Using Sociograms to Enhance Power and Voice in Focus Groups

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Abstract Objective: To discuss the use of sociograms in our focus groups with homeless sheltered mothers and to assess facilitator influence and the distribution of power influence.

Design and Sample: An exploratory, descriptive qualitative design that utilizes both focus groups and sociograms. Two focus groups were conducted in December 2009 (N = 7) and January 2010 (N = 4). Data analysis included a content analysis and a process analysis using sociograms to graphically represent group participant dynamics. Results: Use of the sociogram provided a means to assess the influence of the facilitator as well as quantify the degree to which group participants voices are included. Conclusion: Using sociograms provides a viable mechanism to complement content analysis and increase the methodological rigor of focus groups in health care research.

Key words: focus groups, homeless persons, qualitative research, sociograms, women’s health.
Developed over a half century ago, the sociogram is a quantitative and graphic measure of persons and interactions within groups (Appleton, Terleksi, & Coombes, 2013; Brickell, 1950; Leung & Silberling, 2006). Unlike software programs that assist with content analysis using word count or coding systems to quantify group interactions, sociograms allow researchers to consider the source of comments and how individual voices fit into the larger pattern of group communication. Sociograms also offer additional information to researchers about their effectiveness in facilitating focus group interactions and the degree to which all participants at the table are offered the opportunity to share their thoughts and ideas during the data collection process. This has particular importance for vulnerable, less-empowered groups who have traditionally been absent, voiceless, or misrepresented in health research. When used in tandem with transcription in content analyses, therefore, the sociogram allows the researcher to see, as well as hear, who is shaping and dominating group discourse. Thus, as we discuss in this research article, using a sociogram alongside transcription helps provide a more balanced analysis of group process and content to describe the life experiences of homeless African-American women with children.

Background
Several barriers have been noted when attempting to initiate research among vulnerable groups, including perceived bias because of research methodologies that have been culturally insensitive and nonparticipatory (Getrich et al., 2013; Riden et al., 2012). African-Americans, in particular, describe a lack of perceived benefit to participating in research (Di Bari et al., 2007), raise concerns about exposure to harm (Corbie-Smith, Thomas, & St. George, 2002), and have limited understanding of the research process (Riden et al., 2012). Much of this is rooted in historical instances of research abuse which has perpetuated a pervasive mistrust by many vulnerable and minority populations regarding medical care and health care systems (Braunstein, Sherber, Schulman, Ding, & Powe, 2008). Although the research design should be guided by the nature of the inquiry, qualitative designs, such as focus groups, are particularly sensitive to research with vulnerable populations (de Chesnay, Murphy, Wilson, & Taualii, 2012) where a great deal of attention is given to detail and procedure.

Perhaps the most unique aspect of focus group methodology is the researcher’s role as group facilitator. It is imperative that the group facilitator establish a milieu of group rapport while facilitating broad participation among the group’s members (Morrison-Beedy et al., 2001). This is especially true when dealing with disparate groups where trust can be a barrier. Garnering true participation can be challenging; the group facilitator must shift the power away from self to allow the participants to more fully express their thoughts and beliefs, challenge one another, agree or disagree, and provide clarification (Morgan, 1996). Only by doing so can the group fully express issues that may be shared or experienced differently.

But even with recognition of the facilitator’s role in fostering discussion, the interaction between the facilitator and the group, as well as between group members themselves, is seldom analyzed as part of the overall thematic content (Lehoux, Poland, & Daudelin, 2006). As such, the analysis does not include details of how the flow of discussion occurred, whether the facilitator was able to effectively lead the group, and whether the content reflects the group at large, a select number of individuals, or only those most vocally dominant among the participants (Happell, 2007; Kevern & Webb, 2001). Kitinger (1994) argued that examination of group interactions provides contextual meaning to content-analyzed focus group data such that co-participants acted as co-researchers, “taking the research into new and often unexpected directions...” (p. 107).

Duggleby (2005) offered two approaches to the analysis of focus group interaction: description of the interaction as it relates to the analysis, and inclusion of the interaction in the data transcripts. Clear articulation of both interactions as a process and as part of the analysis has the potential to clarify social processes and group norms that influence data outcomes. Failing to account for these processes, including how the facilitator influences group interaction, runs the risk of reporting biased or inaccurate meaning to the group’s discourse.

Drahota and Dewey (2008) used sociograms in their focus group analyses to underscore how group
members interacted with each other and how the facilitator managed group flow and conversation. Developed by Moreno in 1946 (as cited in Leung & Silberling, 2006) to enhance his work in social psychology and interaction, the sociogram was derived from sociometry as a quantitative way to graphically describe persons and interactions within groups. Though sociograms were commonly used to depict group dynamics (Appleton et al., 2013; Leung & Silberling, 2006), Drahota and Dewey found little prior evidence of sociogram use with focus groups and thought it provided a clear visualization of facilitator influence. We followed their approach to determine the sociogram’s utility with our focus groups with homeless mothers to assess facilitator influence as well as to examine the distribution and power differential of voices within the focus groups themselves.

This study had two major aims: to explore the experiences and perceptions of African-American women with children and how the use of the sociogram helped us determine influence of facilitator and “dominant voices.” To more fully elaborate on our experience with its use, this study describes how the sociogram aided in our analysis, while actual focus group findings are reported elsewhere (Gultekin, Brush, Baiardi, Kirk, & Vanmaldeghem, 2014). This research was conducted through a collaborative of academic and community partners whose common interest in family homelessness research is modeled by a community-participatory action approach (Baiardi, Brush, & Lapides, 2010). Thus, the research team comprised academic researchers and community member investigators who were all engaged in the design, data collection and analysis of the study.

**Methods**

**Design and sample**

An exploratory, descriptive qualitative design to explore the experiences of homeless women was used for this study. Qualitative data were gathered through focus group interviews to elicit details of life for women and their children before, during, and after entering a homeless shelter; sociograms were used to depict the character and frequency of the group participants’ interactions.

A purposive sample of 18 homeless mothers was recruited through a social service agency providing support and rehousing services to homeless families in the city of Detroit. Of the 18 recruits, 11 ultimately consented and participated in one of two focus groups conducted in December 2009 and February 2010. Each focus group was 90 minutes in length, was conducted in a small private conference room located in a convenient downtown location accessible by public transportation, and digitally recorded. The study had full Institutional Review Board approval.

Participants ranged in age from 19 to 50 years old, were African-American, and were single parents of one or more children. All the participants were homeless and receiving services to assist with housing stability.

**Measures and analytic strategy**

Led by an experienced qualitative researcher using a semi-structured interview guide based on earlier pilot interviews, we followed recommendations by Kidd and Parshall (2000) to include a co-facilitator in the group to maximize the research team’s data acquisition. During the sessions, we purposely positioned the group facilitators across from each other and included two observers positioned at various locations around the table so that they might observe the group interactions from different perspectives. One of the observers took detailed field notes, documented the relational positions of participants, and noted other observations that could not be captured in digital recordings. The second observer documented a few words of each interaction to ensure accurate identification upon transcription of the recordings. Both observers were introduced to the group participants as research team members but only communicated if spoken to directly and then only at a minimum so as not to influence group dynamics or disrupt the group’s natural flow. The presence of “observers” also supported our intention to see as well as hear the voices around the table.

The presence of facilitators and observers also allowed a more diverse representation of the research team. All of the research team members were female. One of the research team members was a young African-American woman familiar with the community; one was a young White woman new to the Detroit area; one was a White middle-aged...
academic with long-standing experience with homeless populations; and one was a White, middle-aged academic and lifelong Detroit resident. This conscious arrangement and diversity of age, race, experience, and geographic knowledge was intended to alleviate, as much as possible, some of the disparity between the research team and the focus group members and to increase comfort and interaction. In spite of these efforts, it is possible that the racial composition of the research team influenced participant interaction at some level, and may have been perceived as a barrier to participant interaction for some focus group members.

Upon completion of each focus group, one of the research team members transcribed the recordings and compared notations to match voices to participants and determined communication directionality. Each group’s interaction was then visually depicted using a sociogram following the methodology described by Drahota and Dewey (2008). Word processing software was used to create lines representing frequency and directionality of statements between all focus group participants and the other facilitator. Weight was added to the lines based on the number of directed comments, adding 0.5 points of weight per statement in concordance with Drahota and Dewey. A word count was performed for all participants from the transcript to denote communication and contribution quantity. General comments to the entire group, usually by the lead facilitator in the introductory phase of the sessions, were not included in the sociograms but were included in the overall word count for each participant. After completion of both the transcription and the corresponding sociogram, all research team members independently reviewed the content and process of the groups and then discussed their interpretations of the data.

Results

The first focus group (Figure 1) comprised 11 total members: seven homeless participants, the two facilitators (A and B), and the two observers (A and B). After the lead facilitator’s brief explanation and overview of the focus group’s aims, communication ensued. Most of the participants started the session quietly and in a somewhat guarded fashion. Within 10 min, however, the group shifted from facilitator-led to participant-driven. Participants actively engaged with each other and with the facilitator, sharing words of encouragement, reinforcing each other’s observations and offering suggestions and advice. Participants also built upon one another’s stories and shared information learned during their process of rehousing, such as how to obtain furniture for their new apartments, which apartment complexes were safest and most affordable, and where to sign up for Christmas gifts for their children. This data, presented elsewhere (Gultekin et al., 2014), were rich in content about participants’ experiences and perspectives pertaining to homelessness for themselves and their children. What drove that data and its interpretation, however, was significantly shaped by the group process demonstrated in the sociogram below.

As can be seen in Figure 1, the discussion was unevenly distributed across group participants. For example, participants 3, 7, and 9 dominated much of the conversation, often engaged directly with the lead facilitator, and frequently steered the focus of conversation to address their own concerns and agenda. At times, the emphasis on their shared positions influenced other participants. In this example, while participant 3 initially spoke positively about her experiences in several Detroit shelters, her attitude shifted to reflect the more
negative tones of participants 4 and 7, who felt oppressed in their shelter environments. It is possible that participant 3 was unsure of the trustworthiness of the research team and chose to speak kindly of her shelter experience until she was sure there would be no repercussions for speaking her mind. In fact, participant 3 directed much of her interaction toward facilitator A rather than toward her peers, while participants 4 and 7 focused on building rapport with and supporting each other. Participant 6 interacted minimally, answering questions only when directed to her specifically, and left the session early. We heard later that she had an unexpected issue that occurred just prior to the session that likely took precedence over her active participation. Thus, while she may have participated less often and less forcibly than other group members, we were careful in our analysis to ensure that she was not voiceless.

In assessing the dynamics of the focus group interaction, we then considered why certain participants may have dominated the conversation. Participants 3 and 7 shared several characteristics—both had experienced homelessness twice and shared details of their prior successful rehousing efforts. Participant 3 had three children (one of which had been born while she was staying in a shelter) and participant 7 was 40 weeks pregnant with her third child. Both women had provided care for children with special medical needs and spoke of their mothering skills as successes. In sharing their stories, they connected with each other and often reinforced each other’s shelter experiences. Participant 4 was the youngest (age 18) in the focus group and participant 7 seemed to take on a maternal role with her, encouraging and supporting her contributions to the conversation with concrete examples. Participant 4 was able to steer some of the input of the other dominant voices, although not necessarily a dominant voice herself. Participant 9 was a mother of two young children and also gave birth while in sheltered housing. In the course of regaining housing, she had enrolled in a local university to pursue a degree in Social Work and thus viewed herself as the “success story” in the group. All three dominant voices focused on how their successes, especially their ability to parent under duress (i.e., caring for newborns in a shelter, keeping their children healthy, finding housing, knowing how to access resources, and maneuvering the public assistance system) differentiated them from their peers within the shelter. In this regard, they were acting as experts and advisors and were seeking approval and validation from each other, the facilitator, and the other participants in the group. When we reviewed the sociogram, we noted the large word count with some of the participants and facilitator A. This prompted some reflection as to how word count contributes to an understanding of the relationships and potential dominance of some members of the group. We ascertained that the word count may provide some knowledge about the general rapport among group members and the facilitator, but in and of itself, lends nothing to communication directionality or meaning that mirrors how group members interacted with one another and the research team.

To further ascertain facilitator influence, we made changes in the structure and composition of the second focus group to see if this illustrated effect. One of the second group’s facilitators (A) was also a facilitator in the first group and experienced with focus group methodology. The second facilitator (B) had limited facilitator experience but is an African-American woman closer in age to the participants and born and raised in Detroit. As noted in Figure 2, the second focus group comprised eight total members: four homeless partici-

![Figure 2. Sociogram of Focus Group 2](image)
pants, two observational members (A and B), and two facilitators (A and B). We anticipated nine participants, but had three no-shows and had to turn two away due to minor-age status (participants who had initially stated they met the lower age criteria of 18 but could not substantiate that claim). As with the first focus group, we established rules and guidelines for the researchers to explore group intersectionality and communication. One observational member (A) was instructed to take field notes and not to interact verbally with the group if at all possible, although we encouraged eye contact and displays of interest. As previously instructed, the facilitator from the first focus group (B) who was now an observational member (B), was to note group dynamics and monitor the recordings but would interact only if directly engaged. We decided to use a two-facilitator approach to see if the dynamic of the group changed depending on who and how the group was facilitated.

As illustrated above, the sociogram for the second focus group demonstrated patterns similar to those in the first, with three of the four participants (the exception being participant 2) directing multiple supportive or reinforcing statements to each other. Although a small cohort, new themes emerged from the prior session that captured the experiences of women, who though homeless with children, were anything but homogeneous (Gultekin et al., 2014). It is notable that in this group, participants 1 and 4 engaged more directly with facilitator B and each other than with other members of the group. Participants 1 and 4, ages 19 and 18 respectively, shared experiences as young mothers of infants who were facing homelessness for the first time and struggled to reach out to their families for support. Participant 3, an older (45-year old) participant with a teenage daughter, a long-standing history of a substance abuse disorder, and multiple episodes of homelessness, related most often to discussion by participant 4 and often engaged in side conversation with supportive gestures. We discovered within minutes of the focus group that participant 2, a 50-year-old mother of six children, was significantly hearing impaired. While the facilitators made efforts to include her, she interacted infrequently with the younger participants and limited her discussion. She too had experienced homelessness on multiple occasions and was in recovery from long-standing substance abuse.

Without intervention from the group facilitators, the group again accepted each other’s differing perceptions about the pathways to homelessness and the best way out of their situations, even if they did not always agree. Because the younger participants dominated in this group, we would have likely analyzed the group’s discourse with their experiences in mind and placed those of participants 2 and 4 at the margins. However, we may well have promoted their dominance by the presence of a younger facilitator who they thought would better listen to them. Using the sociogram along with our analysis helped us tease out the dominant voice from the rich context of the whole and ensured that less dominant voices were brought forward.

**Discussion**

Focus group methodology is used frequently in health-related research to solicit group interaction and meaning around particular phenomena. What is typically lacking in the analysis is careful attention to the interaction of participants with each other and the facilitators and how this process influences the ultimate tone and timber of group discussion. Using the sociogram along with analysis of the content of the focus groups, we were able to both hear the group’s experiences with and perspectives about homelessness and see their engagement, passion, and power within the group and how this may have been influenced by the facilitators.

Reviewing the sociogram along with each focus group’s transcribed notes, we were able to reflect on the nature and content of participant discussion and ensure that the themes emerging from the group were more inclusive, and not just those from the most dominant voices. This approach supports the work of Drahota and Dewey (2008) and highlights the importance of the sociogram in analysis. We also agree with Kidd and Parshall (2000) that including multiple researchers in the focus group process allows members to focus on one aspect of the group interaction and then, upon analysis, offer varying perspectives that increase analytic validity and reliability. In our own experimentation with single or multiple facilitators with varying levels of expertise and differing demographic characteristics, with co-facilitator and observer interaction or lack thereof,
and with varying compositions of researchers and participants in the groups, we found significant structural differences in how participants engaged, how communication flowed, what topics were emphasized, and how the level of communication ensued. The size of the group seemed to factor less importantly than on the shared identity group members had with one another or with the facilitator in determining which dominant voices prevailed.

Our ability to extract rich, personal detail from both focus groups reveals, moreover, that the variations in research team and facilitator structures proved at least adequate. The older, more skilled facilitator (A) who shared fewer demographic characteristics with the participants than the younger facilitators, proved more skillful at engaging all participants and allowing participants to control the direction of conversation. However, the younger, less experienced, African-American facilitator was able to engage participants directly and was more likely to guide participants into a specific area of conversation. Working together in the second focus group session allowed for both open and broad par-

Further, the age of participants was relevant to group interaction as the younger women seemed to identify quickly with each other, while older participants were more likely to shift to the margins. Most notable in our second focus group, this age difference led to a sense of “mother” and “daughter” dynamics within the focus group session between participants. Although this research was limited to two focus group sessions, and is therefore not generalizable to group dynamics among other distinct populations of research participants, it is important to note that attention to recognition of the group interactions and research team impact and role aided in a critical review of our focus group findings. This process enhanced the reliability and validity of our overall findings by accounting for power and group dynamics that swayed individual voices and reduced marginalization of quieter voices.

Further research using sociograms may elicit more specific communication patterns and interac-

tions, such as whether the origin of communication was a question, a response, meant for the entire group, or targeted to certain group members (i.e., the side conversation noted in Group 2 between participants 3 and 4). Nonverbal cues should also be included to determine if communication and dynamics shift when the facilitator(s) or group participants demonstrate approving or disapproving postures or behaviors (i.e., nodding in approval or disagreement, maintaining eye contact or looking away, smiling to some but not others). Varying group configurations by demographics, size, and researcher members may also yield different outcomes. Determination of word count may complement understanding directionality, but should be examined cautiously. The use of sociograms as depicted by our two focus group examples is thus useful in analyzing group interaction and how facilitators may influence how and what information is shared and whose voice(s) tend to dominate the discourse. This is important to increase the trustworthiness of the data collected and the themes that are ultimately developed from that data.

Research methods that engage vulnerable pop-

ulations are critical to addressing disparate health outcomes and the work of public health nursing. Focus group research has the ability to reach and give voice to populations that have been marginalized within more traditional research approaches. To do this more rigorously, however, focus group data must be evaluated in context, and attention must be paid to issues of power, influence, and equity, such that all voices are heard and included in the total analysis. Sociograms offer a way to evaluate group process through depiction of participant interaction, enhancing reliability and validity of findings by uncovering imbalances in voice.

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