Beliefs about Community Involvement.

Beliefs	Community-based research		Institution-based research		Total % Agree	P-value
	N	(%)	N	(%)		
Local organizations and leaders have skills needed for research	54	96.3	224	80.8	83.8	P = .006
Community involvement improves the relevance of research	53	96.2	222	89.6	90.9	P = .134
Community involvement enriches the quality of research	53	92.5	222	85.1	86.6	P = .161
Community involvement undermines the scientific integrity of research	53	5.7	220	2.7	3.3	P = .283
Research can make a difference in the local community	54	92.3	224	83.5	85.3	P = .090
Community involvement is not compatible with academic promotion	53	26.6	222	26.1	25.5	P = .601
Community involvement is fraught with problems	53	56.6	222	60.8	60.0	P = .574
Community involvement is too time-consuming	53	30.2	222	43.2	40.7	P = .082

TABLE 4

Faculty Researchers' Perceptions about Facilitators of Community Involvement in Research.

	Community-based research n = 51	Institution-based research n = 223	Total	
Facilitators	% Agree	% Agree	% Yes	P-value
Reducing other academic responsibilities	21.1	41.2	24.8	P = .003
More grant/institutional funding to support community involvement	53.4	76.5	57.7	P = .003
More information on community organizations	54.3	39.2	51.5	P = .052
Acquiring more skills to enable me to involve community in my research	30.0	17.7	27.7	P = .074
Increased safety in the community	26.5	25.5	26.3	P = .887
Greater recognition from my department of the value of community involvement in research	30.5	35.3	31.4	P = .505
Greater recognition from the Institution of the value of community involvement in research	41.3	58.8	44.5	P = .023