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Examining Neighborhood Social Cohesion in the Context of Community-based Participatory Research: Descriptive Findings from an Academic-Community Partnership

Lori Brand Bateman, PhD[1]; Mona N. Fouad, MD, MPH[1]; Bianca Hawk, MSW, MPH; Tiffany Osborne, BA[1]; Sejong Bae, PhD[1]; Sequoya Eady, MPH[1]; Joanice Thompson, BS[1]; Wendy Brantley, BS[2]; Lovie Crawford, BS[2]; Laura Heider, MBA[1]; Yu-Mei M. Schoenberger, PhD[1]

Objective: The purpose of this article is to describe the process of conducting an assessment of neighborhood perceptions and cohesion by a community coalition-academic team created in the context of community-based participatory research (CBPR), to guide the design of locally relevant health initiatives.

Methods: Guided by CBPR principles, a collaborative partnership was established between an academic center and a local, urban, underserved neighborhood in Birmingham, Alabama to identify and address community concerns and priorities. A cross-sectional survey was conducted in September 2016 among community residents (N=90) to examine perceptions of neighborhood characteristics, including social cohesion and neighborhood problems.

Results: The major concerns voiced by the coalition were violence and lack of neighborhood cohesion and safety. The community survey verified the concerns of the coalition, with the majority of participants mentioning increasing safety and stopping the violence as the things to change about the community and the greatest hope for the community. Furthermore, results indicated residents had a moderate level of perceived social cohesion (mean = 2.87 [.67]).

Conclusions: The Mid-South TCC Academic and Community Engagement (ACE) Core successfully partnered with community members and stakeholders to establish a coalition whose concerns and vision for the community matched the concerns of residents of the community. Collecting data from different groups strengthened the interpretation of the findings and allowed for a rich understanding of neighborhood concerns. *Ethn Dis*. 2017;27(Suppl 1):329-336; doi:10.18865/ed.27.S1.329.

Keywords: Social Cohesion; Community-based Participatory Research; Academic-Community Partnerships; Social Determinants of Health

Introduction

Social determinants of health (SDH) play an important role in shaping individual and population health, and this includes individual perceptions of neighborhood characteristics, such as social cohesion.[1] Social cohesion has been defined as "the extent of connectedness and solidarity among groups in society"[2] and includes the "absence of latent social conflict" and the presence of strong social bonds,"[3] which are measured by such constructs as trust and mutual benefit.[4] Research indicates that feeling unsafe in one's neighborhood and the fear of being a victim of crime can decrease social ties and social cohesion among neighbors.[5-10] Further, perceived neighborhood violence and hearing about violence in one's community, in addition to being a victim of violence, contributes to adverse psychological conditions such as anxiety, depression and stress.[11,12]

For that past 3 decades, a common approach to addressing the health of disadvantaged communities has been establishing community coalitions.[13] Coalitions are defined as, "inter-organizational, cooperative, and synergistic working alliances" that bring individuals representing diverse groups within a community together for a shared purpose.[3,13] Coalitions have the potential to impact public health, depending on the interventions implemented and the coalition's effectiveness.[14] Studies have shown that the most effective coalitions share common indicators, such as formalized rules and procedures, leader-

[1]Preventive Medicine, University of Alabama at Birmingham, Birmingham, Alabama
[2]Kingston Coalition, Birmingham, Alabama

Address correspondence to Lori Brand Bateman, PhD; Division of Preventive Medicine, School of Medicine, University of Alabama at Birmingham; 1717 11th Avenue South, Birmingham, AL 35294; 205.934.2924; loribateman@uabmc.edu

ship style, participation from active members, diversity of members, collaborations between agencies, and cohesion within the coalition.[15]

Community-based participatory research (CBPR) is an ideal foundation for coalitions consisting of academic and community partners who work together to address the health of a community.[16,17] CBPR, with its roots in Empowerment Theory, holds that, in order for community members to address goals for social change that are introduced from an outside entity, they must be empowered to address their own concerns and goals.[18,19] With its emphasis on equitably involving diverse partners in all phases of research, capacity building, empowerment, and balancing research and action for the mutual benefit of all partners, the CBPR approach has become the predominant model for examining and addressing health disparities experienced in underserved, racial/ethnic minority communities. CBPR approaches to promoting health and social cohesion can help reduce health disparities by focusing on locally defined priorities and locally specific health determinants. In contrast, research that does not take local priorities and perspectives into account may develop strategies and recommendations that fail to address relevant SDH.[20-22]

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The purpose of this article is to describe the process of conducting an assessment of neighborhood perceptions and cohesion by a community coalition-academic team created in the context of CBPR; results of the assessment will guide the design of locally relevant health initiatives. A partnership was established between the Academic Community Engagement (ACE) Core of the Mid-South Transdisciplinary Collaborative Center for Health Disparities Research (Mid-South TCC) and a local, urban, underserved neighborhood to identify and address underlying causes of health disparities in the community. CBPR served as a way for academic investigators and community partners to work together collaboratively as equals and to ensure that research topics emerged from the community and not solely the researchers.[20] More details about the Mid-South TCC and the ACE Core are provided in Fouad et al in this supplement.

Methods

Community Coalition Building

The city of Birmingham is home to 99 neighborhoods, many of which are affected by food deserts, school closings, and violence. The community under study is among the poorest of the neighborhoods, with a population of 6,792; of these, 90.7% are African American and 67% have a high school education or less. The median household income is $20,771. This community has a high percent of vacant housing units (32.5%) and a violent crime rate of 30.3 offenses per 1,000 people.[23]

The president of the community's neighborhood association had a strong interest in improving the health of the community by making changes within the community, ie, social determinants of health. Through an initial meeting between the neighborhood association president and a community engagement specialist from the ACE Core of the Mid-South TCC, the solidification of the idea for the community coalition emerged. The community engagement specialist had more than 20 years of experience applying CBPR principles to build coalitions throughout the Birmingham community.

The community engagement specialist and two members of the Mid-South TCC staff collaborated with the neighborhood association president to identify and recruit, via email, telephone, and face-to-face meetings, the natural leaders in the community. Using the snowball approach, the initially identified leaders recommended other individuals based on their leadership in the community or their expressed interest in the community. At the kick-off meeting, the coalition was briefed on the expectations, long-term goals, and objectives of the

project, and then the floor was open to comments, questions, and suggestions for additional members. By allowing both the staff and the coalition members an opportunity to express goals and suggestions in an open discussion, mutual respect, shared-decision making, and power sharing, which are key principles of CBPR, were established.

Prior to addressing the areas of concern in the community, CBPR principles encouraged trust building and group buy-in. A trust building activity that was implemented was "Miracle Question" icebreakers (a social work concept for solution-focused brief therapy),[24] where coalition members voiced their vision for the neighborhood to the group. Icebreakers such as the "Miracle Question" are implemented to begin the trust building process by fostering an intimate conversation of personal expectations that will ultimately result in objectives and goals being established. The Mid-South TCC investigators' goal for this exercise was to establish a position with the coalition as a trusted partner in working toward seeing the visions come to pass for the community. Also, we provided dinner for our coalition members at all meetings as a gift of appreciation for their time and attention to this new effort in their area. Moreover, we held all meetings in the community so as not to create a travel burden for residents who lacked transportation and so that residents would be able to stay in their own environment. The meetings were held once a month on a day and time most convenient for the coalition members, and communication between meetings occurred via email and Facebook group postings. The monthly meetings were first planned and led by members of the Mid-South TCC; however, when the coalition solidified, the leadership transitioned to non-academic coalition members.

Coalition meetings were focused on identifying health challenges confronting community residents; these challenges formed a framework that could then be addressed in future health initiatives. Once trust and capacity were built, coalition members began to work together to address the underlying causes of health disparities, especially the social determinants of health by detailing their vision for a healthier community, developing a comprehensive community action plan (CAP), and prioritizing the list of community concerns to address. In a true CBPR approach, the issues were self-addressed by the community; solutions were formulated as a group; and then the community led the resource acquisition with guidance from the Mid-South TCC. With assistance from an academic investigator, the coalition submitted a grant proposal to the Mid-South TCC to request community capacity development funds to implement health initiatives as well as to conduct a community assessment and coalition meetings. The proposal was accepted and the coalition received funding.

Community Survey

The academic investigators of the Mid-South TCC ACE Core, with input and feedback from the community coalition, designed a cross-sectional survey to: examine perceptions of neighborhood characteristics; establish whether or not the community as a whole shared the same concerns as the coalition; and solicit ways to address those concerns. The collected survey data would also serve as baseline data before health initiatives were implemented. The content of the survey was based on coalition-identified concerns as discussed in the Measures and Results section. Individuals aged >18 years and attending a coalition-hosted community event (Get to Know Your Neighbor Day in September 2016) were asked to complete the survey. Attached to each survey was a cover letter that included information about the research study, voluntary nature of participation, and a number to call if there were any questions about the study. By completing the survey, the individual agreed to participate in the study. As a token of appreciation for completing the survey, t-shirts that showcased the name of the community and "Get to Know Your Neighbor" were given to all participants. Approval for this study was obtained from the institutional review board (IRB) of the University of Alabama at Birmingham, and all procedures were in accordance with the ethical standards of the IRB and with the Helsinki Declaration of 1975, as revised in 2000.

Measures

Perceptions of neighborhood characteristics included stability (whether the neighborhood was improving, stable or declining), satisfaction (how satisfied they were with living in the community), social/physical characteristics (character-

istics liked most and least about the neighborhood), and social cohesion. Neighborhood social cohesion[25] was measured with 5-items on a 5-point Likert scale (strongly agree to strongly disagree): 1) people around here are willing to help their neighbors; 2) this is a close-knit neighborhood; 3) people in this neighborhood can be trusted; 4) people in this neighborhood generally do not get along with one another; and 5) people in this neighborhood do not share the same values. The range of values was 1–5 with a higher score indicative of higher social cohesion. We reverse-coded questions 4 and 5 for ease of interpretability. Social connectedness was assessed with the following two questions: 1) how important it is to know your neighbors (5-point scale from very important to not at all important); and 2) how often do you interact with your neighbors (5-point scale from almost always to never).

Demographic variables collected included age, sex, and race/ethnicity. Being CBPR research, coalition members stated that socioeconomic questions (ie, income, education, and occupation) may offend participants, so those questions were omitted from the survey. Self-rated health was measured as a single item, "In general, would you say your health is…" on a 5-point Likert-type scale (excellent, very good, good, fair, poor).[26] Home ownership (rent or own) and type of housing (house, apartment, or living with friend/relative) data were collected.

Two open-ended questions about the community, developed jointly by academic investigators and coalition members, included: "If you could change one thing about [this community], what would it be?" and "What is your greatest hope for the future of the [community]?"

Table 1. Characteristics of participants, N=90

Variable[a]	n (%)
Sex	
Male	24 (28)
Female	61 (72)
Age groups	
18-34	35 (42.2)
35-49	23 (27.7)
≥50	25 (30.1)
African American	85 (94)
Community resident, years, mean (SD)	12.1 (17.4)
Residence type	
House	17 (20)
Apartment	53 (62)
Friend/Relative	16 (18)
Home ownership	
Own	11 (14)
Rent	67 (86)
Self-rated Health	
Excellent	22 (27)
Very good	28 (34)
Good	19 (23)
Fair/poor	13 (16)

a. Some variables have missing data, percentages are based on the n of each individual variable per group. N may not add up to 90 due to missing response.

Analysis

Survey responses were evaluated using descriptive statistics; frequencies and percentages were calculated for categorical variables, and means and standard deviations were calculated for continuous variables. Stepwise regressions were used to examine relationships between characteristics and social cohesion variables. In our multivariable model, we examined multicollinearity of covariates using the variance inflation factor threshold of 5. Statistical analyses were performed using SAS v9.4, where statistical significance was considered if P values were <.05. Qualitative responses were analyzed by the method Thematic Analysis, where data is coded and themes identified, defined, and named.[27]

Results

Community Coalition Building

The coalition consisted of school principals, teachers, ministers, and state and municipal employees representing public housing and the Birmingham City Councilor's office, community advocates, and presidents of both the neighborhood and public housing associations in the community. An average of 20 members attended each monthly coalition meeting. To carry out the activities of the coalition, we formed

a community project committee and a development committee. The community project committee focused on implementing programs based on the CAP; the development committee focused on seeking funding such as fundraising and grant proposals to sustain the coalition.

Concerns expressed by the coalition members ranged from neighborhood violence to relationship building and safer walking routes to local schools, with violence and safety being a particular concern. Monthly face-to-face discussions led to a shared understanding among group members of prioritized needs, which were narrowed to three areas: 1) children; 2) communication; and 3) relationship building.

The coalition felt the community could not tackle the list of concerns if there was not a sense of social cohesion and connectedness within the community. Based on the CAP and the prioritized needs, the first community-building project implemented by the coalition was a "Get to Know Your Neighbor Day," which promoted community cohesion. The event brought together more than 300 community residents (adults and children) for a day of fun and relationship building. The event was also used to promote health and wellness as well as safety and violence prevention.

Community Survey

A total of 134 individuals attending the "Get to Know Your Neighbor Day" completed the survey; however, we only analyzed data from participants residing in the targeted neighborhood (N=90). Among those, 72% were females, 94% were African American, and 70% were aged <50 years. Most participants (86%) reported renting their place of residence, and the median duration year of living in the community was 4 years, with a range of 1 to 71 years (Table 1). Only 16% rated their health as fair/poor

Half (52%) of participants reported being satisfied with living in the community. Only 35% of the participants indicated that the community was improving and 26% "strongly agreed" or "agreed" that the neighbors can be trusted. On a scale of 1 to 5, with higher score indicative of higher social cohesion, the mean perceived social cohesion was moderate (2.87 [.67]). When asked what was the best or least liked thing about living in the neighborhood, 47% of participants indicated "My house/apartment" and 56%

Table 2. Perceptions of neighborhood characteristics, N=90

	n (%)
Satisfaction with living in the neigbhorhood	
Very satisfied / satisfied	43 (51.8)
Very dissatisfied / dissatisfied / unsure	40 (48)
Is the neighborhood improving?	
Improving	26 (35.1)
Stable	28 (32.8)
Declining	20 (27)
Importance of knowing neighbors	
Very important / important	60 (70.6)
Moderately / slightly / not at all important	25 (29.4)
Interact with neighbors	
Almost always / often	38 (46.3)
Sometimes	30 (36.6)
Seldom / never	14 (17.1)
Willing to help neighbors[a]	
Strongly agree / agree	37 (45.7)
Neither agree or disagree	28 (34.6)
Strongly disagree / disagree	16 (19.8)
Close-knit neighborhood[a]	
Strongly agree / agree	30 (36.6)
Neither agree or disagree	33 (40.2)
Strongly disagree / disagree	19 (23.2)
People can be trusted[a]	
Strongly agree / agree	22 (26.2)
Neither agree or disagree	31 (36.9)
Strongly disagree / disagree	31 (36.9)
Do not get along[a]	
Strongly agree / agree	43 (52.4)
Neither agree or disagree	21 (25.6)
Strongly disagree / disagree	18 (22.0)
Do not share the same values[a]	
Strongly agree / agree	51 (60.0)
Neither agree or disagree	20 (23.5)
Strongly disagree / disagree	14 (16.5)
Perceived social cohesion, mean (SD)	2.87 (0.67)

a. Social cohesion scale.

indicated "Safety in the neighborhood," respectively (not shown in table). Other neighborhood related responses can be found in Table 2.

In our multivariate analysis (Table 3), we observed that after adjusting for the confounding variables (age, sex and race), those who indicated the neighborhood is "improving" had a .44 higher score in social cohesion than the ones who answered "declining" (P<.01). Furthermore, participants who responded "almost always/often" to the question "How often do you interact with your neighbors?" had a .405 higher social cohesion score than those who answered "seldom/never" (P<.001).

The top concern (safety/violence) and greatest hope (neighborhood cohesion) for the community voiced by the coalition was supported by the data collected from the community.

Analysis of the two qualitative questions of the survey showed that an overwhelming number of participants mentioned increasing safety and stopping violence as the one thing to change and the greatest hope for the community. Other responses for the one thing to change included better housing and general neighborhood improvement. Getting along better with neighbors, improving children's lives, and improving various neighborhood conditions were the other top responses for the greatest hope for the future of the community.

Table 3. Multivariable model predicting high level of social cohesion

	Social Cohesion	
	F	P
Sex	.03	.87
Age groups	.00	.95
Race/ethnicity	1.06	.31
Neighborhood improving	5.45	.01
Interact with neighbors	15.88	.00

Discussion

Guided by CBPR principles, a team of academic investigators successfully partnered with neighborhood residents and stakeholders to form a community coalition with the goal of improving the health of the neighborhood by addressing the social determinants of health. With CBPR as our foundation, we conducted a community survey and worked together to develop a CAP based on the survey results to inform the priority areas for health initiatives. The top concern (safety/violence) and greatest hope (neighborhood cohesion) for the community voiced by the coalition was supported by the data collected from the community. Collecting data from different groups and in different methods strengthened the interpretation of the findings and allowed for a rich understanding of neighborhood concerns.[28]

Although appearing to be inconsistent, the finding that nearly half of the residents reported being very satisfied or satisfied with living in the community while simultaneously reporting that safety in the neighborhood was an issue, has been reported previously. A study conducted by Echeveria et al found similar results in examining the relation between neighborhood conditions and health.[29] Echeveria et al concluded that factors driving perceptions of neighborhood safety may be different than those driving perceptions of general neighborhood quality.[29] Further research is needed to determine the relationship between perceptions of neighborhood quality and conditions, such as safety, especially in communities with varying levels of social cohesion.

In our study, the majority of the participants reported that they had a moderate or low level of perceived neighborhood social cohesion. Further, feeling the neighborhood was improving and frequent interaction with neighbors was associated with a higher level of social cohesion. These findings have important implications in health disparities because social cohesion is a specific characteristic of neighborhoods that may impact both physical and men-

tal health among residents.[9,30-33] For example, Bjornstrom, Ralston and Kuhl[33] found that as perceived social cohesion increases, the likelihood of reporting poor or fair health declines. This is contradictory to our findings, as the majority of participants reported "excellent "or "very good" health status; however, the relative high level of self-rated health may be explained by the fact that the majority of the participants were aged < 50 years. Regardless, for future research, the issue of neighborhood social cohesion and trust should be explored through qualitative research. If neighborhood trust can be affected by interventions, perhaps social cohesion can increase along with self-rated health.

The Mid-South TCC ACE Core continues to work with and provide technical assistance to the coalition. As sustainability is a crucial component of CBPR,[19] the coalition maintains efforts to build its infrastructure by pursuing grants and new resource opportunities. For example, the coalition's Development Committee submitted two grant proposals to local community foundations to enhance and expand an existing community garden. The coalition believed that planning, planting, and nurturing this garden would improve neighborhood cohesion and help neighbors work together to make a positive change in their collective health behavior and living environment. In addition, education workshops about obesity prevention, the benefits of gardening, and healthy lifestyle choices are being incorporated in the community garden project.

Conclusion

Using the CBPR approach, the Mid-South TCC ACE Core successfully partnered with community members and stakeholders to form a coalition focused on improving the health of the community by addressing the social determinants of health. Through the coalition, community survey and CAP, we gained knowledge about the perceived neighborhood social cohesion as well as other perceptions of neighborhood characteristics. With the data collected through the community survey, the coalition can design future interventions that have the potential to influence the health of their community on a local level.

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Informed consent was obtained from all participants included in the study.

Conflict of Interest

No conflicts of interest to report.

Author Contributions

Research concept and design: Bateman, Fouad, Hawk, Bae, Eady, Thompson, Brantley, Crawford, Schoenberger; Acquisition of data: Bateman, Hawk, Osborne, Eady, Thompson, Schoenberger; Data analysis and interpretation: Bateman, Fouad, Hawk, Bae, Thompson, Heider, Schoenberger; Manuscript draft: Bateman, Fouad, Hawk, Osborne, Bae, Thompson, Brantley, Crawford, Heider, Schoenberger; Statistical expertise: Bae; Acquisition of funding: Fouad; Administrative: Bateman, Hawk, Osborne, Eady, Thompson, Brantley, Crawford, Heider, Schoenberger; Supervision: Fouad, Schoenberger

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