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ABSTRACT

Health and education disparities persist in low-income communities. This project, part of University of Minnesota Extension's Community-engaged Scholars Program, aimed to identify common root causes of health and education disparities as part of a school readiness intervention for low-income, multiethnic children. In this paper I describe my growth as a community-engaged scholar attempting to understand the role of community voice in documenting the complex, interrelated nature of early childhood and lifelong well-being.

Keywords: early childhood, disparities, community

Seemingly intractable health and education disparities persist, burdening low-income and racial/ethnic minorities with poor health outcomes and lower economic standing and well-being. Traditional research centered in academic settings has been unable to solve the complex nature of health and education disparities (Nguyen, Moser, & Chou, 2014; Reardon, Valentino, & Shores, 2012) because research done in a traditional manner is only one way of understanding and addressing community need (Horowitz, Robinson, & Seifer, 2009). Community-engaged research (CER) provides an alternative way of identifying gaps and potential solutions, one that draws upon a wide range of voices from the community that is directly impacted and subsequently most knowledgeable.

Conditions during early childhood shape the pathway for health throughout life (Robert Wood Johnson Foundation, 2008). Early life experiences are multidimensional including social, cognitive, and physical elements, each in turn both dependent upon and predictive of a healthy state. This dependency is embedded in a complex social, political, economic, and cultural context that defines the experiences or opportunities available to families. The complexity of these relationships demands a multifaceted approach that considers how common and coordinated approaches can address 'child development' and 'health' in ways that improve outcomes in each (McConnell, Hearst, & Martin, 2012; Robert Wood Johnson Foundation, 2008).

This paper's focus is set in the context of a pilot study embedded in a community-academic partnership to improve kindergarten readiness and child health in a low-income neighborhood. Using a CER approach, the study integrated voices of families to translate formative research into effective intervention. The paper focuses on my personal journey during the pilot and how I applied to the project what I learned in the Community-engaged Scholars Program (Scholars Program) at the University

of Minnesota (UMN), and the insights I gained and lessons I learned.

COMMUNITY-UNIVERSITY EARLY CHILDHOOD INTERVENTION

Five Hundred under Five (FHu5) was a community-university partnership pilot study initiated in 2007 to increase school readiness of children in a defined, distressed geographic area in North Minneapolis, Minnesota. The UMN Institutional Review Board approved this study. Program details can be found in the UMN *CURA Reporter* (McConnell et al., 2012). This low-income, racially diverse area is comprised of African American, Somali immigrant, and Latino residents. Five organizations—the UMN, the Minneapolis Youth Coordinating Board (YCB), Way to Grow (WTG), Minneapolis Public Schools, and Hennepin County Office of Planning and Evaluation—worked collaboratively to design, implement, and manage this program. The intervention was coordinated by WTG, a non-profit aimed at improving parents' capacity to enhance children's development. Families of children under age 5 years were recruited and provided parent education, home visits, school readiness activities, and resource coordination and referral. School readiness was assessed using the Individual Growth and Development Indicators and the Peabody Picture Vocabulary Test. Parents completed the Ages and Stages Questionnaire – Social Emotional tool to identify possible concerns about children's social behaviors and emotional status. Intervention staff members, called Family Support Advocates, were multilingual paraprofessionals representative of the families they served (McConnell et al., 2012).

The Leadership Team—managers, researchers, or directors from partner organizations—was charged with overseeing the aims of the grant; assuring communication between and within organizations and to the community; ongoing evaluation and adjustment to the intervention; and dissemination. Intervention efforts were coordinated by the Operations Team, including logistics, events, evaluation, and other implementation activities. The Operations Team consisted of a program coordinator from UMN's Center for Early Education and Development, a program coordinator at the YCB, the manager of the Family Support Advocates at WTG, a representative from Minneapolis Public Schools Early Childhood Family Education program and this author, from the Division of Epidemiology, UMN.

Two members of the Operations Team regularly attended Leadership Team meetings. Decisions were made via consensus through an equal exchange between the Leadership Team, the Operations Team, and direct Family Support Advocate feedback. The Family Support Advocates became the key route of information, connecting families to broader support networks and communicating the voice of families to the Leadership Team. This approach is grounded in the health education literature. Low-income families often have restricted access to health information and networks that will provide opportunities (Kelley, Su, & Britigan, 2015). The use of trusted community-based individuals and institutions has been successfully used in health-related outreach programs to increase access (Dulin, Tapp, Smith, Urquieta de Hernandez, & Furuseth, 2011; Tapp, White, Steuerwald, & Dulin, 2013).

In 2008, additional funding was secured to explore the social determinants of health and to highlight, tease apart, and intervene in the complex interrelationship among contextual conditions and health and child development success (McConnell et al., 2012). The original intervention fea-

tured parent education, home visits, and resource coordination and referral. Although families' voices had been heard on other topics, their voices had not been heard as they related to health concerns or other underlying common factors that were impacting their ability to support health and optimal development for their children. Therefore, the Operations Team developed a CER approach using formative research methods to integrate community voice into the process of elucidating social determinants of health and education disparities. The FHu5 Leadership Team agreed with the approach to engage key community members in structured dialogues and focus groups that would inform the development of a survey to be administered with intervention families and the translation of new knowledge to action.

Survey Development

Two focus groups were held with community residents recruited by a local community-based organization, also located in North Minneapolis, and WTG families not enrolled in the intervention but residing in proximal neighborhoods in North Minneapolis. Translation was provided for Somali and Spanish-speaking participants. Childcare was provided and each participant received a $20 gift card for participating. In addition, key informant interviews were held with the FHu5 Family Support Advocates and a representative from a social service agency serving North Minneapolis.

Focus groups with parents were guided by six general questions about a) health concerns about their preschool-aged children, b) the impact of child health or illness on daily life, c) health concerns about preschool-aged children in the neighborhood, d) how the home or neighborhood environment affects preschoolers' health, e) experiences seeking health care, and f) other neighborhood social or environmental conditions. Key informants were asked to describe a) the main health, social, and neighborhood conditions affecting families in North Minneapolis; b) strengths and limitations of health care access and public services; c) effect of neighborhood or housing issues; d) implications of limitations of services and the environment; and e) any unmet needs for families with preschool-aged children. Key themes from notes were extracted. Themes were presented to the FHu5 Leadership Team, the Operations Team, and the Family Support Advocates to verify interpretation and guide development of a parent survey.

A total of 13 community residents attended the two focus groups, and five key informants were interviewed (one health services representative, four Family Support Advocates). The most common overarching themes throughout the focus groups and key informant interviews were overwhelming poverty and mental health concerns among the children and families in North Minneapolis. The comments related to both the effects of individual level poverty on well-being, but also the impact of living in a low-income community on well-being. The following quotes represent the experiences of poverty including living in a distressed community, difficulty with access to health care, food insecurity or hunger, and parenting schedule challenges that ultimately impact child well-being.

Distressed community:

> *"We live in a high stress area – lots of drugs, homicide, (no) money, hassle – 2 out of 10 homes have no men – there are no father figures around."*
>
> *"There are so many foreclosures. If a house is foreclosed it is because don't have enough money – forced to go homeless."*

Access to health care:

> *"Money for co-payments – not getting care because have to take it out of day care and pay co-pays"*
>
> *"Problem is working 3 jobs. If kids is sick, I need to take time off work.*

> *Would lose my job. Don't have time to take off work with family providers."*

Food insecurity or hunger:

> *"Mostly have to travel for groceries but liquor stores are everywhere."*
>
> *"Food is an issue – gotta know where are food shelves, how to get back on other resources, there are new people with food issues, can't afford to buy food."*
>
> *"Hunger – yes and going to get more hungry."*

Parenting schedule affecting child outcomes:

> *"Kids not getting enough sleep – mom sometimes works 16 hours per day. The kids stay up so they can see their mom."*

In summary, all agreed that the general neighborhood physical and social environment was harmful to health and well-being for families and young children. In short, families were stressed.

Using this information as a guide, a survey was developed that incorporated these themes, using reliable and valid survey questions where available; it was shared with the Leadership Team, Family Support Advocates, and Operations Team. We field tested the survey, adjusted, and then had it translated into Spanish and Somali. Spanish-speaking and Somali-speaking Family Support Advocates reviewed the translated documents prior to implementation with families. After the Somali survey was in the field for two months, additional concerns were raised. Some of the translation was done in a dialect different from that used by Somali residents in North Minneapolis. As many Somali families were not literate in Somali or in English, the survey was read aloud by the Family Support Advocate, requiring extra time. Additional edits were therefore made and allotted administration times lengthened.

What the Survey Told Us

Seventy-two families completed the survey. Families were very low-income, most families did not speak English at home, most were renters, and one-third of families were food insecure. However, approximately half responded that the condition of their house was good or excellent. Details of the data analysis can be found elsewhere (McConnell et al., 2012); however, key trends were apparent when exploring the intersection of health, education, and social conditions. Drawing directly on the report by O'Connell, Hearst and Martin:

> *As family income increased (even among families living in poverty),… it was less likely that parents would rate children's social-emotional status to be an area of concern. …as perceived quality of neighborhoods went up, so too did parents' ratings of children's developmental competence. In turn, parents who were satisfied with their neighborhood also had more social support and feeling of cohesion among their neighbors… As child health increased from poor to excellent among FHu5 families, parent ratings of all major aspects of child development trended higher. Children who watched less television and had on average more nightly sleep performed better on several of our school readiness assessments. Children whose parents reported more days of poor physical health also had lower scores on school-readiness assessments. In addition, developmental-assessment results decreased if the family was food insecure. (McConnell et al., 2012)*

Similar to Maslow's Hierarchy of Needs (Maslow, 1943), basic physiologic needs may not be met in these families, thus impeding optimal child health and development. Interventions must include stabilizing

families; addressing food security, housing, and safety; and addressing parenting practices around sleep patterns and TV viewing. Families need to feel safe in their communities and have a sense of belonging, social support and cohesion in the community. These unmet needs appear to be distally related to child health and development, yet the data suggest that these physiologic, safety, and sense of belonging variables are all correlated to child health and developmental outcomes, reinforcing the need for a multifaceted approach.

These findings were shared with the FHu5 Leadership Team, Family Support Advocates, and community partners in a group meeting to discuss implications of the complexity of environmental and social contexts, health, and child development. Additions were made to the Family Support Advocate home visit checklist to address emerging topics with families and to connect them to additional resources. New parent education topics were suggested based on the findings. And further conversations were held with the Family Support Advocates to both increase their knowledge of social determinants of health and education, and increase the University's knowledge about the community.

Unfortunately, it was at this time that the FHu5 program was defunded. 2008 was a challenging year for the economy. Failures in the stock market and the banking collapse radically changed the landscape for funding agencies. North Minneapolis continued to be decimated by housing foreclosures. The combination of absentee landlords defaulting on loans and predatory lending practices forced many families to be evicted, move in with family or friends, or live in houses without electricity or water. The silver lining is that:

> *FHu5, through its development and demonstration, staff development, and vision contributed directly to the design and initial operation of the Northside Achievement Zone (NAZ), and FHu5 staff…worked closely with community leaders developing NAZ to add dimension and content to their emerging plan. That work, certainly not solely due to the efforts of FHu5 staff but with discernible contributions, led to creation of a robust community-based organization that earned a $28M Promise Neighborhood implementation grant to provide a cradle-to-career pipeline for children in a geographic zone in North Minneapolis—a zone that includes part of the original FHu5 catchment area, and a set of services that includes [a family education program], strong and ongoing commitment to young children and their families, and a central focus on parent and family engagement (McConnell& Martin, 2012).*

LESSONS LEARNED

FHu5 opened an important door for me including the opportunity to participate in the Scholars Program at the UMN. The Scholars Program aimed to increase faculty and staff capacity to develop CER projects that were responsive to societal issues. The Scholars Program supported faculty and research staff to generate knowledge about health and education disparities in ways that may not be typically supported in academic institutions, particularly among untenured faculty (Calleson, Jordan, & Seifer, 2005). CER is time- and relationship-intensive, and may yield products different than those expected in research-oriented institutions of higher education. Funding streams may also differ as research scopes may be smaller and thus not necessarily, particularly at early stages, funded by large federal grants.

Although ultimately defunded, FHu5 is an excellent example of CER. The process of learning, listening, sharing, co-developing, and implementing data collection procedures was slow and iterative, and done within the context of mutual respect and trust. The fact that the project was defunded is one example of the challenges of CER. Funding sources may be from less secure funding mechanisms that are at greater risk for market fluctuation. Smaller amounts of money may be pieced together and any loss in funding may be devastating to a project. What is needed is commitment from large institutions to provide long-term and ongoing support for CER. Although the financial crisis in 2008 impacted federal funding dollars also, political will aimed at prevention strategies to positively impact communities would have been an excellent long-term investment. Our process and outcomes were informative to all the teams, yet the benefit only partially circled back to the families in this project. If funding had been sustained and the project had more time, we could have been responsive to the needs of the time and the needs of families, improving outcomes for all.

As a Scholars Program participant and public health researcher, I reflect on my role in FHu5 and consider ways to improve community-university partnerships and CER in my future work. According to seminal work by Israel and colleagues, CER builds upon strengths of the researcher and community partners to allow the community to have a part in decisions that affect their own lives (Israel, Schulz, Parker, & Becker, 1998). CER is not an either-or approach. CER projects fall on a continuum of engagement. If one imagines a continuum from left to right, researchers may engage with communities with outreach (one-way communication); consultation (researcher receives advice from community); involvement (communities have input before questions or methods are determined); shared leadership and participation; or community-driven approaches (Israel, Eng, & Schulz, 2005; Israel et al., 1998). The definition of community may vary, including differences between individuals within the community vs. community-based organizations that may represent or serve these individuals.

The FHu5 CER component used consultation and involvement approaches to address social determinants of health and education disparities. As my training in the Scholars Program continued, I understood that my CER efforts on this project were toward the left side of the continuum of engagement. For example, the FHu5 intervention was underway with established relationships and methods. The formative research built upon existing structures. Therefore, the most logical approach given funding and project constraints was to provide the Leadership Team, Operations Team, and Family Support Advocates with summaries and draft survey question items. A more progressive and inclusive CER approach would have been to invite individuals who participated in the focus groups to the table to determine themes and participate in the survey development.

Finally, it is clear that more of my time was required to understand the residents and their community context and to build relationships with partners. Given competing priorities and my physical location on campus, I spent limited time in the community with the Family Support Advocates, at events, or visiting families. This distance created a barrier to building trust and relationships. While I felt I was open to all feedback, dialogue, and adaptation, I learned that the Family Support Advocates did not feel like "equal partners" and therefore did not feel comfortable expressing concerns. One important example was that it took two months for one Family Support Advocate to share the errors in the Somali

translation of the survey. It was clear by the end that the Family Support Advocates did not know me and did not know if they could trust me and that we were not effectively communicating and sharing knowledge.

In my current CER efforts, I am now deliberate in my intentions to build strong relationships, clarify and verify two-way communication, be present, listen, and listen more. Effort is spent on shared learning, translating between disciplines and experiences, building trust, and assessing the effectiveness of the partnership, all with an eye toward sustainability with or without grant funding. The experience with FHu5 coupled with the Scholars Program enhanced my capacity to further advance my role in effective CER.

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