



# Reflections on Interdisciplinary Teamwork in Service-Learning

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**This article examines partnership experiences in a community-based research project that involved an interdisciplinary team composed of nursing and social work clinical faculty and graduate students. Using Bronfenbrenner’s social ecology theory, the project assessed individual and community levels of health and quality of life in a low-income housing community. Students were involved in research activities that required community collaboration and needs assessment. They also actively engaged community members in problem solving related to their health concerns. The effects of these experiences on student learning were examined using a student reflection technique. Service-learning activities led to *mutual positive regard, increased cultural sensitivity, improved organizational and research skills, growth in ethical decision making, and valuing interdisciplinary teamwork*. These findings are discussed in light of the literature on the social determinants of health. Reflection on work in an interdisciplinary team and the importance of mutuality in relationships with community members were determined to be important considerations in service-learning. Student learning in this setting has implications for graduate teaching and learning, and the conduct of research.**

**Keywords:** service-learning, research, health disparities, community, reflection, graduate student

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Addressing health disparities within a variety of underserved populations has increasingly been identified as a priority for research, health care education, and clinical service provision due to the loss of human capital in the workforce and the growing costs of untreated medical conditions for our society-at-large. Social justice issues inherent in barriers to care are finally being recognized as critical economic and policy issues. Historically, charity work was conducted by religious organizations in the community to ameliorate social problems. Today

community partnerships between universities and underserved groups are viewed as critical to achieving health for the whole community (Morton, 1995).

Emerging literature documents the need for a shift towards the community. This is illustrated by an increasing focus on clinical education, participatory research and services (Callen & Lee, 2009; Gillis & Mac Lellan, 2010; Kim, 2005; Marcus et al., 2010). Bringle and Hatcher (2002) reported compelling reasons for universities to increase their focus on community engagement, such as an increased sense of civic responsibility and a wider understanding of one's discipline. Federal agencies, such as the National Institutes of Health, have prioritized community-based research and increasingly moved toward funding studies that are both sustainable and make strong commitments to the dissemination of findings. Universities are being challenged to find ways to increase opportunities that provide mutual benefits for the university and community, with an emphasis on making lasting contributions to health care. Opportunities for service-learning in communities with health disparities, however, are frequently missing from graduate education in the health and allied health professions despite increased efforts in many universities towards community engagement (Antonio, Astin, & Cress, 2000).

A growing body of literature on health identifies that a range of factors determines health status. There is substantial evidence that underlying social and economic determinants such as environment/geography, resources, and income are important contributors to health. Along with an understanding of the complex nature of health comes the expectation that health and social service disciplines cannot function in silos and must develop interdisciplinary services and increase professional training to meet the health challenges of underserved groups (Jutte et al., 2011; LaVeist et al., 2011). Nursing and social work are two disciplines whose focus is on supporting and improving the health and well-being of individuals who are among the most vulnerable in our communities. Thus, joining forces across disciplines is a natural comradery. Developing partnerships may stimulate more collaboration of health care professionals in general to better serve patient needs and improve systems of care.

Participation in interdisciplinary teams provides opportunities for students to get real-world experience and is a type of service-learning. Service-Learning as defined by Sigmon (1974), includes: (a) learning opportunities for students outside the traditional classroom, (b) a focus on service to the community, and (c) participation in activities that benefit students as well as community participants. Sigmon's definition is useful for describing the current research project that investigated the emergent needs of a low-income high-rise community and provided the context for the service-learning analyzed in this article. Prior research has shown that students who participate in service-learning may be better prepared to provide clinical services and/or to undertake research as professionals (Eyler, Stiles, Stinson, & Gray, 2001). Students in this project also had the opportunity to hear the viewpoints of underserved health care consumers, and to learn how consumers experience the existing health care system. Residents benefitted by "telling their stories" and being referred to a case manager for additional services.

One investigator (Rocha, 2000), found that social work students in the classroom who had been involved in service-learning in the community were more likely to engage in policy-making activities (e.g., keeping up with issues that affect neighborhoods, creating a task force, meeting with a public official) after graduation compared with their peers who had not participated in service-learning. There is evidence that service-learning experiences better prepare social workers and nurses to meet challenges in the workplace, and also increases the likelihood that they will become good citizens and contributing members of society (Saltmarsh, 1996; Boutin-Foster, Phillips, & Palermo, 2008; Gillis & Mac Lellan, 2010; Hood, 2009; Reisling, et al., 2008). Wang (2000) reported that service-learning increased beginning professionals' commitments to connect with people in the community. Other investigators reported cognitive gains that improve through service-learning (Rockquemore & Schaffer, 2000). They described students' growing capacity to regard those living in poverty as fellow human beings. Another analysis suggests that service-learning is a strong predictor of increased racial understanding and commitment to further activism (Vogelgesang & Astin, 2000). Numerous other research investigations have indicated that service-learning decreases stereotyping and enhances cultural sensitivity (Buch & Harden, 2011; Gelmon, Holland & Shinnamon, 1998; Giles & Eyer, 1994; Greene & Diehm, 1995; Vogelgesang & Astin, 2000).

Another consideration in service-learning is exposure that includes interaction with professionals from other backgrounds. Cantor (1997) and others (Joseph, Diack & Haxton, 2012; Wilhelmsson, 2012) noted beginners' needs for interdisciplinary collaboration and learning as part of education to gain an appreciation for, and working knowledge about, collaboration with other disciplines. Using interdisciplinary teams to meet the needs of consumers leads to better care. Understanding multiple viewpoints may be particularly important in service professions such as nursing and social work, where interdisciplinary perspectives are essential to effective health care planning and intervention. In recent history, nursing students received the majority of their clinical education in hospital and clinical settings, with less emphasis on working in the community. Concomitantly, social work educators have often paid little attention to helping students conceptualize their role and participation in interdisciplinary health care teams (Bronstein, 2003). Social work students have also displayed a lack of interest in research and are often skeptical about the connection between research and practice (Knee, 2002).

Given the absence of service-learning opportunities for both nurses and social workers, a community-based setting which gave students the opening to examine multi-level factors affecting health, participate in an interdisciplinary team, and develop research skills, can be viewed as an extremely valuable learning experience. Regardless of whether the emphasis is on service-learning or inter-professional practice and research, these approaches will increasingly be used with vulnerable and underserved populations (Callen & Lee, 2009; Commission on Community-Engaged Scholarship in the Health Professions, 2005; Gillis & Mac Lellan, 2010; Marcus et al., 2011; Milton et al., 2011; Ramsden, McKay & Crowe, 2010).

Involving students in service-learning activities with vulnerable populations as part of a university's outreach to the community has the potential to reduce health disparities and to improve the policy and practice of young health care professionals. This article presents a qualitative examination of student reflections on their participation in an interdisciplinary team related to a community-based research project.

## **The Context of the Student Experience**

Because student reflections were based on their experiences during the project, an overview of study findings are presented here to better situate the student's experiences, and subsequent perceptions and reflections, about the context in which this learning occurred.

### ***The Setting***

The setting for the research project was a unique, three building, high-rise public housing community situated in one inner-city block of a mid-size urban community. The community was composed of approximately 650 low-income residents ages 18 and over (70% were 50 years of age or older; approximately 80% were African-American), the majority of whom had chronic physical and mental health conditions. Because of these unique characteristics, the community disproportionately reflected both vulnerable and low-income populations, which have been identified in the literature as experiencing the highest degrees of disparities in health and resources.

### ***The Community-Based Research Project***

The project was funded through a university office of community engagement faculty grant award and approved by the university institutional review board. The research was conducted from May 2010 through April 2011. Partners in this community-based project included university faculty members, a gerontology service agency, a community mental health agency, the local public housing authority, and the resident council of the selected public housing community. The research aims involved assessing participants' mental and physical health status, perceived needs, social support, accessibility to services, perceptions of community life, and perceived quality of life. The majority of interviews were conducted by nurse-social worker teams. Two individual in-person interviews were conducted with 100 participants. Additionally, three focus groups were held for 27 participants, who discussed the strengths and challenges of living in the community.

Study participants (n=127) ranged in age from 20 to 76 years; the majority were African-American women. Project findings were that participants, regardless of age and health status, identified common categorical influences on quality of life which were: chronic illness, ability or inability to accomplish instrumental activities of daily living, depression, trauma/abuse, family, transportation, basic services, and social activities.

### ***Theoretical Model***

Bronfenbrenner's (1979) Social Ecology model guided this investigation of community-level influences that impact health. Bronfenbrenner identified four types of systems transactions that influence individual development and life course: (a) interface with significant individual others or microsystems; (b) interactions with mesosystems, such as transactions between individuals and social service systems; (c) exosystems such as bureaucracies that affect individuals indirectly without their knowledge; and (d) macrosystems at the cultural level that affect individuals through values, roles, and traditions. There is growing recognition that addressing reciprocal interactions is critical for understanding community health needs and individual health behaviors. Health can be affected by changes vertically (micro to macrosystems) as well as by changes horizontally, as individuals are members of multiple microsystems. The environmental impact on health and quality of life has been increasingly examined in health services research (Hines-Martin, Speck, Stetson, & Looney, 2009). Building out of this model the current study investigated microsystem factors such as health perceptions, health functioning, and quality of relationships with others internal and external to the housing community; mesosystem factors, such as whether needs were being met by service systems; exosystem factors such as safety, transportation, and nutrition; and macrosystem factors such as cultural environment and stigmatization.

### ***Student Learning from Partnerships***

The first and second authors of this article were the project faculty and principal investigators on this study. While both nursing and social work faculty had previously worked within the housing community, the community-based research project was the first inter-professional one conducted in collaboration with this community. Student investigators consisted of one PhD nursing student, four master's level social work students, and one exercise physiologist. Two of the students were completing field work at the community site, and four volunteered outside of formal classroom requirements to gain experience in community-based research.

Students had a wide variety of experiences with participants who had complex problems, yet who also exhibited remarkable resilience. Students were able to join forces with residents and hear how they survived in the face of poverty. Students worked with community members during recruitment, scheduling, and interviewing. They participated in collaboration, problem-solving, progress updates and final reporting.

In many instances, their interactions with community members resulted in the need to address emergent issues that required critical thinking and priority setting. Students consulted with research faculty to identify strategies that reflected shared perspectives (community members and investigators) to address these identified issues. Throughout the project, students also participated in team planning, strategizing and processing sessions. Students collaborated in community reporting, professional presentations and publication development. At the completion of the project, students reflected on their learning through participation in these partnerships.

### **Research Findings from the Parent Study**

Participants reported a range of chronic illnesses (1-9/person; average of 4/person). Most participants rated their physical health as fair or poor. Participants struggled to complete instrumental activities of daily living such as carrying groceries, doing laundry, and climbing stairs. Compromised mobility affected the majority of participants. Their emotional health was reported as interfering with their life satisfaction as well as their social interactions. Twenty-one percent of residents identified significant levels of depression. Residents reported that treatment for their physical conditions was much easier to obtain than for psychological conditions. Those with psychological needs were the most vulnerable to having unmet needs and being exploited by others. Thirty-nine percent of participants reported some type of interpersonal trauma and few had received any form of counseling related to these experiences.

Although the community was located within a public transportation hub in the city center, transportation was identified by residents in this community as a major concern and barrier to performing essential activities for a variety of economic and logistical reasons. There was limited access to grocery stores, physicians, clinics, and venues in which social activities occurred. Neighborhood safety, tension, and discord in their relationships with other residents were reported. Much of it was linked to the intergenerational nature of the population. Residents reported not having enough social, recreational or vocational activities in their lives.

### **Participant Strengths**

For many participants, ongoing contact with family, especially intergenerational contact, appeared to be strongly correlated with higher quality of life. Eighty percent identified their spirituality and religious observance as very important to their quality of life. Participants invested significant amounts of time and effort identifying available resources within the broader community and sharing that information with others. Most importantly, the ability to assist others in their community and support collective community efforts was a source of pride and satisfaction for all participants in this study.

### **Student Reflection and Learning**

Some researchers (Beard, Clegg, & Smith, 2005; Bowen, 1977; Sax, 2004) have written about the potential of higher education to spur cognitive, emotional, and practical competence. Over the course of the year-long project, students frequently asked questions, grappled with uncertainty and confusion, sought solutions for participants' problems, and frequently expressed appreciation for the residents. During team meeting sessions, project faculty encouraged students to discuss and process these experiences and to report how they were managed or addressed. Students freely shared their thoughts and emotions about all aspects, including communication, problem solving, professional behavior and ethical considerations, advocacy, and resource development. As part of this interdisciplinary research project, faculty

wanted to identify what learning had resulted from collaboration within this very challenging setting from the students themselves.

### **Reflection as a Method**

The approach chosen to assess the experiences of students in these learning partnerships was the use of *student reflection*. Reflection involves the use of cognitive and metacognitive skills in which new information and experiences are integrated into existing knowledge and paradigms, resulting in meaningful learning. Reflection often occurs after an experience is over, promoting professional development (Bernard, et al., 2012; Kok & Chabeli, 2002; Kuiper & Pesut, 2004).

After the project was completed, students were asked to share reflections on their experiences and student permission was obtained prior to initiating the process. All students in the project ( $n = 6$ ) were eager to be involved in the journal reflection. Each of them completed an electronic narrative of several pages which focused on (a) how they viewed the community over the course of the project; (b) how they evaluated their experience with community members, and (c) in what way (if any) this experience affected their professional development. Students also responded to the experience of working on an interdisciplinary team. Initially the two researchers and first and second authors of this article used an inductive approach to coding (*in vivo*) (Tutty, Rothery, & Grinnell, 1996). The data was broken into small segments. Next the researchers met to aggregate the codes into categories. The researchers arrived at consensus about the emerging themes, patterns and relationships between the codes. The themes were developed into a cohesive narrative with illustrative quotes (Lofland, Snow, Anderson, & Lofland, 1995). Students were then contacted to give input into how the coding matched their experience of the study and reflections on it (member checking). Some quotes and interpretations were selected. Reflections on service-learning activities led to the identification of several themes: (a) mutual positive regard, (b) increased cultural sensitivity, (c) improved organizational and research skills, (d) growth in ethical decision making, and (e) valuing interdisciplinary teamwork. These are discussed below.

### **Mutual Positive Regard**

*Mutual positive regard* is a phrase coined in the field of psychology but has been applied in many disciplines in which interpersonal interaction is a core element, including education. Mutual positive regard is demonstrated by valuing the other as they are, appreciating their assets and treating each other with warmth, liking, respect, sympathy, and civility in a give and take exchange (Patterson, 1977). The majority of student reflections reported in the ensuing analysis section included some reference to the appreciation they had for the community but also identified what the community participants expressed about them in return.

Student No. 4: A highlight for me was being able to participate in a focus group that we conducted through the research project. The participants in that group let us know that

our work there was really appreciated. I looked forward to going to work and meeting with these amazing people whose stories have really touched my life.

Participants responded positively to being asked their opinions about life in the community, and there was much energy and engagement during these discussions. Residents reported they felt listened to and valued for their opinions. Some of the residents contrasted the respect they felt from students and researchers with their usual sense of invisibility and disrespect.

### ***Increased Cultural Sensitivity***

Students reflected on their preconceptions about the community, subsequent actual experience in meeting and working with residents, and about their changing perceptions. There was evidence that these interactions reduced stereotypes and facilitated racial and cultural understanding. The community was commonly viewed in the community-at-large as a dangerous place to be. Residents were often deprived of their humanity by the perception of those around them. One student described her growing awareness of the “real people” who lived there.

Student No. 1: .... we as students are always told to “be cautious” when walking or even driving past the public housing area. There are plenty of stories, stereotypes, and assumptions that are being passed on to employees and students who frequent areas around the public housing community but you never hear about the lives and the compelling stories of the individuals who live there. You never hear about individuals who were homeless and found refuge at the public housing community. And you certainly never hear about the elderly and disabled individuals who comprise the majority of the public housing residents ... The people there have real stories, real lives that matter.

Another student learned that even those who are the most vulnerable in our society can have important perspectives, have often not given up, and may be actively working for a better day.

Student No. 3: Interactions with members of the public housing community reshaped my previously conceived perceptions of what it was like to live in these buildings. I found myself inspired by the residents who had so little yet were so content with what they did have. I was also inspired by the residents who took it upon themselves to advocate for the community, those who recognized that engaging their community to work together would be an effective way to foster a better environment.

So much of the learning came from what the residents themselves taught the students about how to live in poverty and maintain one’s dignity.

Student . 2: My interactions with the residents of this community have expanded my knowledge of the psychosocial impact of poverty and deprivation on individuals. I have learned about the psychological effects of living without many of the resources that I



take for granted. Since many of these individuals suffer from mental illnesses, the inability to receive effective treatment creates a cycle of mental illness and the negative impact of mental illness that is practically inescapable ...

Students came to care about members of the community as human beings and looked forward to interaction when residents informally dropped by the case management office. Students gained clarity about how much energy it takes to run your life when you are poor, and how little things, such as bed bugs or a late social security check, can have major negative consequences.

### ***Increased Organizational and Research Skills***

Both nursing and social work are founded on the ability to examine complex needs and undertake multiple tasks to address those needs. This multi-tasking must also be focused, deliberate and coordinated. Although there are some experiential opportunities for development of organizational skills as part of student clinical and field placements, this opportunity was identified as an important element of student learning.

Student No. 5: Some of the research process showed me how to multi-task, to be able to coordinate, promote, and make adjustments. I better understand the need for being flexible and adaptable when dealing with clients and the importance of having a strategy for when things happen that are beyond my control.

Student No. 3: I feel very fortunate to have been able to be a part of the research team. I have been able to collaborate and work with a very diverse team of students and faculty, from other countries, different ages, and educational backgrounds which made working on this project a great learning experience. We were able to actually be in the field and recruit, make phone calls, participate in information sessions and the focus groups.

Students learned to contact residents, track appointments and compile interview packets. They came to understand the importance of consistency in asking research questions and recording the results. They participated in collecting data in the focus groups by completing field notes. They learned when they needed guidance and spoke up during the project meetings.

### ***Growth in Ethical Decision-Making***

Issues of confidentiality are ever present in both nursing and social work professions. Identification and application of this concept was situational and required real-world critical thinking. One student who wore multiple hats as an interviewer and a practicum student struggled to understand appropriate boundaries and became sensitized to the challenges of living in a community where people regularly knew about each other's business.

Student No. 5: One of the most important points that I came away with from the research project is the importance of confidentiality when it comes to participants and

clients. There were times when I had privileged information about a resident because I had interviewed them, and then I would see them in the office. I gave them respect by keeping private what had been said during the project interviews.

Another student developed awareness about the vulnerability of human subjects when she completed ethics training through the university internal review board. She was able to understand the historical link between being a research participant and having one's vulnerability exploited.

Student No. 4: I learned a great deal of information about ethics, working and protecting participants' confidentiality and safety, and examined protocols developed to correct past violations of human rights for diverse racial/ethnic minority groups.

Living in a community with a dense population means extra care must be taken to protect the confidentiality of residents. Many residents had experiences that they did not want others to know about. Some of the types of concerns around confidentiality related to sexual orientation, financial resources, mental health issues, and plans to move out.

### ***Valuing Interdisciplinary Teamwork***

Although social work students had been exposed to the concept of interdisciplinary collaboration in the classroom, the service-learning experience broadened an understanding of their complementary role in relation to the medical profession. It showed them how multiple perspectives combine to enhance the quality of care in *real practice*.

Student No.3: Working with the nursing department at (university) was an excellent way to supplement a psychosocial perspective with the addition of a more clinical perspective. Where, as a social worker I may not have recognized a person's limitations or challenges due to a particular health condition, the nurse researchers were quickly able to identify this as a potential area of need. Having multiple perspectives from differing fields helped to better identify needs, which in turn would provide better outcomes for the resident.

One team member wrote about his appreciation in working with a collaborative team rather than a competitive one:

Student No. 6: I think having a diverse team made the team work more cohesive and gave each team member a responsibility that they could handle ... Unlike other experiences that I've had working on research projects I felt more connected with the team. In some ways I think within the same department students feel they have to compete to keep their status of brightest and most dependable. I didn't experience this with anyone and in the end I became friends with everyone.

One student reported her vision for the program with many disciplines, professionals, and students-in-training working together to decrease the health disparities in the community. She saw that success in reducing disparities would require a multi-disciplinary alliance.

Student No. 3: In order to provide support and bring positive changes to the community, it is vital for community organizations and universities to collaborate in their efforts to provide adequate services and resources. The community would greatly benefit from free health screenings, counseling, social work services, and other services that can be provided by students, under the supervision of on-site social workers and nurse practitioners as well as other professional volunteers from different disciplines.

The appeal of interdisciplinary teamwork is underlined by the reflections of these students. Having a service-learning experience greatly increased their awareness of other disciplinary lenses and led to recognition of the value of taking an ecological systems approach. The students spoke eloquently about the importance of these multiple and reciprocal inputs in developing programs to benefit the residents.

## Discussion and Implications

Bowen (1977, p. 54) described a goal of higher education as promoting the “capacity for empathy, thoughtfulness, compassion, respect, tolerance, and cooperation toward others, including persons of different backgrounds ...” These human capacities, which are less well measured, understood, and discussed in the literature on service-learning, may be the most compelling outcomes of the current project. Bronfenbrenner’s model of relationships and the reciprocal interactions between persons and their environment at multiple levels represents a step forward in conceptualizing these capacities. These activities become visible at the personal and interpersonal level and show our potential for improving human beings and society. The value of mutuality is undervalued, yet it is during dyadic exchange, during the process of listening and responding, that people are equipped and empowered. Mutual positive regard is the arena in which creative problem-solving occurs. This may be as true for the student learners as for the community residents themselves. There is nothing more important for a student than discovering that their presence can make a difference in someone else’s life. Students recognized the positive impact of their activity on residents who participated in the health-related research.

Additional findings from these student reflections and the responses of participants mirrored many of the benefits for service-learning reported in the literature. Students were challenged to utilize critical thinking skills as they problem-solved regarding participant recruitment, data collection, and analysis. They became more flexible and participant-centered as they negotiated the environment to complete study tasks. Participants were empowered to seek out new resources they were not aware of prior to the study. Students’ cultural and social competencies increased as they began to appreciate the “world-view” of residents and how

they made sense of, and coped with, their daily lives as a result of student-conducted interviews and focus group sessions.

Students were able to understand how multiple layers of social and economic advantage are necessary in maintaining health and well-being. Ethical issues were a common experience within this vulnerable community. Students, in collaboration with faculty members, encountered and addressed emergent issues that had legal, ethical and confidentiality implications, such as suspected abuse, through use of protocols and resource identification. Skill-building was enhanced as they worked together to manage unpredictable situations.

In addition to outcomes corresponding with what has been reported in the literature, students from each discipline gained a mutual appreciation of the other, with frequent collaboration and consultation (Commission on Community-Engaged Scholarship in the Health Professions, 2005; Gillis & Mac Lellan, 2010; Knee, 2002; Marcus et al., 2010; Riesling et al., 2008; Wilhelmsson et al., 2012). Some envisioned that a creative way forward to reduce health disparities could involve professionals from multiple disciplines and incorporate students as well.

As a result of this project, students were co-authors on seven national research presentations, received two research awards (local and regional) for their work, and participated in the development of one article. Others were involved in community organizing and advocacy. Two students began professional work with this community. The project provided a real-world experience encompassing opportunities for learning about many aspects of professional life that will be useful to the students in their future research, professional roles, and shaping of policy for vulnerable populations.

### **Limitations**

Limitations inherent in this service-learning project were the limited number of students involved ( $n = 6$ ). Data were subjective and were only measured at the end of the one-year project. It is not known how this experience will shape their evolving professional perceptions and commitments, particularly their pursuit of interdisciplinary collaboration. The community-based research was focused in one community and there was no additional funding to sustain this project for future cohorts of students. Limitations of the study assist in identifying needed next steps for research regarding service-learning in an interdisciplinary team. Studies are needed which examine the impact of service-learning on student behaviors and attitudes longitudinally. Prospective, comparative studies, and identification of strategies that support sustainability and institutionalization of service-learning and teamwork are also crucial next steps.

### **Lessons Learned**

As faculty members undertake interdisciplinary service-learning within vulnerable communities, there are many issues (student capabilities and strengths, crisis management, communication at multiple levels, emotional support and positive feedback, experience processing, funding,

etc.) that must be considered in addition to the planned activities themselves. The research process is exponentially more challenging when students are fully integrated into it, especially when the project includes multiple community partners. Considerable time was spent building relationships in the housing community, supervising and supporting students as they encountered obstacles and critically analyzed and responded to ethical issues. Based on the quality of the learning reported and the productive activity that was generated, all of those involved appeared to noticeably benefit from this experience.

Student No. 2: In addition to the advantages of working with ... nursing, we were also able to utilize the on-site public housing community program office as a resource. While we were entering the public housing community as outsiders with no working knowledge of any of the residents, the community's onsite case management program had extensive interactions with most of the individuals. The program was able to benefit from our findings and to refer residents for additional services based on information collected in the research project.

### **Conclusion**

Project faculty members observed the excitement in the students about what they were learning, and the pride in community of residents as they identified problems and took action. This synergy was what made the teaching-learning process invaluable. Students were energized during the learning process and sought out opportunities to engage and test their skills. Models that utilize interdisciplinary collaboration offer an effective approach for addressing health disparities. Marcus et al. (2010) identified that, "The scholarship of engagement not only links theory with practice but forges relationships between academic institutions and communities, relationships that enhance the effectiveness of both entities to bring about change that contributes to the elimination of health disparities" (p 53). Students who build connections with communities of vulnerable people, and experience the increased impact of joining forces with other disciplines as part of that connection, will be more adept in visualizing future strategies for change in systems of care that are informed by their experiences in these communities.

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