Partnering to Create a More Livable City: The Livable St Louis Network

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Context: Physical inactivity is a major public health problem. While individual (e.g., attitudes, values, beliefs) and social (e.g., social support) factors play a role, access to an activity-safe local environment can have a significant influence. Environments that include accessible opportunities for physical activity, a component of livability, require cooperation from many sectors including nonprofit, government, educational, and for-profit.

Objective/Design/Setting: This study used a mixed-methods network mapping approach to evaluate a multisector network focused on increasing the livability of St Louis, Missouri.

Participants: Eighteen network members participated in in-depth interviews about their livability partners.

Outcome Measures/Results: The participants identified 86 unique partners in the region, with a majority representing nonprofit and government organizations and fewer from the education and for-profit sectors. Participants trusted 88% of their partners and felt that 83% of partners shared their mission and vision. Trust and shared mission and vision varied across organization types. Specifically, 89% of nonprofit partners were thought to share a mission/vision and 87% were trusted. Participants felt that 87% of government partners shared their mission/vision and 91% were trusted. Participants shared mission/vision with 75% and trusted 75% of educational partners. Finally, 44% of for-profit partners were thought to share mission/vision and 100% were trusted. For-profit partners also had more positive influence than others, while government partners had the highest average negative influence. Finally, while most relationships were mutual, relationships with for-profit partners were mostly one-directional, with for-profit partners sending resources to other network members.

Conclusion: Livability efforts in St Louis might benefit from recruiting additional for-profit partners that provide the network with new perspectives and needed resources, and from cultivating positive partnerships with government organizations that can assist with local policy development and enforcement.

KEY WORDS: community health, network, physical activity

Physical inactivity is an important public health issue that has received increased attention over the last few decades. A review of studies on physical activity and the incidence of coronary heart disease found that those with sedentary lifestyles were almost twice as likely to have cardiovascular disease as those who were not sedentary. In addition to contributing to reduced risk of heart disease, physical activity contributes to lower risk for a variety of other chronic diseases including hypertension, non–insulin-dependent diabetes, colon cancer, osteoarthritis, and osteoporosis.

Despite the known associations with morbidity and mortality, more than 53% of American adults do not obtain the recommended levels of physical activity. The Centers for Disease Control and Prevention recognizes the need for increasing physical activity and has incorporated physical activity goals into national...
public health guidelines set forth in Healthy People 2010 and 2020.5-7 These national recommendations, and substantial research, recognize that physical inactivity is a function of individual behavior as well as the policies and environments that influence individual lifestyle choices. Thus, public health needs to not only provide information and skills about physical activity and health risks but also create physical activity supportive environments and policies to foster lifestyles incorporating physical activity.8-14

Given the potential impact of environmental and policy changes on physical activity, recent work has begun to examine the resources and infrastructure that need to be in place for these changes to occur. Most researchers recognize that multisectoral partnerships, including government, nonprofit organizations, schools/education, and business/for-profit partners, are needed to create these changes.8,15,16 Governmental departments approve, plan, and implement projects, nonprofit organizations organize people and promote issues, educational institutions offer research support and technical assistance, and for-profit organizations elevate initiatives with their backing and funding. It is, however, unclear if all of these partners are actually involved in creating environmental and policy changes, and, if they are, little is known about the characteristics of these partnerships and how that might influence development and implementation of changes.

The current study evaluated the development of Livable Saint Louis Network (LSLN), a network intended to bring together partners interested in environmental and policy changes around land use development to improve physical activity opportunities within St Louis, Missouri. In a recent evaluation of walking and biking in cities and states nationwide, the Alliance for Biking and Walking reported that Missouri ranked 40th among states, and St Louis city did not appear among the top 51 walking and biking cities in the country (http://www.peoplepoweredmovement.org/site/). According to the same evaluation, Missouri is in the bottom third of states for commuting by bike and walking and in having policies that promote biking and walking. Missouri has, however, begun to invest in biking and walking and has an average safety record for bikers and walkers across the state.

In 2009, members of Trailnet, a nonprofit group located in St. Louis, Missouri—dedicated to promoting biking, walking, and active living—partnered with faculty, staff, and students from Saint Louis University College for Public Health & Social Justice to conduct a listening tour to talk with leaders of St. Louis area about the value of collaboration. Fifteen area leaders were interviewed, and results were analyzed and synthesized into recommendations for forming the LSLN. Upon concluding our listening tour, the partners identified a need for a meaningful collaboration to enhance regional capacity to address land use and transportation policy. The LSLN steering committee drafted the charter (http://www.livablestlouis.com/) and the LSLN was formed on March 12, 2010. The charter opens with a quote defining livability from United States Department of Transportation Secretary Ray LaHood, “Livability means being able to take your kids to school, go to work, see a doctor, drop by the grocery or post office, go out to dinner and a movie, and play with your kids at the park—all without having to get in your car.” The mission of LSLN is to enhance livability by catalyzing partnerships to translate (adapt and implement) evidence-based transportation and land use policies for the St Louis context and population. To understand what progress LSLN has made toward its goal of developing a network around livability across the region during its first 18 months, we used a network approach to determine the strengths, weaknesses, and opportunities for LSLN by asking the following questions:

1. Who is partnering around livability issues in St Louis?
2. What are the characteristics of network of organizations working on livability?
3. Who are the most trusted and positive influences in the network?
4. Which network partners influence livability in St Louis?

Methods

Sample and data collection

We invited the 27 LSLN members who had ever attended an LSLN steering committee or workgroup meeting and who had been involved in the first phase of the LSLN project; 2 individuals were no longer working with their organization and so were excluded. Eighteen of the remaining 25 invited participants agreed to be interviewed, for a 72% response rate. Using the mixed-methods network approach (net-mapping) developed by Eva Schiffer,17 we worked closely with each participant to draw a network depicting the individuals and organizations they work with on livability across the St Louis region based on this prompt: First we want to know about the people (name and organization) and partners in St Louis you most commonly work with around livability. Please name 5 to 10 St Louis organizations or people you partner with the most frequently. As participants were answering this prompt, all identified partners with their organizations were added to a large sheet of paper with the participants’ organizations shown in the middle. During the process
of identifying and placing the partners on the network map, participants explained how the work with their partner fit into livability. Participants were allowed the flexibility to exceed the upper limit of 10 if they indicated having more than 10 livability partners.

After all participants defined who were in their livability networks and these partners were added to the network map, we asked participants to characterize their relationship with each of the partners by drawing an arrow between their organization and their partner demonstrating 1 of these 3 categories: Is most of your work mutual and consisting of sharing? (↔), Is most of your work one way, with you providing to them? (→), Is most of your work one way, with them providing to you? (←). Following the identification of each relationship, we asked participants to characterize each partner on the map in terms of trust whether they shared a mission and vision with the partner, whether the partner was influential in livability in the St Louis region, whether each partner had a positive or negative influence on their work, and how much positive or negative influence they had on a scale of 1 to 5 with 1 being the least amount of influence and 5 being the most. Finally, we asked which of the partners listed the participant believed also worked with each other and drew lines connecting partners.

As the participants developed their livability partnerships network map, they talked through the decisions they were making. Interviews were audio-taped and transcribed verbatim. The transcriptions were reviewed and coded. Three members of the research team reviewed the assignment of text to codes to ensure accuracy. When this was complete, the research team wrote summaries of the codes and combined quotes that referred to the same issue, such as trust, when appropriate.

Finally, the participants filled out a survey to collect general information about their work (eg, primary work focus, length of time working on livability) and the characteristics of the organizations they worked for (eg, organization type). The net mapping and survey took approximately 1 hour and 20 minutes to complete for each participant. Consistent with egocentric network approaches, for the remainder of this manuscript, the 18 participants who drew maps will be referred to as egos and the partners identified by the egos in their networks will be referred to as alters. To our knowledge, although multisectoral partnerships are thought to be necessary for livability, this is the first time that a network approach has been used to examine a network of partnerships addressing livability in a community. All data were collected directly from the participants, with the exception of organizational type for alters, which was collected through Web searches and phone calls to organizations by the research team following the conclusion of all interviews. Interview guides and surveys used are available on the Prevention Research Center in St Louis’ Web site (http://prcstl.wustl.edu/).

Data management and analysis

The 18 egos identified a total of 165 alters when all were listed. When alters were named more than once they were combined, for a final list of alters with 86 unique organizations or people. We examined the characteristics of the egos and alters using descriptive and bivariate analyses. We developed a single network composed of the egos and unique alters and used visual and descriptive network methods to examine the patterns of connections among the network member types. Transcripts from the 18 interviews were reviewed to identify emerging themes. These themes are incorporated throughout the results to provide additional context for the network and other quantitative findings.

Results

Who has partnered around livability issues in St Louis?

The livability network included 104 organizations (18 egos; 86 alters) from 4 sectors: nonprofit, government, for-profit, and educational. Most of the egos and alters were from nonprofit organizations (n = 56; 53.8%). Nonprofits were typically organizations that organize people and promote issues, for example, Citizens for Modern Transit, which educates St Louisans about transit-oriented development and advocates for better public transportation systems in the St Louis region. Government egos and alters were also well-represented (n = 30; 28.8%); most government network members were agencies working to implement projects around livability issues like transportation. For example, government alters included St Louis City and St Louis County government. There were fewer for-profit organizations in the network (n = 10; 9.6%) and the for-profit partners varied greatly, ranging from small local organizations like a bike shop to large regional corporations employing hundreds of people. Finally, educational institutions (n = 8; 7.7%) consisted of 2 local elementary schools and 6 public and private colleges and universities across the region.

What are the characteristics of network of organizations working on livability?

The majority of egos, with a single exception, reported working with multiple partner types. Nine egos (50%) had 2 partner types, 6 egos (33%) had 3 partner types,
thought to share ego mission and vision by at least one of the egos they were connected to, and 9.3% did not share mission and vision with any ego. This differed across alter types with egos completely sharing a mission and vision with 87% of government alters, 89% of nonprofit alters, 75% of educational alters, and only 44% of for-profit alters. Mixed opinions on shared mission and vision were reported for 3 nonprofit organizations, 2 educational institutions, and 2 governmental organizations. No shared mission and vision were reported for 2 nonprofit organizations, 1 governmental organization, and 5 for-profit organizations. Because there were only 9 for-profit alters, this demonstrates a lack of shared mission and vision between the egos and more than half of their for-profit partners.

Which network partners influence livability in St Louis?

We measured the indirect and direct influence of each alter on livability in St Louis. First, each alter was identified by the ego as having positive influence or negative influence on the ego’s work around livability. Next, the egos indicated how much influence each alter had by placing a stack of 0 to 5 checkers representing the amount of influence on their map next to each network member; red and black checkers were used to represent negative and positive influence, respectively. The Table shows the overall distribution of influence among the 165 alters originally identified. Note that, although there were few organizations identified as having no influence or negative influence, several nonprofit egos found nonprofit alters to lack influence in the network.

Of the 86 unique alters named, 6 were identified by 1 or more of the egos as a negative influence; so, no 2 egos classified the same alter as negative. Five alters were deemed by the egos to have no influence. Of the 6 who had a negative influence, 5 were characterized as having a positive influence by another ego in the network; only 1 network member was characterized as only negative. Among the 80 organizations with positive influence, the average amount of positive influence was 3.0 (SD = 1.3). The for-profit alters had the highest average positive influence (M = 4.1; SD = 0.8), followed by government (M = 3.1; SD = 1.1), nonprofit (M = 2.8; SD = 1.3), and education (M = 2.6; SD = 1.3). Qualitative data indicated that the egos described positive influence as related to several alter qualities. Egos identified positive influence when they received funding from an alter or when the alter facilitated networking opportunities or new connections. In addition, having a history of collaboration and collaborating frequently, and experiencing good communication, especially when the communication was
initiated by the alter, were qualities that egos related to positive influence.

The 3 negatively perceived government alters had the highest average negative influence ($M = 0.54; SD = 0.40$), followed by 2 negatively perceived nonprofit organizations ($M = 0.33; SD = 0.24$), and the single educational institution ($M = 0.50; SD = 0$). None of the for-profit alters were identified as having negative influence. Qualitative data indicated that negative influence was accounted for by tensions between the ego and alter due to having similar organizational roles and wanting to do the same type of work. Egos also found that when alters were unreliable, lacked capacity to partner or communicate effectively, or were organizationally

<table>
<thead>
<tr>
<th>Alter type</th>
<th>Ego type</th>
<th>Influence</th>
<th>Nonprofit, n (%)</th>
<th>For profit, n (%)</th>
<th>Government, n (%)</th>
<th>Education, n (%)</th>
<th>Total, n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nonprofit</td>
<td>Positive</td>
<td>50 (59.5)</td>
<td>7 (8.3)</td>
<td>15 (17.9)</td>
<td>12 (14.3)</td>
<td>84</td>
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<tr>
<td></td>
<td>Negative</td>
<td>1 (25.0)</td>
<td>0</td>
<td>2 (50.0)</td>
<td>1 (25.0)</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>None</td>
<td>5 (83.3)</td>
<td>0</td>
<td>1 (16.7)</td>
<td>0</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>For profit</td>
<td>Positive</td>
<td>2 (40.0)</td>
<td>0</td>
<td>0</td>
<td>3 (60.0)</td>
<td>5</td>
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<td></td>
<td>Negative</td>
<td>0</td>
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<td>None</td>
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<td></td>
</tr>
<tr>
<td>Government</td>
<td>Positive</td>
<td>29 (46.0)</td>
<td>2 (3.2)</td>
<td>3 (4.8)</td>
<td>29 (46.0)</td>
<td>63</td>
<td></td>
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<tr>
<td></td>
<td>Negative</td>
<td>1 (50.0)</td>
<td>0</td>
<td>1 (50.0)</td>
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<td>0</td>
<td>1 (100.0)</td>
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unstable (eg, high staff turnover), it negatively influenced their livability work.

In addition to reporting perceived influence of the alters on ego’s livability work, the egos reported that which alters were, themselves, influential in livability across St Louis. Of the 86 alters, egos reported that 51 were not influential in St Louis livability. Among these were 7 of the 9 for-profit alters (78%), 23 of the 46 nonprofit alters (50%), 17 of the 23 government alters (74%), and 4 of the 8 educational institutions (50%). So, although for-profit alters were viewed as having the most positive influence on the ego’s livability work, they were not perceived as directly contributing to livability in St Louis. Government alters had the most negative influence on the ego’s livability work and were also not perceived as direct contributors to livability in St Louis.

Conclusions

Through a participatory mixed-methods data collection process, we identified the characteristics of partnerships around livability across the St Louis metropolitan area. We found that, after 18 months of existence, LSLN had cultivated partnerships spanning all 4 sectors (nonprofit, government, education, and for-profit), with nonprofit and government organizations comprising majority of the partners. As the LSLN continues to grow over time, the results of this study can aid in developing a strategy to broaden and strengthen the network of partners working on livability in St Louis.

This study was limited by the use of self-report data and unconfirmed ties. Specifically, the partnerships identified by the LSLN egos were not confirmed by their alters. While they may accurately represent participant perspectives on partnerships in LSLN, it is likely that this strategy missed or misrepresented some connections. Despite this limitation, we believe the information gained in this evaluation will aid LSLN in strengthening the network, which, in turn, has the potential to positively influence livability and health across the St Louis region.

To this end, on the basis of our findings, we conclude with 3 recommendations for LSLN that other developing and existing livability networks may also consider during efforts to strengthen their networks and improve livability.

Recommendation 1: Increase the number of for-profit partners

The vast majority of partners had positive influence on the work of LSLN members, and, despite many lacking a shared mission and vision and most not directly influencing livability, the for-profit partners had more positive influence on the ego’s livability work than all other partner types. Given this high level of positive influence, the current lack of for-profit partners in LSLN may represent an opportunity to strengthen the network. Recruiting additional for-profit partners would likely positively influence the livability work of existing partners by bringing added resources and new ideas to LSLN. The interview with the for-profit participant identified one potential challenge in recruiting for-profit organizations that LSLN should consider before beginning recruitment efforts. Specifically, for-profit partners may need a way to explicitly tie their own work to the work of LSLN. For-profit partners may have billable hours and participating in a network such as this has to offer a benefit to offset the cost of spending billable time on an activity that does not directly generate income.

Recommendation 2: Work with existing government partners to strengthen relationships and reduce negative influence

Although few partners were viewed negatively, government partners had the highest average negative influence of any partner type in the network. Themes in the qualitative analysis indicated that this might be due to a lack of communication among multiple departments and divisions within government agencies that resulted in conflicting messages communicated to LSLN members. Government partners were also seen as not directly influencing livability, which is troubling because government partners are of considerable importance in passing, implementing, and enforcing policy related to livability. Identifying ways to work with government partners to reduce negative influence, increase actual and perceived positive influence, and strengthen partnerships will be key to strengthening the network and improving livability in St Louis and perhaps in other communities.

Recommendation 3: Work with existing partners who have few ties or weak ties to the network to bring in new partners

Most ties between egos and alters were characterized as mutual ties, which may be considered strong ties.
The for-profit partners, however, were mostly tied to egos through nonmutual relationships, which have been characterized as weak ties. There is evidence that both strong and weak ties have important roles in a network like LSLN, “weak ties provide people with access to information and resources beyond those available in their own social circles, but strong ties have greater motivation to be of assistance and are typically more easily available.” In addition, weak ties have often been cited as key in bringing new information into a network. In LSLN, weak ties to for-profit organizations and others may be useful in cultivating new relationships and resources for LSLN. However, for-profit partners may need to be receiving something from the network to participate, so identifying ways to turn nonmutual ties into mutual ties with for-profit organizations may aid in the recruiting effort recommended earlier.

Finally, in addition to identifying potential new partners by conferring with partners who are weakly tied through nonmutual relationships, another strategy that LSLN might employ to broaden and diversify the network is to work directly with those partners who have fewer connections to existing egos in LSLN. Partners with fewer ties within the network typically have more ties outside the network. Having ties outside the network also facilitates the adoption of new information; these alters may also be able to aid LSLN in bringing new partners and new information into the network.

Although each community will bring different strengths, challenges, and stakeholders to local livability efforts, the lessons learned from the LSLN evaluation may be useful for others aiming to increase local livability. While the development of a stakeholder evaluation may be useful for others aiming to increase local livability efforts, the lessons learned from the LSLN strengths, challenges, and stakeholders to local livability. In bringing new partners and new information into the network. In LSLN, weak ties have often been cited as key in bringing new information into a network. In LSLN, weak ties have often been cited as key in bringing new information into a network.

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REFERENCES