ARTICLE

INFORMAL SOCIAL CONTROL OF INTIMATE PARTNER VIOLENCE AGAINST WOMEN: RESULTS FROM A CONCEPT MAPPING STUDY OF URBAN NEIGHBORHOODS

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How the neighborhood environment relates to intimate partner violence against women has been studied using theories applied originally to general violence. Extending social disorganization and collective efficacy theories, they apply a traditional measure informal social control that does not reflect behaviors specific to partner violence. We conducted a concept mapping study in two New York City neighborhoods, to understand what behaviors neighborhood residents might enact to prevent partner violence and how feasible and effective residents believed them to be. Results revealed a range of "preventive intervention behaviors." Cluster analysis revealed that these behaviors grouped into four general areas, corresponding to the victim, perpetrator, community, and formal systems. Preventive intervention behaviors rated by participants as most feasible focused on the victim, whereas those rated most effective involved formal systems. Results have theoretical and practical implications for future research and programs to engage neighbors and neighborhoods in intimate partner violence prevention. © *2012 Wiley Periodicals, Inc.*

INTRODUCTION

Empirical research into the role of the neighborhood environment in the distribution of intimate partner violence against women is growing with the renaissance of sociological theory-based, neighborhood effects research. Sampson and colleagues' germinal article (Sampson, Raudenbush, & Earls, 1997) found that neighborhood collective efficacy (the ability of a neighborhood to enforce shared norms prohibiting deviant behaviors) mediates the relationship between structural characteristics indicative of social disorganization and violent crime in Chicago neighborhoods.

Subsequent studies have applied a social disorganization theoretical framework to intimate partner violence against women with mixed results (Block & Skogan, 2001; Browning, 2002; Jain, Buka, Subramanian, & Molnar, 2010; Li et al., 2010; Wright & Benson, 2010) and critics have argued that extending social disorganization, and related sociological theories, such as collective efficacy theory, to intimate partner violence against women is problematic. To develop a more grounded understanding of how neighborhood characteristics relate to partner violence, qualitative analysts have explored the neighborhood social context surrounding victimization and perpetration, learning directly from neighborhood residents who have experienced partner violence (O'Campo, Burke, Peak, McDonnell, & Gielen, 2005). Here, we examine a construct central to social disorganization and collective efficacy theories: informal social control.

Social Disorganization and Collective Efficacy Theories and Intimate Partner Violence

Social disorganization theory as originally formulated proposed that neighborhood structural characteristics, e.g., residential mobility, concentrated poverty and ethnic heterogeneity, are associated with higher crime levels (Shaw & McKay, 1942). Extensions of this germinal theory have emphasized the roles of social networks and bonds (Kasarda & Janowitz, 1974; Kornhauser, 1978; Bursik & Grasmick, 1993), specifying the social processes that are thought to mediate relations between structural changes and violent

outcomes. More recent formulations propose that sociostructural changes reduce a community's collective efficacy, or the ability to collectively control deviant behavior in the neighborhood (Sampson et al., 1997; Sampson, 2003; Sampson & Morenoff, 2004). Collective efficacy has been operationalized as a combination of social cohesion and informal social control, the actions or behaviors that neighbors take to enforce shared norms. Analyses have found strong support for the notion that collective efficacy mediates the relationship between socio structural characteristics indicative of social disorganization and violence outcomes (Sampson et al., 1997; Pratt & Cullen, 2005).

However, there are theoretical reasons to believe that extending social disorganization to partner violence is problematic. Some have argued that because partner violence often takes place "behind closed doors" neighborhood-based social processes are unlikely to affect these "private" social interactions (Block & Skogan, 2001). Others have posited that the theory depends upon the attitudes and social norms of both the individuals and neighborhoods, respectively, involved which are difficult to assess, leading to underspecified models (Frye, 2007). Additionally, it may be that collective efficacy is, like other forms of efficacy (Bandura, 1989, 1997), specific to the focal behavior.

Most of the intimate partner violence studies that model collective efficacy have used a measure of informal social control tapping actions to control "deviant" behaviors among youth. Items include how likely a respondent believes a neighbor would be to intervene in the following behaviors among children: skipping school and hanging out on a street corner, spray painting graffiti on a local building, and showing disrespect to an adult. Also, in assessing intervention in a fight in front of their house and the fire station closest to their home was threatened with budget cuts, no item is specific to partner violence. Here, we explore the concept of informal social control as applied to intimate partner violence specifically, using concept mapping, an innovative method that blends qualitative and quantitative approaches to generate a visual map of how a group conceptualizes a particular topic (Kane & Trochim, 2007), from the perspectives of two urban neighborhoods' residents.

METHODS

Concept mapping is a multistep, mixed research method that results in a visual representation of how study participants conceptually organize and assess a particular topic (Trochim & Kane, 2005; Kane & Trochim, 2007). In the first step, the area of inquiry is determined and a single "focal question" to be posed to participants is developed. Next, one or more groups of study participants "brainstorm" action statements in response to the focal question. Participants are encouraged to generate as many statements as possible and the group facilitators probe to correctly ascertain participant intent, if unclear. The research team reviews all statements generated, eliminating redundancies and collapsing overlapping concepts to develop a parsimonious set of statements. Each statement is printed onto a single, small card and the participants "sort" and "rate" the statements. Participants receive a full set of cards and sort the cards into piles of similarly themed items and create a descriptive label for each pile. Participants then rate each statement according to various domains of interest.

In the analytic stages, all of the sorted piles and the statement ratings are entered into the Concept System® data analysis program. Once the data are analyzed, resultant

maps may be shared and discussed with the groups and potential applications of results are discussed and developed (Kane & Trochim, 2007).

Study Sample

We purposively sampled two low socioeconomic status (SES) neighborhoods for inclusion in the study. Because we were interested in the potential impact of neighborhood collective efficacy as measured traditionally, we stratified the 59 community districts of New York City by collective efficacy scores and an index of socioeconomic status. Collective efficacy scores for each community district were drawn from data collected via a random-digit-dialing phone survey of 4000 NYC residents conducted in 2002 (Ahern, Galea, Hubbard, & Syme, 2009). Collective efficacy was assessed as per Sampson (1997) by combining measures of social cohesion (e.g., "people around here are willing to help their neighbors" and "people in this neighborhood can be trusted") and informal social control (e.g., "if there was a fight in front of your house or building and someone was being beaten or threatened, how likely is it that your neighbors would break it up?").

We randomly selected one neighborhood on either side of the median of the collective efficacy scores. This resulted in two neighborhoods being selected, both low SES, but one (here called "Mentwick") with a mean collective efficacy score of 3.6 and the other (called "Jonesburg") with a mean collective efficacy score of 3.4 (the range for the entire sample was 2.73 to 4.05; the mean was 3.52 (standard deviation [*SD*] = 0.28); the range for the low SES community districts was 2.73 to 3.94; the mean was 3.39 (*SD* 0.28)). Because it was difficult to know how well the collective efficacy scores translated into true neighborhood differences in social cohesion and collective action (informal social control), we did not re-select neighborhoods in search of a greater difference in the scores of the neighborhoods selected, preferring instead to explore whether this almost one standard deviation difference between the scores affected our findings.

Study Procedures

The convenience sample was accrued using active street recruitment methods. Male and female recruiters, working in teams of two to three, were trained on the study purpose, street recruitment techniques, assessing eligibility criteria, and ethical issues in conducting partner violence research. The study was described as one on domestic violence against women living in the neighborhood. Potential participants received $50 and $60 for participating in brainstorming and sorting and rating sessions, respectively. Eligible participants had to be 18 years or older, able to read and write in English, and residents of a focal neighborhood. Eligible participants completed a contact form, which included basic sociodemographic and contact information. English literacy was assessed by completion of the contact form as well as through discussion during the recruitment process. Eligible participants were given a card with information about the upcoming session, study contact number, time and location of the session, and exceptions to confidentiality, including disclosure of intent to harm themselves or others and child maltreatment or abuse.

In spring 2010, we conducted three brainstorming groups (N = 36) using this focal question: "One specific action that a neighbor or group of neighbors could do to prevent a woman from experiencing partner violence is . . . ." All brainstorming groups were segmented by sex with two groups of women (N = 18) and one group of men (N = 18). The groups generated over 200 response statements, which were reviewed and reduced

using an iterative approach. Once the final set of 76 statements was composed, sorting and rating groups were conducted with a mix of earlier brainstorm group participants (N = 17) and newly recruited participants (N = 22), with a total of 39 individuals conducting the sorting and rating.

These groups were segmented by sex but not by neighborhood, as all work was completed individually and did not require group discussion. Participants were asked to rate each statement on a scale of 1 to 5, ranging from 1 (*not at all*) to 5 (*extremely*) on the following: feasibility for them (the participant); feasibility for an average neighbor; and effectiveness in preventing partner violence. Feasibility was defined as the likelihood that "you could and would" engage in the behavior. Each of the sort piles and rating sheets were manually reviewed for completeness. Two participants were unable to complete the tasks; their data were excluded from analyses, thus 37 participants' sorting and rating data contributed to the maps and ratings. The study was reviewed and approved by the Institutional Review Board of the University Committee on Activities Involving Human Subjects of New York University.

Analysis

Concept mapping uses two statistical techniques, multidimensional scaling (MDS) and cluster analysis, to generate the concept maps and specify relationships among statements. Cluster analysis is used to group the statements using the data from the "sorting" exercise. MDS is used to create a visual map of the distance between each group of statements. The data used are the statements generated by participants, the piles into which the data are sorted, and the ratings attached to each statement. To use these data, each participant's sort is converted to a 0,1 co-occurrence matrix where 1 is entered into a cell if the row and column statement pair were grouped together by the participant, and a 0 if not. Thus, each statement exists in the rows and the columns and a binary similarity matrix is constructed for each participant.

A group similarity matrix is created by summing these individual matrices and is simply the number of participants that sorted each pair of statements together. To "map" the data, the summed square similarity matrix table is represented as distances in Euclidian space using MDS (Kruskal & Wish, 1978). The MDS solution is restricted to two dimensions in concept mapping and yields an x, y value, which when plotted are the point on the concept map. Next hierarchical cluster analysis is used to partition the MDS map hierarchically into nonoverlapping clusters (Anderberg, 1973; Everitt, 1980). Ward's algorithm (1963) is used in the hierarchical cluster analysis; clusters that are close together then have stronger relations than those that are farther apart.

The final cluster solution is determined by examining the bridging values, values that range from 0 to 1 and that indicate how often a statement was sorted with other statements; lower bridging values suggest a closer relationship with other statements in the cluster. Kruskal's stress statistic, which is a sum-of-squared differences estimator, is produced as an accuracy measure, with any value lower than 0.30 is considered adequate in concept mapping (Kane & Trochim, 2007). To arrive at the final cluster solution, the analyst examines the values and the maps as the cluster solutions increase to identify the final solution. For example, as the cluster solution moves up a cluster with a bridging value of 0.80 may split into two clusters with lower values, indicating more distinct clusters. At times, the bridging value for only one of the new clusters will decrease and the analyst assesses the utility of the split, based on the new and old bridging values and the contents of the two new clusters (Concept Systems Inc., 2003).

Thus, the process is both objective and subjective, and dependent upon the analyst's in-depth knowledge of the data, method, and processes underlying the research question. The final cluster arrangement is superimposed onto the point map and each cluster is named. For this study, the research team labeled the clusters using the labels provided by the participants as well as our own understanding of the content of the piles; we attempted to emphasize in our labels those items with the lowest bridging values as they represent "anchor" items for their respective clusters. The statement rating data can also be overlaid to identify clusters with the clusters getting "taller" visually as they are rated as more feasible, for example. We analyzed cluster-rating maps for three of our rating scales: feasibility for you, feasibility for your average neighbor, and effectiveness in preventing partner violence. Using PASW/SPSS 18.0 (Chicago, IL.), we examined differences in mean feasibility and effectiveness ratings by cluster and participant sociodemographics using *t* tests for continuous variables.

RESULTS

More residents of Mentwick (N = 26) than Jonesburg (N = 11) participated in the sorting and rating groups; the average age of participants was 39 (*SD* = 10.0) and just over half were male. Across both neighborhoods (N = 37) about 50% of participants self-identified as African American or Black, 25% Latino/a, and 25% as White. Forty-three percent of participants had either some college or a college degree, and 54% reported incomes of less than $10000 per year and 78% were unemployed. There were differences in the sociodemographic profiles of the participants from Mentwick and Jonesburg, with the Jonesburg participants being younger and with higher levels of education. As compared with the underlying population, Jonesburg participants were more likely to be White, born in the United States and college educated. The Mentwick participants were more likely to be male, African American/Black, born in the United States and unemployed as compared with the underlying population (Table 1).

Concept Maps

We examined the cluster solutions and bridging values including the entire sample (pile sorts from participants living in both neighborhoods) and found that the statements clustered in four main areas: (a) actions focused on semiformal and formal public health, safety and welfare systems (for example, "call the police anonymously," "call Administration for Children's Services," and "call a domestic violence hotline"); (b) actions focused on the abuser/perpetrator (for example, "step in an physically stop the abuse," "let the abuser know that you expect the abuse to stop," and "try to keep the abuser away from the victim during an incident"); (c) actions focused on the community (for example, "work with leaders of community organizations to create a neighborhood group to address domestic violence," "ask the pastor/priest at a local church or other place of worship to speak out against domestic violence," and "organize a meeting with neighbors for abused women in the community"); and (d) actions focused on the victim (for example, "talk to the victim to determine if she is in an abusive relationship," "suggest that the victim go to counseling," and "take the victim to a safe place, such as a shelter").

As we proceeded through the cluster solutions and examined the bridging values, we determined that a 17-cluster solution fit the data best. Figure 1 depicts this map, with the cluster labels. Further splits (from a 17- to 18-cluster solution) did not result in lower

Table 1. Sociodemographic Characteristics of Sort and Rate Sample (N = 37) and Community District (CD) Population (Census 2000)

Factor	*Overall (n = 37) % (N)*	*Mentwick (n = 26) % (N)*	*Mentwick (CD) % (N)*	*Jonesburg (n = 11) % (N)*	*Jonesburg (CD) % (N)*
Age					
Median age	41	42	27	32	30
Sex					
Male	57% (21)	61.5% (16)	48%	45% (5)	49%
Female	43% (16)	38.5% (10)	52%	54% (6)	51%
Place of birth					
Born in the United States	81% (30)	85% (22)	65%	73% (8)	68%
Ethnicity					
Hispanic/Latino	24% (9)	19% (5)	39%	36% (4)	70%
Race					
Black	51% (19)	69% (18)	24%	9% (1)	6%
White	27% (10)	11% (3)	4%	64% (7)	49%
Asian	0% (0)	0% (0)	4%	0% (0)	6%
Native American	3% (1)	4% (1)	<1%	0% (0)	<1%
Mixed Race	5% (2)	4% (1)	<1%	9% (1)	<1%
Other (not specified)	13% (5)	11% (3)	[a]	18% (2)	[a]
Education					
Some college or more	43% (16)	27% (7)	25%	81% (9)	25%
Income					
Less than $10000 per year	54% (14)	32% (13)	27%	14% (1)	23%
Employment					
Currently employed	22% (8)	12% (3)	55%	50% (5)	57%
Experience of intimate partner violence					
Perpetrated	35% (13)	42% (11)	[a]	18% (2)	[a]
Experienced	54% (20)	50% (13)		64% (7)	
Both	27% (10)	35% (9)		9% (1)	

[a]Not available in census data.

bridging values or a substantive differentiation that we thought would be meaningful either theoretically or practically. The stress statistic on this analysis was 0.207 indicating a stable pattern of relationships among the clusters. The items contained within each of the 17 clusters along with their average ratings are listed in Appendix; Figure 2 illustrates these 17 clusters nested within the original four-cluster areas described above.

We repeated this procedure stratified by neighborhood. For Mentwick we determined that a 15-cluster solution fit the data best, whereas for Jonesburg we concluded that a 16-cluster solution fit best. The stress statistic for the Mentwick cluster solution was slightly higher at 0.25, whereas for Jonesburg it was 0.21. This suggests that there was less stability in the Jonesburg cluster solution using data from residents of Mentwick only, due to the smaller number of participants contributing to the map. However, the Jonesburg clusters were similar to the map using the sorts by residents of both neighborhoods, whereas the Mentwick clusters were larger and closer together in general, indicating that more participants sorted them with other statements more often.

Several patterns emerged examining the whole set of maps. Two items, "support neighborhood parents by offering to babysit or play with children" and "get to know your neighbors, talk to them and socialize regularly", were clustered together and at a distance from the nearest clusters across both neighborhoods. Both items were generated in the

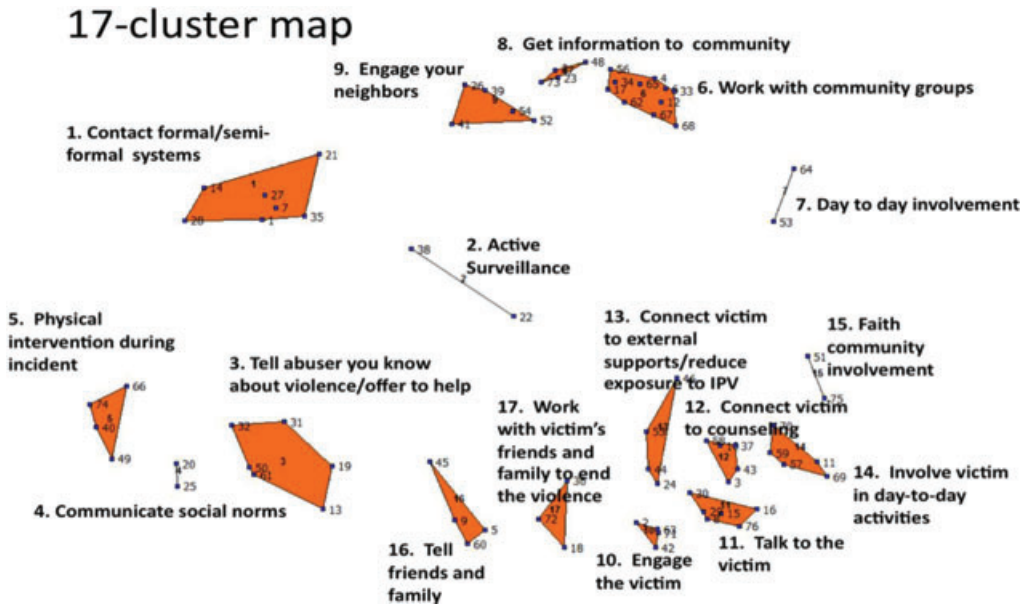

Figure 1. Seventeen-cluster concept map of informal social control of intimate partner violence (N = 37).

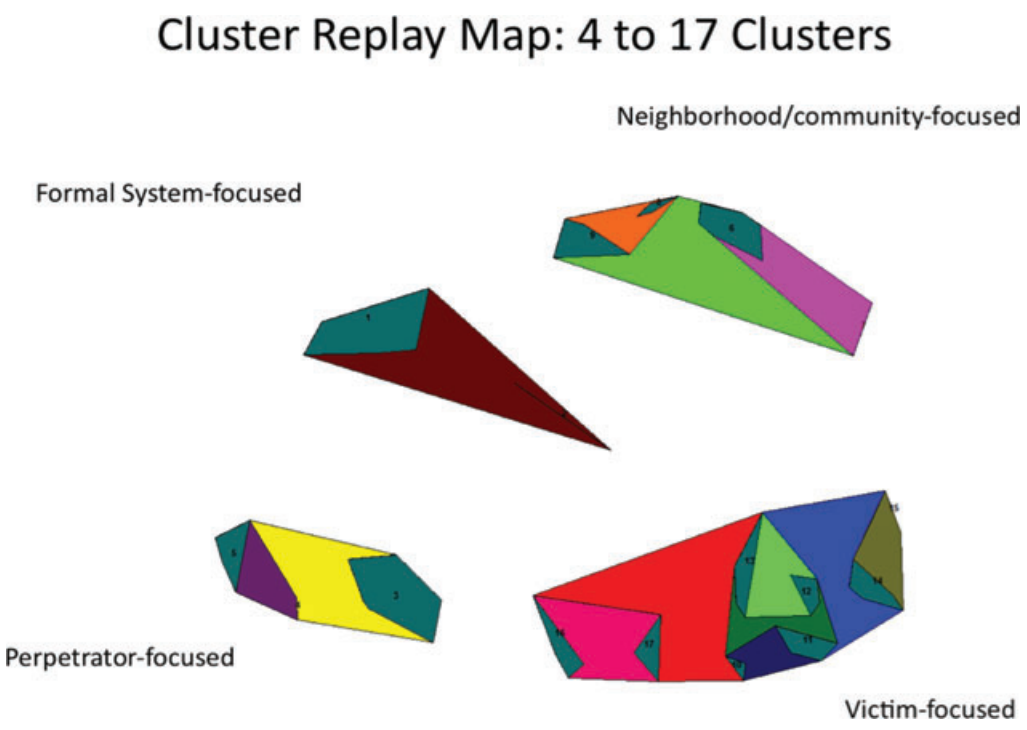

Figure 2. Four-cluster concept map of informal social control of intimate partner violence.

brainstorm groups during a focus on what was conceptualized by the group as "breaking the chain of violence" or the intergenerational transmission of family violence. Similarly, items 75 and 51 were isolated in a single cluster in the full cluster solution and in the Mentwick only cluster solution; these items, "invite the victim to go to church with you" and "suggest the victim talk to a pastor or another respected member of the community", focused on involving or connecting an organized religion. Otherwise the statements were organized in roughly similar areas.

Cluster Ratings Analysis

We examined average cluster ratings in terms of feasibility and effectiveness, first using the 4-cluster solution and then using the 17-cluster solution, reflecting participant data from both neighborhoods.

Feasibility and effectiveness ratings: Four-cluster solution. Examining the four-cluster solution, on average, participants rated actions focused on the victim (the first cluster area; x = 3.74; *SD* = 0.31) and actions focused on the formal and semiformal systems (x = 3.74; *SD* = 0.86) as most feasible for themselves, with the average score of 3.74 approaching a "very feasible" (4) rating. Actions focused on the abuser were rated least feasible (x = 3.30; *SD* = 0.97), with ratings of actions focused on the community only slightly higher (x = 3.44; *SD* = 0.68). These average ratings sat midway between "moderately" and "very" feasible. There were statistically significant differences in feasibility (for participant) ratings between the cluster of actions focused on the community and the cluster of actions focused on the formal/semiformal systems (3.44 vs. 3.74; *t* statistic = 2.32; p < .05). Similarly, the average feasibility rating for actions focused on the abuser was statistically significantly different from feasibility ratings for actions focused on the victim (3.30 vs. 3.73; *t* statistic = −3.70; p < .01).

Across all items, participants reported higher feasibility for themselves, as compared with the average neighbor (3.58 vs. 3.21; *t* statistic = 3.40; p < .01). Examining the four-cluster solution revealed that actions focused on engaging with the formal system, including public safety and health and welfare authorities, had the highest feasibility ratings (x = 3.48; *SD* = 0.47) when considering the average neighbor. Feasibility for the average neighbor for actions focused on the victim was slightly lower (x = 3.35; *SD* = 0.28). Actions focused on the abuser and the community had the lowest feasibility ratings for their neighbors (x = 3.01; *SD* = 0.30 and x = 3.01; *SD* = 0.26).

In terms of *effectiveness* in preventing partner violence, actions involving public safety, health and welfare authorities, and victim-focused actions were rated as being midway between "somewhat effective" and "very effective" in preventing future abuse (x = 3.58; *SD* = 0.17 and x = 3.51; *SD* = 0.20), whereas actions focused on the abuser were perceived to be only somewhat effective (x = 3.00; *SD* = 0.26) in preventing abuse. Community-focused actions were rated as being between somewhat and very effective (x = 3.34; *SD* = 0.25).

Most feasible and effective items. Only 10 of the 76 items were rated as "very feasible" or greater on average (rated 4 or better) by participants for themselves. Most of these items focused on talking to the victim about the relationship, two of which involved contacting the police. Not a single action was perceived to be either "very feasible" or "very effective" or better for the "average neighbor." We identified statements rated as both feasible (for self) and effective including: "suggest the victim seek medical care," "call the police and

report the abuse anonymously," "offer to listen to the victim if she needs to talk about anything," and "take the victim to a safe place, such as a shelter."

Differences by sociodemographic characteristics and neighborhood. Despite small numbers, we found some statistically significant differences in feasibility and effectiveness ratings by participant sex, with women rating actions focused on the formal and semiformal systems as more feasible, as compared with men (4.02 vs. 3.49; t statistic = 2.11; $p < .05$). Participants born in the United States rated all items as less effective as compared with individuals born outside of the United States (2.71 vs. 3.10; t statistic = 2.06; $p < .05$). Participants with at least some college education rated all actions as less feasible than participants with a high school degree or GED or less (3.36 vs. 3.76; $p < .05$); they also rated actions focused on the victim as less feasible than did participants with no college education (3.48 vs. 3.93; t statistic = 2.04; $p < .05$). Similarly, participants who were employed rated actions focused on the community as less feasible than did unemployed participants (3.01 vs. 3.55; t statistic = 2.04; $p < .05$). As compared with Jonesburg residents, Mentwick residents rated as more feasible the cluster of actions focused on the victim (3.54 vs. 2.93; $p < .05$) and the abuser (3.21 vs. 2.52; $p < .05$). In terms of effectiveness, Mentwick rated actions focused on the community as less effective than the Jonesburg participants (3.15 vs. 3.81; $p < .01$). No other differences emerged.

DISCUSSION

In this concept mapping study exploring informal social control of intimate partner violence against women, we found that the range of behaviors to prevent partner violence against women described by residents of two NYC neighborhoods was far broader than current conceptualizations of informal social control. Because these behaviors included both collective and individual behaviors and focused on intervening during acute events and primary prevention, we term such behaviors "preventive intervention behaviors." The behaviors ranged from traditional actions, including involvement of the formal system of social control (e.g., calling the police) to surveillance-type activities, such as making sure that the perpetrator knows that the violence is being heard. The behaviors also included day-to-day socializing and engagement in community life and actions designed to reduce children's exposure to violence in the home. Involving friends and family, engaging residential building staff and management, and involving local businesses and other community groups, both in specific incidents and more generally, were conceived of as potential preventive responses as well. These results suggest that the current measure of informal social control, when applied to intimate partner violence, is too narrow and is inconsistent with the behaviors described by the neighborhood residents expected to enact the control.

In terms of practical applications of the results, we found that preventive intervention behaviors focused on the victim received the highest feasibility ratings, whereas behaviors focused on connecting the victim to formal systems were perceived to be most effective. This suggests that neighbors might be willing and able to reach out to the victim, but that they believe professional assistance will be most helpful in preventing future violence. It is important to note that only a handful of items were rated "very feasible" or "extremely feasible" for both the respondent and the typical neighbor, suggesting that there are a limited number of preventive intervention behaviors that may be universally acceptable and therefore appropriate to promote using universal prevention messaging. Examining

items that were rated above average in terms of both feasibility and effectiveness we find that most of these actions were low risk, minimal effort, and/or invoked formal systems. Although some involved talking to the victim and lending significant support, very few were highly interventive or got the neighbor deeply involved. During the brainstorming sessions, although we aimed to keep the sessions focused on generating statements, the complexity of intervening in domestic violence, as we called it during the groups, was raised. Further research should examine factors that modify whether neighbors will intervene, including fear, safety concerns, and the desire to maintain privacy.

Consistent with previous research, we found that most items were rated as more feasible by participants for themselves, as compared with their neighbors (Frye, 2007). This may reflect an optimistic bias on the part of respondents where they overreported the likelihood that they will engage in the preventive intervention behaviors. It is probable that feasibility ratings for neighbors engaging in the preventive behaviors are closer to the "true" likelihood that the behavior would be enacted than are feasibility rating for the respondent. We found that the differences in the maps by neighborhood to be small, but suggestive; it is possible that there were too few respondents to discern differences that might emerge with larger numbers of neighborhoods, as well as equal numbers of participants per neighborhood. Future research should consider sampling larger numbers of neighborhoods using purposive sampling methods to maximize potential contrasts.

These results should be considered in light of a number of limitations of the study. First, because of the exploratory and qualitative nature of the research and the use of a convenience sample, generalizability is limited and was not a goal of the study. We also explored predicted behaviors, although the extent to which these predictions correlate with actual behavior is unknown. In addition, these data do not tell us why or under what circumstances participants might enact these behaviors. Discussions during the groups, as well as the bystander intervention literature give some insight into this, but recent research specifically linking this to partner violence is scarce (Latane & Darlet, 1968; Laner, Benin, & Ventrone, 2001; Shotland & Straw, 1976).

These results suggest that, as applied to intimate partner violence, our current conceptualization of informal social control is inadequate and does not reflect the actual behaviors that may be enacted by neighborhood residents. How these behaviors correlate with the traditional measure is at present unknown; however, the extent to which they do not may explain some of the mixed findings in the neighborhood effects on partner violence research. The findings reported here may serve as a starting point for the development of a grounded measure of informal social control of intimate partner violence against women. Beyond highlighting the inadequacy of traditionally measured informal social control, the results suggest the need to conduct further work to better understand how the neighborhood social environment, including characteristics such as social cohesion and social norms around partner violence work on the ground. More in-depth work should include a range of research methods, including both mixed methods like concept mapping, as well as multilevel analyses to get a clear picture of how the neighborhood environment relates to intimate partner violence against women.

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APPENDIX

Appendix below lists the 17 clusters identified, all statements included within the clusters, as well as the mean feasibility and effectiveness ratings for each statement and each of the 17 clusters.

Cluster	*Item name*	*Feasibility YOU*	*Feasibility NEIGHBOR*	*Effective*
1. Contact formal/ semi-formal systems	Call ACS and report the domestic violence (35)	3.68	3.76	3.84
	Document the domestic violence (e.g., tape record incident) to give to police or to victim (28)	2.97	2.68	3.51
	Call a domestic violence hotline or contact a counselor in person for advice on how you could help the situation (27)	3.59	3.11	3.43
	Contact local public safety or health authorities (e.g., police, hospital, health department) for advice on how to address domestic violence (21)	3.73	3.27	3.38
	Report the domestic violence to the police in person or call the police and provide your name (14)	3.46	3.59	3.54
	Contact local police precinct to let them know that domestic violence is occurring regularly in the apartment/home (7)	4.14	3.86	3.73
	Call the police and anonymously report the domestic violence (1)	4.14	3.84	3.84
Mean (*SD*)		3.67 (0.37)	3.44 (0.41)	3.61 (0.18)
2. Active surveillance	Inform the building super or management of the abuse (38)	3.81	3.62	3.41
	Stay alert and look for signs of domestic violence (22)	4.11	3.59	3.51
Mean (SD)		3.96 (0.15)	3.61 (0.01)	3.46 (0.05)
3. Inform the abuser that you know about the violence/offer to help	Try to keep the abuser away from the victim during an incident (61)	3.41	3.00	3.19
	Knock on the door if you suspect that domestic violence is occurring inside a neighbors apartment/home (50)	3.49	2.86	3.22

Cluster	*Item name*	*Feasibility YOU*	*Feasibility NEIGHBOR*	*Effective*
	Tell the perpetrator that you and your neighbors will not tolerate domestic violence in their neighborhood (32)	3.51	3.19	3.19
	Let couple know that you can hear abuse going on n the apartment/home (31)	4.05	3.43	3.22
	Encourage the abuser to seek counseling or other forms of help with his anger and violence (19)	3.41	3.03	3.24
	Talk to the abuser and provide advice for ending the violence (13)	3.19	3.14	3.08
Mean (*SD*)		3.51 (0.27)	3.11 (0.18)	3.19 (0.05)
4. Communicate social norms	Let the abuser know that you know about the violence and expect it to stop (25)	3.59	3.32	3.00
	Tell the perpetrator that the way he treats his woman is wring (20)	3.57	3.30	3.14
Mean (*SD*)		3.58 (0.01)	3.31 (0.01)	3.07 (0.07)
5. Physical intervention during incident	Shame the perpetrator (e.g., by giving him dirty looks, excluding him from group activities) (74)	3.16	3.14	2.59
	Step in and physically stop the abuse during an incident (66)	2.70	2.65	2.70
	Try to calm the abuser during the incident by talking to him (49)	3.24	2.76	3.03
	Physically attack the abuser during or after an incident of domestic violence (40)	2.38	2.32	2.46
Mean (*SD*)		2.87 (0.35)	2.72 (0.29)	2.70 (0.21)
6. Working with community groups	Ask the pastor/priest at a local church or other place of worship to speak out against domestic violence (68)	3.59	3.46	3.35
	Speak out against domestic violence at church or other places of worship (67)	3.27	3.03	3.24
	Encourage local community leaders to speak out against domestic violence (65)	3.54	3.05	3.46
	Ask key community leader to act as a mediator in domestic disputes (62)	3.35	2.97	3.32
	Encourage community organization to provide family activities, parenting classes and help for parents in domestic violence situations (56)	3.95	3.22	3.41
	Develop community events (e.g., a protest) with your neighbors to speak out against domestic violence (34)	3.16	2.95	3.41
	Working with community organizations to create safe spaces (e.g., school programs) for children to escape exposure to violence at home (33)	3.59	3.24	3.49
	Create a strong community that does not tolerate domestic violence (17)	3.57	3.30	3.46

Cluster	*Item name*	*Feasibility YOU*	*Feasibility NEIGHBOR*	*Effective*
	Create a strong community that offers support to women in abusive relationships (12)	3.35	2.97	3.49
	Work with leaders of community organizations to create a neighborhood group to address domestic violence (6)	3.41	3.08	3.38
	Organize a meeting with neighbors for abused women in the community (4)	3.11	3.00	3.19
Mean (SD)		3.44 (0.23)	3.12 (0.16)	3.38 (0.09)
7. Day to day involvement	Support neighborhood parents by offering babysit or play with children (64)	3.81	3.00	3.73
	Get to know your neighbors, talk to them and socialize regularly (53)	4.08	3.65	3.68
Mean (*SD*)		3.95 (0.14)	3.32 (0.32)	3.70 (0.03)
8. Get information into the community	Pass around informational flyers about domestic violence in your neighborhood (73)	3.19	3.00	3.14
	Encourage community organizations to bring domestic violence experts to neighborhood (48)	3.16	2.84	3.38
	Help local businesses to develop anti-domestic violence communication (e.g., store front posters) and programs (e.g., discounts for DC groups, safe havens and community center support) (47)	3.27	2.68	3.38
	Encourage schools to host antidomestic violence conferences, workshops or other neighborhood events (23)	3.70	2.97	3.35
Mean (*SD*)		3.33 (0.22)	2.87 (0.13)	3.31 (0.10)
9. Engage your neighbors	Work with your neighbors to make stronger laws and police responses to domestic violence (54)	3.59	2.92	3.43
	Form a building association to address building problems including domestic violence (52)	3.16	2.78	3.05
	Ask local business to refuse to do business with known domestic violence perpetrators (41)	2.49	2.43	2.49
	Encourage local hospitals, health care clinics and care providers to address domestic violence in their work (39)	3.73	2.76	3.57
	Use social networking websites (e.g., Facebook) to warn women about men that they know to have perpetrated abuse before (26)	3.35	2.84	3.11
Mean (SD)		3.26 (0.44)	2.75 (0.17)	3.13 (0.38)

Cluster	*Item name*	*Feasibility YOU*	*Feasibility NEIGHBOR*	*Effective*
10. Engage the victim	Tell the victim if you know of previous abuse by her partner (71)	3.59	3.41	3.27
	Stop by the victim's home occasionally to let her know that you are right next door (63)	3.73	3.30	3.59
	Stay with the victim (wherever she is) so that she knows she is safe (42)	3.78	3.41	3.65
	Talk to the victim about getting out of the abusive situation (2)	4.03	3.46	3.41
Mean (*SD*)		3.78 (0.16)	3.39 (0.06)	3.48 (0.15)
11. Talk to the victim	Take the victim to a safe place (e.g., shelter) (76)	4.11	3.54	3.86
	Help the victim understand that she is in an abusive situation (30)	4.08	3.57	3.86
	Offer to listen to the victim if she needs to talk about anything (29)	4.35	3.68	3.89
	Help the victim find a new place to live away from the abuser (16)	3.24	2.97	3.57
	Talk to the victim to determine if she is in an abusive relationship (15)	3.84	3.43	3.24
	Talk to the victim about her abusive relationship (8)	4.08	3.57	3.43
Mean (SD)		3.95 (0.35)	3.46 (0.23)	3.64 (0.25)
12. Connect victim to counseling/help	Provide the victim with phone numbers or written information on domestic violence (58)	4.08	3.38	3.68
	Suggest that the victim go to counseling (43)	3.84	3.57	3.78
	Suggest that the victim go to counseling with the abuser (37)	3.32	2.95	3.54
	Take the victim to a domestic violence class, workshop or event (10)	3.30	2.76	3.35
	Talk to the victim about the risks her children face by staying in an abusive home (3)	4.05	3.95	3.57
Mean (*SD*)		3.72 (0.34)	3.32 (0.43)	3.58 (0.14)
13. Connect victim to external supports/ reduce exposure to violence	Help the victim or the perpetrator find a job or otherwise improve their economic situation (55)	3.59	2.84	3.24
	Offer your home as a safe place for kids to escape exposure to violence in home (46)	4.14	3.59	3.62
	Suggest that the victim seek medical care (44)	4.24	3.92	3.95
	Develop an escape route with the victim (24)	3.43	3.11	3.24
Mean (SD)		3.85 (0.34)	3.36 (0.42)	3.52 (0.29)

Cluster	*Item name*	*Feasibility YOU*	*Feasibility NEIGHBOR*	*Effective*
14. Involve victim in day-to-day activities	Let victim know about domestic violence resources in the neighborhood (70)	3.95	3.41	3.51
	Shelter the victim in your home (69)	3.43	3.16	3.27
	Help victim by helping around house with housework and/or children (59)	3.76	3.08	3.35
	Develop a friendship with the victim or stay actively involved in the victim's life (57)	3.92	3.14	3.54
	Include the victim in everyday activities, such as going shopping or running errands (11)	3.22	2.89	3.35
Mean (*SD*)		3.65 (0.29)	3.14 (0.16)	3.41 (0.10)
15. Faith community involvement	Invite the victim to go to church or other place of worship with you (75)	3.76	3.57	3.51
	Suggest that the victim talk to a pastor or another respected member of the community (51)	3.62	3.16	3.27
Mean (*SD*)		3.69 (0.07)	3.36 (0.20)	3.39 (0.12)
16. Tell friends and family	Inform the victim's family of the violence (60)	3.65	3.32	3.57
	Talk to the couple about the situation and try to provide them with advice (45)	3.43	3.16	3.30
	Urge victim's male family members to protect female victim (9)	3.73	3.46	3.41
	Inform the victim's friends of the violence (5)	3.49	3.54	3.54
Mean (*SD*)		3.57 (0.12)	3.37 (0.14)	3.45 (0.11)
17. Work with victim's friends and family to end the violence	Work with the victim's family to end the violence (72)	3.46	3.30	3.38
	Talk to the victim about getting a restraining order against the abuser (36)	3.89	3.54	3.59
	Work with the victim's friends to end the violence (18)	3.30	3.30	3.57
Mean (*SD*)		3.55 (0.25)	3.38 (0.11)	3.51 (0.10)