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Improving interorganizational collaborations: An application in a violence reduction context

Erika Gebo^{a,*}, Brenda J. Bond^b

^a Department of Sociology, Suffolk University, 8 Ashburton Place, Boston, MA 02108, USA

^b Institute for Public Service, Suffolk University, 120 Tremont Street, Boston, MA 02108, USA

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ABSTRACT

Interorganizational collaboration (IC) is a widely used and valued approach to tackling societal challenges. Effective communication and coordination are difficult to achieve within ICs, yet critical to the attainment of shared goals. Relational coordination is a conceptual framework with analytical tools that can assist in overcoming collaboration shortcomings. This study introduces relational coordination to ICs aimed at reducing gang and youth violence. Through a quasiexperimental design in which two sites received relational coordination interventions and two did not, sites were assessed on the degree to which IC coordination and communication was improved in four rounds of surveys over a two year period. Significant, positive changes were seen in one intervention site from baseline to end. In the other intervention site, initial positive changes were eroded by the end of the second year. No significant positive effects were demonstrated in comparison sites. Qualitative analysis shed light on why differences occurred, which were due in large part to structural changes that included codification of practices and the effective use of boundary spanners. A discussion of relational coordination utilization for strengthening ICs in diverse, collaborative contexts is presented.

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1. Introduction

Interorganizational collaboration (IC) is increasingly common in the public sphere with a growing recognition that such collaborations are essential to addressing problems that cut across different arenas (Koschmann, 2013). Collaboration involves individuals and/or agencies working together toward a common goal, yet a host of collaboration issues arise in ICs beyond the immediate focal concern. ICs are complex because of the mashing of different organizational structures, missions, goals, and agendas (Keyton, Ford, & Smith, 2008). Given the interdependence

that comes with collaboration, it is important to study the relationship *between* organizations in ICs rather than studying the perspective of one organization alone (Gray, 1985). Poor relationships among collaboration partners inhibit cross-organizational work and negatively impact success (Lewis, Isbell, & Koschmann, 2010; Wandersman & Florin, 2003), while better interorganizational collaboration results in achieving shared goals (Bryson, Crosby, & Stone, 2015; Ford, Ford, & D'Amelio, 2008; Kanter, Stein, & Jick, 1992). More information on what works to improve ICs is needed given that ICs in the public sector are likely here to stay (Bryson et al., 2015; Rosenbaum & Schuck, 2012).

Successful public sector ICs that target social problems involve diverse entities who typically do not work together, and who typically do not trust each other (e.g. police and social services). This requires that entities change current

* Corresponding author.
E-mail addresses: egebo@suffolk.edu (E. Gebo), bbond@suffolk.edu (B.J. Bond).

policies or practices to include sharing information and resources (Mizrahi, Rosenthal, & Ivery, 2013). In essence, these changes require entities to engage in organizational change (Van Eyk & Baum, 2002). To further knowledge on how collaboration can be improved in public sector ICs, relational coordination, a promising practice from organizational studies, is used in gang and youth violence reduction ICs. This represents the first time relational coordination has been used to address community violence problems in an IC context. Comparative data from sites are examined to understand if and how communication and collaboration was improved. Results have implications for how organizations can work better together in ICs. Relational coordination is first discussed as a model for facilitating collaborative change. The Comprehensive Gang Model, an initiative to reduce gang and youth violence, is then described. Details about the study sites, implementation processes, and findings are provided. Finally, implications for using relational coordination to improve ICs are presented.

2. Collaboration and relational coordination

A systematic review of collaboration effectiveness reveals that structural (e.g. composition, accountability, formalization), functional (e.g. collaboration management, steering and leadership), and relational (e.g. building relationships) factors can impact the effectiveness of collaboration (Turrini, Cristofoli, Frosini, & Nasi, 2010). Unfortunately, struggles abound with communication and coordination among diverse collaboration entities. Challenges include tension, poor leadership, informal coordination, unskilled managers, and a lack of trust and engagement (Kramer, Day, Nguyen, Hoelscher, & Cooper, 2019; Maccio & Cristofoli, 2017; Seaton et al., 2018; Silvia, 2018). Collaborative challenges in ICs could be addressed through the application of techniques from the organizational studies field. One strategy is relational coordination (RC), an innovative theory and practice grounded in research on organizations and organizational processes. RC has been used as a best practice model in the US and abroad for increasing and strengthening communication and coordination between groups toward achievement of outcomes of interest (Cramm & Nieboer, 2012; Noël, Lanham, Palmer, Leykum, & Parchman, 2013). RC theory posits conceptual linkages between communication, coordinated actions, and outcomes. It also offers a set of intervention tools to assist partners in improving communication and coordination in support of organizational change. Such practical tools to improve collective work are necessary as collaborations tend to focus on their key purpose for partnering rather than on how the partnership itself functions (Mizrahi et al., 2013).

The theoretical foundations of RC focus on relational elements of personnel and performance research in which better relationships lead to improvement in communication and coordination among entities working toward shared goals. In RC theory, effective collaboration occurs when individuals share goals, when they have shared knowledge, and when they respect each other. These

characteristics can be facilitated by certain types of communication – timely, frequent, accurate, and problem-solving (Gittel, 2000). Outcomes of RC include increased efficiency, improved quality of work, and enhanced performance at individual and group levels (Cramm & Nieboer, 2012). It can be extrapolated that using RC in a collaborative, public sector context will lead to better working relationships and improved information and resource sharing.

Practical intervention tools stemming from RC theory are designed to strengthen communication and coordination in support of collaborative change (Gittel, 2016). RC intervention tools emphasize structural, relational, and work process aspects of collaborative work, which are very much aligned with the noted challenges of ICs. Collectively, these tools are identified as a relational model of change (Gittel, 2016). All of these aspects need attention if organizations are to change to achieve collective goals.

Structural intervention tools include supporting a practice of teamwork in staff hiring and/or training, as well as mutually agreeable accountability and reward systems that recognize collaborator successes and hold partners accountable for their contributions. This includes regular meetings and formal agreements that detail each partner's contributions. A boundary spanner(s), who works across partner organizations to ensure communication and coordination and facilitates project work in pursuit of common goals is also a structural intervention. Boundary spanners are called different names across fields of study, including organizers, conveners, and collaborative managers; they also may take on different formal and informal roles depending on the structure and nature of the problem (Williams, 2013). The term "boundary spanner" is used here to be consistent with RC terminology. Shared information systems and protocols are additional examples of structures that support effective communication and coordination.

Relational intervention tools emphasize the relational dimensions of collaborative work. Partners are more effective when they come together in safe spaces to learn more about each other and their work (Fu, 2015). This provides opportunities to build respect, share knowledge, and increase commitment to shared goals. The nature and strength of relationships are important to reaching shared goals. RC surveys are a critical relational intervention that evaluates collaboration communication and coordination and provides a mechanism to offer feedback on the strength of relationships among different collaborating groups.

Finally, *work process intervention tools* focus on changing individual and collaborative work processes to support the IC. These include an assessment of the current state of work, an imagination of an ideal state of work, and creation of new ways to work to achieve the ideal. One set of interventions alone – structural, interventional, work process – will not ensure goal attainment; interventions must be implemented in parallel to support change (Gittel, 2016). The combined use of these tools should improve communication and coordination leading to desired results. For these reasons, RC is well suited to address the interorganizational challenges confronting ICs.

3. The Comprehensive Gang Model

This study applies RC to the Comprehensive Gang Model (CGM), a criminal justice initiative that requires an interorganizational collaboration and a deliberate focus on organizational change as a strategy for success. As in other contexts, large gaps exist in how to work effectively together on violence reduction. This study is an opportunity to contribute to the IC literature as well as the CGM literature. While organizational change has never been clearly defined in the CGM, collaboration among diverse entities is at the core of this strategy. Under the CGM structure, diverse entities come together to create a more comprehensive and holistic gang and youth violence reduction strategy, which necessitates change in individual and collective work (Howell & Griffiths, 2016). Collectively, criminal justice entities, other government units, social services, faith-based, and grassroots organizations address the social, physical, and psychological needs of at-risk and gang-involved individuals that are touted as critical to gang and youth violence reduction. Where needed, arrest and prosecution is used. Traditional methods of collective violence prevention do not rely on sharing of information or coordinating action, so organizations must change. For example, police and outreach organizations (agencies that connect with gang members and those at-risk for gang involvement) must share information and, at times coordinate efforts, but outreach workers are often former gang members themselves and working together requires those respective organizations to change.

There are two stated goals of the CGM: (a) increase community capacity to work together on gang and youth violence problems; and (b) reduce gang and youth violence. These goals are reached through a coordinated five strategy effort. Those strategies are suppression, including arrest and prosecution; provision of prosocial opportunities, including employment, training, and education for gang-involved individuals; and prevention services, such as after-school programming, to those most at-risk for gang membership. Organizational change and community mobilization are the final two strategies. Organizational change means IC coordination and communication through new or improved policies and practices, while community mobilization entails involving the community in the initiative. Combined, these strategies should lead to less gang affiliation and fewer gang formations, which should reduce violence, particularly among young people most likely to engage in violence.

The CGM was a result of a decade of research on how to reduce gangs and youth violence in American communities, spearheaded by Irvin Spergel from the University of Chicago. Evaluations of the CGM have not been overwhelmingly positive. Implementation problems often associated with organizational change have been cited as a major barrier to success (Gebo, Bond, & Campos, 2015). For example, an evaluation of the Little Village Project in Chicago, IL, the pilot CGM initiative, as well as five subsequent US federally funded replications, found that coordinating and communicating across diverse entities and sharing information was problematic. Some violence was reduced in the Little Village, but institutionalizing project practices were never

realized. Results were more mixed in the CGM replication sites (Spergel, Wa, & Sosa, 2006). Researchers concluded that organizational change was the most difficult strategy of the five to employ, yet was critical to overall success.

Insufficient work was done to address organizational shortcomings in later CGM initiatives, many of which also were funded by the US government (Gebo et al., 2015). Scholars noted that CGM initiatives were not subjected to rigorous evaluation and feedback to genuinely overcome any such challenges (Klein & Maxson, 2006). Consistent with early findings, these federally-funded CGM iteration evaluations also pointed to problems stemming from lack of organizational change. Noted failures were most often due to a lack of boundary spanning activities and leadership to ensure coordinated, prioritization of collective work; a lack of community collaboration to sustain and spread the initiative, especially within communities most affected by gangs; and a lack of data analytic capacities to make data-informed decisions (Gebo et al., 2015; McGarrell et al., 2013). Effective collaboration as an element of organizational change is critical for CGM success. This study is the first of its kind to use RC in the CGM context. Collaborative challenges noted in the CGM setting have also been identified in other ICs (Kramer et al., 2019; Maccio & Christofoli, 2017; Seaton et al., 2018), pointing to the notion that lessons learned from this project may be transferrable to ICs in other contexts.

4. Methods

A quasi-experimental design with four cities in a northeast state was employed in this study: two sites received RC interventions and two sites served as comparisons. All cities utilize the Comprehensive Gang Model to address gang and youth violence. An 18-month RC intervention from March 2016 through August 2017 utilizing the RC tools was introduced to boost IC organizational change in the areas of communication and collaboration. Study authors employed an action research approach. Researchers collaborated with the intervention cities to provide the RC action research intervention that began with a two-day relational coordination training by RC experts. This study is a mixed method examination of intervention implementation and outcome data over a two year period. Quantitative RC surveys showed change in communication and coordination over time in intervention sites relative to comparison sites, while qualitative detailed documentation of the RC intervention was used to identify failures and successes at a process level.

Two RC intervention sites were purposefully chosen as they represented cities of different sizes, had data capacities to assess change, and agreed to participate in the project.¹ Two comparison sites were matched with intervention sites on the demographic characteristics of population, families in poverty, ethnicity, and income. Generally, sites were well-matched. U.S. Census (2010) data

¹ Funding constraints limited the number of study sites. Researchers sought out cities in which they had no previous working relationship in order to guard against any potential biases from pre-existing projects.

show that the Intervention Site A and Comparison Site A are medium-sized cities of approximately 180,000 and 110,000 residents, respectively. There is a significant difference in city size ($p < .05$). In both cities approximately 53% are white, with 17% and 19% of families below the poverty line. Both Intervention Site B and Comparison Site B are small cities of approximately 89,000 and 95,000 residents, respectively, with approximately 19% below the poverty line in both cities. There is a significant difference in ethnicity with 83% white in Intervention Site B and 70% white in Comparison Site B. All sites were deemed to have a gang violence problem in order to receive state funding.

All study sites received the same state funding and structure mandates imposed that required adoption of the CGM and implementation of the five CGM strategies. Sites were required to have a steering committee to oversee the initiative, a lead agency to coordinate the work, and a local research partner to assist in employing best practices and providing analysis support. IC partners in each site typically included law enforcement, prosecution, probation, outreach, social services, faith-based services, and education.

4.1. RC survey

Using the Tailored Design Method (Dillman, Smyth, & Christian, 2014), the validated RC survey (Gittel, 2000) was administered four times over the course of the study – at inception, six months into the intervention, at 18-months when intervention ceased, and one year post-intervention. The survey assessed the strength of communication and coordination on seven dimensions: frequent communication, timely communication, accurate communication, problem-solving communication, shared goals, shared knowledge, and mutual respect. Sample questions were: “How frequently do people in each of these groups communicate with you about gang and youth violence?”; “Do people in each of these groups share your goals regarding gang and youth violence?”; “Do people in each of these groups respect the work you do with regard to gang and youth violence?”

The survey was administered to individuals in each city who were in key work groups deemed to be essential to implementation of the CGM through the web-based software Qualtrics (National Gang Center, 2010). These work groups included law enforcement, prosecution, probation, outreach, social services, faith-based services, education, research, and each site’s CGM coordinators. The role, not the individual, is significant in RC as RC emphasizes coordination and communication among organizational roles which reflect institutional and sustainable collaboration. Those in the role most connected to gang and youth violence reduction in organizations within these work groups were selected to answer the survey. Prior to each survey, researchers rechecked contacts for each role with site coordinators to ensure accuracy of contact information.

4.2. Intervention implementation

The RC intervention consisted of the authors as action researchers utilizing relational and work process interven-

tions and encouraging the use of structural interventions to support increased IC capacity to work together on their violence reduction goals. Action research is aimed at assisting stakeholders in improving outcomes through tailored and contextualized interventions, as well as consistent monitoring, feedback, and action steps. This technique has increasingly been applied in criminal justice contexts (Mock, 2010). During the RC intervention, researchers met with the ICs in the two intervention sites approximately monthly, held site coaching and facilitation calls approximately monthly, and provided the ICs with RC survey feedback as well as evidence-based and best practice information on other ICs and RC.

Researchers employed relational intervention tools that included humble inquiry (e.g. “What barriers exist to facilitate more information sharing?”); coaching (e.g. emphasizing productive meeting tips that lead to actionable items with accountability); as well as work process interventions (e.g. facilitating conversations to create the ideal violence prevention system in the city). These techniques were used during partner meetings and on calls with site coordinators who had formal roles as boundary spanners as well as those boundary spanners that arose informally to assist the site coordinators. The use of relational and work process tools were consistently employed across all interactions with intervention sites. Action researcher support provided to sites also encouraged creating and/or strengthening structural interventions (e.g. shared protocol), which varied based on site requests, researchers’ feedback during calls, and RC survey results.

To document intervention site implementation, researchers analyzed notes from face-to-face meetings and coaching calls and examined youth violence prevention plan documents created by each IC. A deductive qualitative approach used the RC framework as a starting point. Two researchers line coded meeting notes and coaching calls as well as plan documents for content evidence and descriptions of how long, how intense, and how frequently RC tools were used. Themes that surfaced during the analysis were further explored and refined throughout the analysis process. Researchers discussed any discrepancies, and consensus was developed in accordance with qualitative data analysis strategies of inter-rater reliability (Armstrong, Gosling, Weinman, & Martaeu, 1997; Patton, 2015).

Existing youth violence prevention plans from each site were the foundation for infusing the RC intervention in ways consistent with those plans. Intervention City A provided three versions of their prevention plan documents, once at the beginning and two revisions during the intervention. Intervention City B provided a draft version early in the intervention; their plan was not revised during the intervention. During the intervention period, there were 23 separate in-person meetings and site coaching calls in Intervention City A, and 17 separate meetings and calls in Intervention City B. Researchers held 18 monthly debriefing and planning meetings separate from site meetings and calls to ensure that work was aligned with RC and with the CGM.

Table 1
Global RC results.^a

Global RC index	Round 1	Round 2	Round 3	Round 4
Intervention City A	3.12	3.38	3.77***	4.00**
Comparison City A	3.75	3.66	3.64	3.58
Intervention City B	3.39	3.83***	3.69	3.40
Comparison City B	3.44	3.33	3.31	3.37

^a Results compared to baseline (Round 1); two-tailed.** $p < .01$.*** $p < .001$.

5. Findings

While the seven dimensions of RC have been shown to have a high factor loading on one dimension in previous research in the private sector (Gittell, 2000), a factor analysis was run to confirm that this was the case in this study. Across sites and surveys, these measures loaded consistently on one factor with a minimum Cronbach's alpha of .87.² Response rates varied slightly across survey rounds, but averaged 55.4% in Intervention City A (between 9–14 respondents), 52.0% in Comparison City A (between 10–22 respondents), 58.9% in Intervention City B (between 14–17 respondents), and 57.5% in Comparison City B (between 9–12 respondents). These response rates are considered good for web-based surveys (Kaplowitz, Hadlock, & Levine, 2004). An examination of respondents versus non-respondents revealed no discernable differences with regard to gender or role in their city's CGM initiative.

Global RC results offer a snapshot of how well these ICs are communicating and coordinating over time (Table 1). Scores are normed on RC research, where "1" is considered "weak" and 5 is considered "strong" (Gittell, 2012). Global rankings should be in the 4's to be considered strong. Overall, there was clear and significant improvement in Intervention Site A, improvement and a precipitous drop in Intervention Site B, and relatively no change in comparison sites. The relational coordination intervention significantly increased communication and coordination in one intervention site, but not the other. The fact that comparison sites saw no significant changes supports the contention that the RC intervention had a positive effect on one IC. We explore the intervention site findings further through detailed qualitative examination.

5.1. Intervention City A qualitative findings

Overall, the work in Intervention City A was focused and action-oriented, aimed at codification of goals and process structures that would better facilitate IC communication between organizations. The RC intervention was formally and publicly recognized by city leadership as critical to the citywide youth violence prevention plan. Action researchers made suggestions throughout the intervention on how to incorporate organizational change mechanisms (e.g. shared meetings, protocols, and information systems) into their city planning documents. The City A site coordinator

and another partner from a local university took on much of the work of ensuring that many of these suggestions were adopted. These individuals served as site boundary spanners. The coordinator was required to facilitate meetings amongst partners, but their collective work went beyond any formal role. These individuals were well-respected, had been involved in public health issues in the city for years, and were committed to reducing gang and youth violence. They were the main communicators and central repositories of collective work. Coaching calls with them often centered on how to increase communication among group members and how to encourage partners to work together to address thorny issues, with racial inequities as a primary focus. During a discussion about longstanding racial disparities that were rarely discussed publicly, a director of a program captured a foundation block of RC practice of addressing conflict by stating, "Good agendas have pushed us toward addressing these challenges."

Site boundary spanners took the lead in creating meeting structures to support better communication across groups. They held standing, smaller, weekly planning meetings to ensure the IC was on track and to troubleshoot problems. Boundary spanners reached out to diverse entities and connected youth violence plan structure to the variety of youth violence working groups which included employment, early childhood, youth services, and male-youth-of-color serving agencies; thereby deliberately facilitating communication and coordination across agencies. They proactively asked researchers for examples of shared meeting agendas and meeting best practices.

Continual sharing and assessment of gang and youth violence data was central to City A's work. City A's structure included time at monthly meetings for working groups to share data and monitor the gang and youth violence problem. Boundary spanners pushed to obtain data to discuss at meetings that would tie into their overall violence prevention goals and address racial disparities. There was evidence that boundary spanner efforts were paying dividends. Approximately eight months into the intervention, a boundary spanner said, "[I] didn't have to request monthly data from agencies and programs" as collaboration partners were proactively sending it on their own at the end of each month. This is an example of the changes that partnering organizations made in support of the IC and was evidenced in their significantly increased RC scores.

Accountability and reward structures also were being built into the IC at the time the intervention ended. City A introduced a number of changes aligned with RC. This included working on a cross-agency shared protocol that would be signed by city leadership, including the mayor, city manager, police chief, school superintendent, chief judge, and district attorney to facilitate cross-agency work and expectations. The IC also began to take steps to build a platform for shared information systems to facilitate communication among partners. City A's IC use of the RC tools of boundary spanners, productive meetings, shared information systems, and protocols were at the forefront of work during the intervention period that helped facilitate increased collaboration and organizational change.

² Analysis available from first author.

5.2. Intervention City B qualitative findings

RC intervention efforts in City B focused on encouraging, modeling, and providing resources for boundary spanning roles and productive shared meetings. As with City A, the site coordinator for the CGM initiative and another partner took on much of the work of helping to improve the partnership, but they were not effective boundary spanners, as will be detailed. To strengthen boundary spanner roles, researchers provided resources on relational job design that would lead to formalized systems of coordination so that if one person was unavailable or absent for any length of time – as happened in this case when the site coordinator was on medical leave for three months – the collaboration work continued. Researchers also used a humble inquiry approach with collaborating partners to identify barriers and solutions for positive change in their violence prevention plan and in their IC.

Similar to Intervention City A, the Intervention City B site coordinator and supporting partner saw the need to ensure meeting agendas were out to members ahead of time with agreed upon and actionable items for planning and accountability. These individuals did not always meet their own standards, however. The requested information to be sent prior to an upcoming meeting on four separate occasions, but no one in the IC did so. There was no true discussion about setting up shared accountability; rather, IC participants felt that they had informal agreements about how they would work and be held accountable for that work. On the last coaching call with City B, the coordinator and partner brought up the need to follow up on a request for data from partners. That did not occur. City B continued to operate solely at the informal program level, which did not increase their ability to better communicate or collaborate as reflected in the RC survey results.

In the early months of City B's intervention, there was a collective sense among partners that youth-serving entities had solid relationships and did not need formalized structures to link and to share information among them. One partner said, "*We believe our strengths are based in programs.*" This was reflected in strong RC survey results in the second round. The problems with a limited program-level focus became clear to many of them seven months into the intervention. During an action research-facilitated partner meeting exercise to identify strengths and barriers for CGM organizational change, every suggestion identified was at the program or individual-level, with no larger system-level suggestion (e.g. shared information systems) that would produce the goal of working better together. Partners then held a protracted discussion of individuals and entities important to violence reduction who were not part of the partner committee. Researchers provided violence reduction examples and organizational best practices that illuminated the need to move beyond program-level membership, discussions, and actions.

After nine months of intervention, the City B IC decided to reconstitute their steering committee to include individuals who could impact policy, leverage more power to make changes, provide vision, and engage city leaders. Dur-

ing one related coaching call, the site coordinator stated that trying to focus their gang and youth violence reduction efforts had been a "*rollercoaster*", but with the reconstituted steering committee, "*we are regaining momentum.*" With support of the research team, the IC defined the purpose and roles for their CGM steering committee.

The City B site coordinator and partners tried to engage non-program personnel and city leadership, but they had little access to leadership whose endorsement and support for cross-organization efforts would be beneficial for buy-in of other organizations, such as the police department. Their attempts to engage leadership were not successful. This absence of access and influence suggests that true boundary spanning mechanisms were lacking. The effort to engage more diverse stakeholders was redoubled with the decision to reconstitute the steering committee. Yet, schools were not actively involved until just prior to the end of the RC intervention, and other key entities still were not at the table. As one IC member said fifteen months into the eighteen-month intervention, "*I'm a little disappointed because we need some other big players, like the police department and the mayor's office.*" Though the police department was on the steering committee roster, there was no consistent departmental representation at the meetings until the advent of the reconstituted steering committee when the site coordinator secured a more formal commitment from the chief of police.

Fewer structural interventions took place than were initially identified in City B. Despite creating an ideal youth development model for violence prevention, City B struggled to make the changes needed to align diverse organizations in pursuit of shared goals. Productive meetings did not always occur, especially with important entities missing from the table and with the site coordinator out of work for several months. Accountability, while discussed, was never implemented as a tool to improve the IC. There also was a significant shift in focus during the intervention itself – a reconstituted steering committee. While this change was needed and aligned with RC tools, it likely influenced RC survey results as survey respondents recognized the problems they needed to address to produce positive change.

In sum, the IC in Intervention City A enhanced and strengthened a structure to formally communicate and coordinate as part of an overall youth violence prevention plan in which boundary spanners played a key role. Organizational change was added as a formal component of the youth violence prevention plan. The IC in Intervention City B worked entirely informally and did not adopt work process or structural interventions into any citywide plan, and effective boundary spanning roles were relatively non-existent. While each city was compared to its own baseline and in the use of RC tools, it is interesting to contrast how partners saw organizational change at the end of the intervention. In City A, when discussing how organizational change occurs, one IC partner said, "*It's the structure that allows us to move forward.*" While in City B, an IC partner said, "*It's [name of site coordinator] that moves things in this city.*"

6. Discussion

This study examined the effects of a research project designed to improve IC capacity to address gang and youth violence. Results were mixed. While one site made linear, positive progress over time as evidenced by survey results; another site had initial gains, but returned to baseline scores by the end of the study. There were no changes in RC scores over time in the comparison sites. Implementation analyses help to explain intervention results. Structural changes occurred in Intervention City A and boundary spanners were effective, helping to strengthen communication and coordination. There were structural change efforts in Intervention City B with a reconstituted steering committee, but no effective boundary spanner who deliberately communicated and coordinated across organizations and levels of government. Organizational change was memorialized through Intervention City A's youth violence prevention plan; while Intervention City B did not codify shared goals or link to their citywide plan. Both cities, however, used their plans as work process interventions to consider an ideal state of gang and youth violence reduction.

Structural change is necessary for sustained relational change (Gittel, 2016). Research shows that the existence of structures through which organizational change can take place are essential to achieve outcomes of interest (Daley, 2009), and this may be especially true in ICs as demonstrated here. Structural changes include clear roles and purpose for ICs in general (Koschmann, 2013), and in the CGM realm (National Gang Center, 2010). Structured meetings with clear agendas and shared protocols are structural changes that can lead to relational change (Huxham & Vangen, 2000). Structured meetings also are important to promoting an atmosphere where diverse participants feel like they have an equal stake in the partnership and will be heard (Zakocs & Edwards, 2006). Finally shared protocols increase trust across diverse organizations that lead to more effective delivery of services and programs (Hean, Warr, & Staddon, 2009). Research is clear that initiatives relying on people alone, rather than on structure to support people, are less effective and sustainable (Bryson, Crosby, & Stone, 2006). This study reinforces that finding.

RC research in single organizations has shown that boundary spanners are not typically critical factors to success (Gittel & Logan, 2018); yet boundary spanners were vital in terms of communication, coordination, and producing change in this study. They are part of a structural intervention according to RC theory, but also are essential to relational interventions. Boundary spanning roles may be an important element of success in ICs where there is a heightened need for cross-agency communication and coordination and perhaps a heightened set of tensions (Lewis et al., 2010). These roles also are more likely to be negotiated and sometimes informal in public sector ICs that address "wicked problems", such as violence (Woo, 2019). Boundary spanners created bridges vertically and horizontally in Intervention City A. They were active and effective at reaching out and communicating with diverse entities at different levels of government and in various organizations. They also obtained data from them as a work process intervention to help meet shared goals. At the same

time, with a global RC score of 4 out of 5, City A still had work to do to achieve excellent communication and coordination across partners. Boundary spanners may not have official roles that designate them as liaisons among different groups, but City A's boundary spanners buffered and nurtured relationships among diverse groups at many levels. These relationship-supporting roles are essential to effective collaboration (Turrini et al., 2010).

RC can be a practical guide to overcoming collaborative challenges in ICs, but critical elements may be missing. Absent from the RC framework is a deliberate emphasis on higher leadership in organizations beyond boundary spanners. In the case of this public sector initiative, leadership refers to city officials. Leadership in this sense may have a direct outcome on the degree to which ICs effectively collaborate and change. Active involvement of city leadership occurred in Intervention City A with a noted absence of leadership in Intervention City B. One clear example of the need for leadership is interagency memoranda of understandings, which facilitate information sharing and work among agencies with different missions. Leadership is an important feature in the operation of ICs in the private sector (Contractor, DeChurch, Carson, Carter, & Keegan, 2012; Kramer et al., 2019) and in the CGM public sector (Cahill & Hayslip, 2010). It may be that leadership support is a precondition to positive change as measured through relational coordination (Fu, 2015). Future research should examine leadership dimensions on the achievement of IC goals in the public sector.

Improving community capacity to work together is one CGM goal. This study demonstrates that RC was used to significantly improve communication and coordination in one intervention site. RC was a useful guide for change with a set of practical tools that partnerships could implement to improve how various entities went about their collective violence reduction work. Importantly, RC provides an instrument to measure success, and research shows that evaluation of the collaboration itself is essential to overall success (Silva, 2018). To more fully understand the utility of RC in the CGM context, replicating the use of RC in other CGM sites, with careful attention paid to codifying practices and boundary spanning roles, is warranted. Because of the similarity of problems with ICs across contexts, it also is useful to explore the use of RC in other public sector settings.

Several study limitations exist. Researchers were careful to craft an intervention that was rooted in best practices and that met the 18-month time requirement to observe outcome changes (Proctor, Powell, & McMillen, 2013). A quasi-experimental design was used with matched comparison sites to ensure any changes could be attributed to the intervention itself. Yet organizational change within ICs is a challenge, and organizational changes in these contexts are likely to be more difficult than in single organizations (Belenko, Johnson, Taxman, & Rieckmann, 2018). Organizational change work needs conscious attention over time (Fixsen, Naoom, Blasé, Friedman, & Wallace, 2005). These efforts in intervention sites sometimes took a backseat to issues galvanized around violent shootings and public events. Forward momentum was paused several times in each site because of other events that percolated to the

top of the priority list, echoing results from CGM evaluations (McGarrell et al., 2013). There are always competing demands for time and effort. Prioritizing the health of the collaboration itself must be a priority and part of the overall collaboration plan, as was demonstrated in Intervention City A.

Internal validity may have been affected if those surveyed for this study were not representative of those who were involved in the delivery of the CGM in sites. Surveyed individuals provided critical key informant data as they were centrally involved in the CGM execution in their sites. Exogenous factors not assessed in this study also may have affected study results, such as shifts in city leadership and economic downturns. Fundamental context factors, including funding stability, IC structure, and CGM strategies were state mandated and stable over time in each site. This limited some of the influence of outside factors and was a primary reason these sites were chosen for the study. Finally, positive changes may have occurred in Intervention City B with a longer evaluative time horizon.

This study is informative for improving communication and coordination in pursuit of shared goals in interorganizational collaborations in the public sector. A robust intervention implementation plan allowed for a careful examination of the RC process lending itself to translation from this setting to others. Cross-disciplinary research shows that effective collaboration is part of organizational change and central to overall initiative success (Bryson et al., 2006), yet ICs have not been well-studied in this regard (Kramer et al., 2019; Stokols, 2006). Boundary spanners may be essential to the achievement of effective collaboration because of their critical role in facilitating communication and coordinating across diverse entities. This study adds to the literature by applying a practical, innovative approach of incorporating relational coordination theory and tools into a criminal justice IC. Future research should continue to examine the interorganizational elements of diverse collaborations and integrate knowledge from other fields to help unpack the process by which entities work together – and work better together – as these practices ultimately may have broad influence on meeting shared goals.

Declaration of interest

None.

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References

Armstrong, D., Gosling, A., Weinman, J., & Martaeu, T. (1997). *The place of inter-rater reliability in qualitative research: An empirical study*. *Sociology*, 31(3), 597–606.

- Belenko, S., Johnson, I. D., Taxman, F. S., & Rieckmann, T. (2018). Probation staff attitudes toward substance abuse treatment and evidence-based practices. *International Journal of Offender Therapy and Comparative Criminology*, 62(2), 313–333.
- Bryson, J. M., Crosby, B. C., & Stone, M. M. (2015). Designing and implementing cross-sector collaborations: Needed and challenging. *Public Administration Review*, 75(5), 647–663.
- Bryson, J. M., Crosby, B. C., & Stone, M. M. (2006). The design and implementation of cross-sector collaborations: Propositions from the literature. *Public Administration Review*, 66(s1), 44–55.
- Cahill, M., & Hayslip, D. (2010). *Findings from the evaluation of OJJDP's Gang Reduction Program: Juvenile justice bulletin*. Washington, DC: OJJDP.
- Contractor, N. S., DeChurch, L. A., Carson, J., Carter, D. R., & Keegan, B. (2012). The topology of collective leadership. *The Leadership Quarterly*, 23(6), 994–1011.
- Cramm, J. M., & Nieboer, A. P. (2012). Relational coordination promotes quality of chronic care delivery in Dutch disease-management programs. *Health Care Management Review*, 37(4), 301–309.
- Daley, D. (2009). Interdisciplinary problems and agency boundaries: Exploring effective cross-agency collaboration. *Journal of Public Administration Research and Theory*, 19(3), 477–493.
- Dillman, D. A., Smyth, J. D., & Christian, L. M. (2014). *Mail and internet surveys: The Tailored Design Method* (4th ed.). Hoboken, NJ: Wiley.
- Fixsen, D. L., Naoom, S. F., Blasé, K. A., Friedman, R. M., & Wallace, F. (2005). *Implementation research: A synthesis of the literature*. Tampa, FL: National Implementation Research Organization planning: Cases and Concepts. Homewood, IL: Irwin.
- Ford, J. D., Ford, L. W., & D'Amelio, A. (2008). Resistance to change: The rest of the story. *Academy of Management Review*, 33(2), 362–377.
- Fu, N. (2015). The role of relational resources in the knowledge management capability and innovation of professional service firms. *Human Relations*, 68(5), 731–764.
- Gebo, E., Bond, B. J., & Campos, K. S. (2015). The OJJDP comprehensive gang strategy: The Comprehensive Gang Model. In S. H. Decker, & D. C. Pyrooz (Eds.), *Handbook of gangs and gang responses* (pp. 392–405). New York: Wiley.
- Gittel, J. H. (2000). Organizing work to support relational coordination. *International Journal of Human Resource Management*, 11(3), 517–539.
- Gittel, J. H. (2012). *Relational coordination: Guidelines for theory, measurement, and analysis*. Cambridge, MA: Relational Coordination Analytics.
- Gittel, J. H. (2016). *Transforming relationships for high performance: The power of relational coordination*. Stanford, CA: Stanford University Press.
- Gittel, J. H., & Logan, C. (2018). Relational coordination theory: A systematic review of evidence. In *Research Seminar Presented at the ISEEG School of Management*.
- Gray, B. (1985). Conditions facilitating interorganizational collaboration. *Human Relations*, 38(10), 911–936.
- Hean, S., Warr, J., & Staddon, S. (2009). Challenges at the interface of working between mental health services and the criminal justice system. *Medicine, Science, and the Law*, 49(3), 170–178.
- Howell, J. C., & Griffiths, E. A. (2016). *Gangs in America's communities*. Thousand Oaks, CA: Sage.
- Huxham, C., & Vangen, S. (2000). Leadership in the shaping and implementation of collaboration agendas: How things happen in a (not quite) joined-up world. *Academy of Management Journal*, 43(6), 1159–1175.
- Kanter, R. M., Stein, B., & Jick, T. (1992). *The challenge of organizational change: How companies experience it and how leaders guide it*. New York: Free Press/Maxwell Macmillan.
- Kaplowitz, M. D., Hadlock, T. D., & Levine, R. (2004). A comparison of web and mail survey response rates. *Public Opinion Quarterly*, 68(1), 94–101.
- Keyton, J., Ford, D. J., & Smith, F. I. (2008). A mesolevel communicative model of collaboration. *Communication Theory*, 18(3), 376–406.
- Klein, M. W., & Maxson, C. L. (2006). *Street gang patterns and policies*. New York: Oxford.
- Kramer, M. W., Day, E. A., Nguyen, C., Hoelscher, C. S., & Cooper, O. D. (2019). Leadership in an interorganizational collaboration: A qualitative study of a statewide interagency taskforce. *Human Relations*, 72(2), 397–419.
- Koschmann, M. A. (2013). The communicative constitution of collective identity in interorganizational collaboration. *Management Communication Quarterly*, 27(1), 61–89.
- Lewis, L., Isbell, M. G., & Koschmann, M. (2010). Collaborative tensions: Practitioners' experiences of interorganizational relationships. *Communication Monograph*, 77, 460–479.
- Maccio, L., & Christofoli, D. (2017). How to support the endurance of long-term networks: The pivotal role of the network manager. *Public Administration*, 95(4), 1060–1076.

- McGarrell, E. F., Corsaro, N., Melde, C., Hipple, N. K., Bynum, T., & Cobbina, J. (2013). Attempting to reduce firearms violence through a comprehensive anti-gang initiative (CAGI): An evaluation of process and impact. *Journal of Criminal Justice, 41*(1), 33–43.
- Mizrahi, T., Rosenthal, B. B., & Ivery, J. (2013). Coalitions, collaborations, and partnerships: Interorganizational approaches to social change. In M. Weil, M. Reisch, & M. L. Ohmer (Eds.), *The handbook of community practice* (pp. 1–22). Thousand Oaks, CA: Sage.
- Mock, L. F. (2010). Action research for crime control and prevention. In J. Klofas, N. K. Hipple, & E. McGarrell (Eds.), *The new criminal justice: American communities and the changing world of crime control* (pp. 97–102). New York: Routledge.
- National Gang Center. (2010). *Best practices to address community gang problems: OJJDP's Comprehensive Gang Model*. Tallahassee, FL: National Gang Center.
- Noël, P., Lanham, H., Palmer, R., Leykum, L., & Parchman, M. (2013). The importance of relational coordination and reciprocal learning for chronic illness care in primary care teams. *Health Care Management Review, 38*(1), 20–28.
- Patton, M. Q. (2015). *Qualitative research and methods: Integrating theory and practice*. London, UK: Sage.
- Proctor, E. K., Powell, B. J., & McMillen, J. C. (2013). Implementation strategies: Recommendations for specifying and reporting. *Implementation Science, 8*, 139. Retrieved from: <https://implementationscience.biomedcentral.com/articles/10.1186/1748-5908-8-139>
- Rosenbaum, D. P., & Schuck, A. M. (2012). Comprehensive community partnerships for preventing crime. In D. P. Farrington, & B. C. Welsh (Eds.), *The Oxford handbook of crime prevention* (pp. 226–246). London: Oxford.
- Seaton, C. L., Holm, N., Bottorff, J. L., Jones-Bricker, M., Errey, S., Caperchione, C. M., . . . & Healy, T. (2018). Factors that impact the success of interorganizational health promotion collaborations: A scoping review. *American Journal of Health Promotion, 32*(4), 1095–1109.
- Silvia, C. (2018). Evaluating collaboration: The solution to one problem often causes another. *Public Administration Review, 78*(3), 472–478.
- Spergel, I. A., Wa, K. M., & Sosa, R. V. (2006). The Comprehensive Community-Wide Gang Program Model: Success and failure. In J. F. Short, & L. A. Hughes (Eds.), *Studying youth gangs* (pp. 203–224). Lanham, MD: AltaMira Press.
- Stokols, D. (2006). Toward a science of transdisciplinary action research. *American Journal of Community Psychology, 38*(1–2), 63–77.
- Turrini, A., Cristofoli, D., Frosini, F., & Nasi, G. (2010). Networking literature about determinants of network effectiveness. *Public Administration, 88*, 528–550.
- U.S. Census Bureau. (2010). *American fact finder: Community facts*. Retrieved from: <https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>
- Van Eyk, H., & Baum, F. (2002). Learning about interagency collaboration: Trialling collaborative projects between hospitals and community health services. *Health and Social Care in the Community, 10*, 262–269.
- Wandersman, A., & Florin, P. (2003). Community interventions and effective preventions. *American Psychologist, 58*(6–7), 441–448.
- Williams, P. (2013). We are all boundary spanners now? *International Journal of Public Sector Management, 26*(1), 17–32.
- Woo, D. (2019). Reconceptualizing interorganizational collaborations as tensile structures: Implications of conveners' proactive tension management. *Communication Monographs, 86*(2), 158–183.
- Zakocs, R. C., & Edwards, E. M. (2006). What explains community coalition effectiveness? A review of the literature. *American Journal of Preventative Medicine, 30*(4), 351–361.