Effective Leadership in Network Collaboration: Lessons Learned from the Continuum of Care Homeless Assistance Program

Abstract

The trend toward using collaborative networks has increased in recent years—creating a need to understand the unique leadership skills and qualities that are necessary of managers to effectively function within this new normal. This paper examines the relationship between transformational leadership and network performance in homeless services. We hypothesize that a transformational leader—broadly defined as an individual who is inspirational, attentive to the needs of others and open to innovative ideas and solutions— contributes to the effective management of a collaborative network of organizations by inspiring change, bringing diverse stakeholders together, and creating an environment of exchange and creativity. We test this idea using survey data from 237 respondents who lead collaborative networks within the context of homeless services. Findings indicate that transformational leadership style has a positive and statistically significant effect on the performance of the homeless service network.

Keywords: Transformational Leadership, Network Effectiveness, Homeless Networks, Network Leadership, Cross-Sector Collaboration

It has been observed that the use of cross-sector collaboration has become the prevalent form of governance in human and social services. Public organizations often depend on nonprofit organizations because of benefits embedded in collaborations such as access to resources, cost benefits, and the opportunity to access the local expertise (Jang, Feiock, & Saitgalina, 2014; Feiock & Jang, 2009). Nonprofit organizations also depend on public organizations to implement programs through government contracts and grants (Farrell, Fyffe, & Valero, 2015; McKeever, 2015). Recent research indicates that in these cross- sector collaborations, which take various forms ranging from informal information exchange networks to formal contracts, nonprofits are increasingly tapped to take the lead (Valero & Jang, 2016).

Leading a network requires an investment of time, resources, and energy in tasks such as identifying resources, securing the participation of organizations, and establishing a shared vision and strategy (Ansell & Gash, 2008; Milward & Provan, 2006), and managers have a

choice in the style of leadership they adopt in handling these affairs of the network (Jang, Valero, & Jung, 2016). Previous work on leadership within organizational settings, for example, has reported that public managers' leadership varies from transformational to transactional leadership. Transformational leaders can be broadly defined as individuals that are visionary and catalysts of organizational change and innovation (Denhardt & Campbell, 2006; Jaskyte, 2004). Some research has found that transformational leadership is being perceived to be more effective (Trottier, Van Wart, & Wang, 2008). In that study, Trottier and her colleagues analyzed data from a national survey of federal employees and found that transformational leadership explained a larger variance in what employees perceive to be effective leadership and that several dimensions of transformational leadership were among the top variables explaining followers' leadership satisfaction. We suspect that the same is likely to be the case within collaboration, with transformational leadership having a positive effect on network outcomes. Thus, it is essential to understand the scope of leadership behaviors that are necessary to effectively function within cross-sector collaboration, a new normal.

In addition, we expand upon an established leadership theory—namely, transformational leadership theory—that has been previously studied within organizational boundaries by applying it to a new setting, interorganizational network or cross-sector collaboration. We argue that there are significant differences between leadership in an organization and in a network (Agranoff, 2006). Organizations, for example, tend to represent a single sector (e.g., public, private, or nonprofit), whereas a public service network may be comprised of cross-sector organizations. Organizations also tend to be legally registered entities with defined decision-making mechanisms and documented rules that hold members accountable, whereas networks may not be legally registered entities and tend to have evolving decision-making mechanisms in

place with understood norms and shared expectations among more autonomous members (Provan & Kenis, 2008; Milward & Provan, 2006; Rethemeyer & Hatmaker, 2007; Selznick, 1948). We admit that these differences between organization and network are not absolute and instead are somewhat conditional.

Our focus on leadership is a significant departure from resource dependency and institution models that treat individuals in collaborations as mere agents of underlying organizational decisions driving the management of collaborations. In fact, studies that explore network leadership are rare except for a study done by McGuire and Silvia (2009) on the impact of collaborative leadership on effective emergency management networks. We assume network managers are real people who, in representing their home organizations in the collaboration process, engage in leadership behaviors that will influence the behaviors of diverse agencies to achieve effective collaboration for the benefit of the network and community in predictable ways. Our study, therefore, focuses on answering the following research questions: What are the key transformational leadership activities that are exercised by network leaders? Does a manager's transformational leadership style matter in explaining a network's performance?

To answer these questions, we construct a survey that captures the leadership behaviors of individuals managing networks focused on addressing the incidence of homelessness within their communities and that operate under the Continuum of Care Program of the U.S. Department of Housing and Urban Development (HUD). We use this survey and secondary sources of data to understand key transformational leadership behaviors of public service network leaders and test the impact of transformational leadership on network level effectiveness. We organized our paper into four additional sections. First, we review the literature on collaboration and leadership, from which we draw testable hypotheses. The research context,

data, and methods are presented in the next section. In the third section, we report and discuss our findings. The last section is comprised of our conclusion, discussion of limitations, and implications for future research and practice.

Theoretical Considerations

Effective Collaboration

Public service collaboration refers to instances where two or more organizations work together to co-produce and implement public programs that they would otherwise be unable to accomplish alone (Agranoff & McGuire, 2001; Gazley, 2010; Jang, Valero, Kim, & Cramb, 2015). Effective collaboration, therefore, refers to the degree to which organizations in collaboration are able to achieve successful outcomes (Gazley, 2010; Selden, Sowa, & Sandfort, 2006). The current collaboration literature in public and nonprofit management has focused on answering the question of why organizations are likely to collaborate, but the factors explaining effective collaboration have been understudied. This is not surprising when it is difficult to observe the complex interaction of cross-sector actors participating in the multiple stages of the collaboration process. It can also be a daunting task to identify collective goals shared among network members in order to measure collaboration outcomes.

In a seminal piece on assessing network effectiveness, Provan and Milward (2001) suggested that network effectiveness research could be conducted at three levels of analysis: organization, network, and community. At the *organizational level*, the focus is on assessing the degree to which organizations are able to accumulate individual benefits as a result of their collaborative participation. For example: are organizations able to better serve their client base as a result of collaborating with other organizations? Other effectiveness criteria in this level of analysis include: resource acquisition, agency survival, and enhanced reputation. At the *network*

level, effectiveness is measured by the degree to which the network as a whole is able to achieve collective benefits, and effectiveness criteria may include: increased network membership, range of services provided, member commitment, and integration/coordination of services. At the *community level*, the focus is on investigating whether the network is able to contribute value to the community it serves. Effectiveness criteria in this level of analysis may include: reduction in the problem, public perception that problem is being tackled, and cost to the community.

Using Provan and Milward's (2001) framework on evaluating network effectiveness as a guide to review the literature, we find that most of the research in the public and nonprofit management field has focused on organizational level analysis by exploring the conditions or factors that may help organizations accumulate individual benefits by participating in collaborative efforts (Provan & Milward, 1995; Andrews & Entwistle, 2010; Babiak & Thibault, 2009; Chen & Graddy, 2010; Gazley, 2010; Gazley & Brudney, 2007; Selden et al., 2006). Andrews and Entwistle (2010), for example, explore the impact of different types of cross-sectoral partnership arrangements on collaboration effectiveness and found that public-public partnerships matter in explaining an increase in effectiveness, but public-nonprofit partnerships do not result in statistically significant results. These findings indicate that organizations must be aware of the costs and benefits that different types of partnership arrangements may have on their client base.

Some research has explored network effectiveness at the network level, but those studies tend to use subjective measures of effectiveness and adopt a small n case study or qualitative approaches (Chen, 2008; Nolte & Boenigk, 2012). In a case study of family and children services in Los Angeles County, for instance, Chen (2008) analyzes the impact of collaboration processes on perceived network level effectiveness measures such as the quality of working

relationships, increasing partner interactions, and goal achievement. In general, the study found that resource sharing and building trust mattered in explaining perceived collaboration outcomes at the network level.

Our work adds to this developing literature on network level effectiveness by measuring network performance both subjectively and objectively. We test the framework as proposed by Provan and Milward (2001) and assess the perceived performance of networks in four areas: increase in network membership, increase in range of services provided by network, reduction in the duplication of services provided in the community, and increase in member commitment. From an objective perspective, we analyze the degree to which the network is able to secure funding for its efforts and services by accessing data on funding that networks receive competitively from the federal government. Thus, we evaluate network effectiveness objectively by analyzing the degree to which networks are successful in winning government grants.

Transformational Leadership

The debate of whether leadership makes a difference for effective collaboration remains unsettled partly because much of the scholarship has focused on organizational leadership and on assessing the conditions that affect organizations to engage in interorganizational collaboration. Gazley (2010), for example, calls "for a more nuanced look at the characteristics of the public managers who make collaborative decisions" (669). Thus, we take a close look at those leading collaborative networks by assessing their style of leadership and its potential impact on the ability of organizations to work well together in network collaboration.

We adopt transformational leadership theory as developed by Bass and Avolio (2004)—which reflects leaders who are agents of change, visionary, inspirational, and attentive to the needs of followers—to understand the effects of leadership on collaboration outcomes. Bass

and Avolio (2004) propose that individuals can achieve transformational leadership through behaviors organized in four dimensions: idealized influence, inspirational motivation, individualized consideration, and intellectual stimulation. *Idealized influence* refers to a leader who is a strong role model and whose behavior is led by strong ethical and moral standards. *Inspirational motivation* simply refers to leaders who motivate others by inspiring them to achieve mutual goals and who effectively link individual values and beliefs to the mission of the organization. *Individualized consideration* refers to leaders who take an interest in the individual needs of others. Transformational leaders foster an environment of innovation and creativity through *intellectual stimulation*. In this type of environment, leaders and followers are able to exchange ideas, thoughts and solutions to the ever-changing needs of an organization. In addition, this platform enables followers to challenge not only their values and beliefs, but also those of their leaders and vice versa. Overall, transformational leaders are able to tap into the potential and motivations of others and by doing so, helping followers or team members to perform above and beyond.

Transformational leadership has been widely studied in the private sector, with scholarly work in the public and nonprofit sectors lagging behind. Within business organizations, transformational leadership has been linked to innovation (Gumusluoğlu & Ilsev, 2009), organization performance (Garcia-Morales, Jimenez-Barrionuevo, & Gutierrez-Gutierrez, 2012; Zhu, Newman, Miao, & Hooke, 2013; Zhu & Akhtar 2014), employee citizen behavior (Song, Kang, Shin, & Kim, 2009), employee engagement (Tims, Baker, & Xanthopoulou, 2011), and team performance (Lehmann-Willenbrock, Meinecke, Rowold, & Kauffeld, 2015; Wang & Howell 2012). Lehmann-Willenbrock et al. (2015), for example, studied the interactions between leaders and their teams during regular team meetings in an automotive supply industry,

and found that transformational leadership explains functional problem-solving by team members—a relationship that was mediated by the use of solution-focused communication by transformational leaders. In a different study, Wang and Howell (2012) found that transformational leadership is linked with the collective efficacy of teams, which was mediated by group identification. Thus, the process by which transformational leaders affect the effectiveness of teams is through creating a group identity and engaging in effective communication by doing things such as identifying a collective vision and helping members understand their role and purpose in the team.

The application of transformational leadership to the context of cross-sector collaboration in public service is important when it has the power to explain the dynamic interaction among network participants and the ability of leaders to affect real change in the community through transformational leadership behaviors. This is because transformational leaders ultimately help create an environment of shared leadership by building relationships among participants from diverse organizations and developing a common vision for the collective benefit (Bass & Avolio, 1994). A leader in public service collaboration has to maintain high ethical standards and be a strong role model in order for members of the network to accept the network's vision and goals through his or her idealized influence. The collaboration process requires leaders that are stewards of the collaboration process, inspire others to work collaboratively by building consensus, consider the needs of network members and act as good faith mediators, and are open to new solutions and change when necessary (Ansell & Gash 2007; Chrislip & Larson 1994; Milward & Provan 2006).

Transformational leaders can help increase the number of network members and the commitment of members by communicating a compelling and clear vision that effectively links

the interests of each organizational member to the purpose and mission of the network. Organizations are less likely to feel compelled to participate and commit to the efforts of the network when they see no salience to the purpose of the collaboration. In their study of senior managers of U.S. local governments, for example, Wright, Moynihan, and Pandey (2012) explore the relationship between transformational leadership, public service motivation, and mission valence. Mission valence in particular refers to an individual's attraction to the goals and mission of an organization (Caillier, 2014). Ultimately, Wright et al. (2012) find that transformational leadership has an indirect effect on mission valence through its effect on public service motivation and goal clarity. In other words, the process by which transformational leaders are able to increase the attractiveness of an organization's mission is by being clear of the goals to be achieved and by building the motivation of individuals to engage in public service. Ashikali and Groeneveld (2015) similarly find that transformational leadership has an impact on affective commitment and this relationship is mediated by creating an inclusive culture. We, therefore, predict that transformational leaders can likewise leverage on their ability to motivate and to be visionary to effectively attract and retain network membership by selling a vision that is worthy of collaboration and inclusive of the needs of all stakeholders involved.

Previous research on public and nonprofit organizations has also found that transformational leaders engage in innovation and help improve employee performance (Belle & Sanzo, 2014; Caillier, 2014; Dwyer, Bono, Snyder, Nov, & Berson, 2013; Jaskyte, 2011). In her study of human service nonprofit organizations, Jaskyte (2011) considers the impact of transformational leadership on two types of innovation: administrative and technological. The former refers to the implementation of a new administrative procedure or policy whereas the latter refers to the introduction of a product or service that is new to the organization. Results

indicate that transformational leadership is indeed a significant predictor of both types of innovation. Organizations in network collaboration are also expected to think in innovative terms; after all, one of the purposes of coming together is to strategize ways to co-produce when a single entity is not able to do it alone and to secure sources of funding (Gray & Gray, 1985; Weber & Khademian, 2008). Within networks, transformational leaders can help members engage in innovation by revisiting the repertoire of services offered in the community by network members and thinking of ways to both reduce the duplication of services and increase the range of services. Transformational leaders can also lead network innovation in the process of pursuing resources for the efforts in the network, particularly when innovativeness is often a criterion in the awarding of grants. Thus, we hypothesize that:

H_1: A higher level of transformational leadership is associated with an increase in perceived network effectiveness.

H_2: A higher level of transformational leadership is associated with an increase in network funding.

Professional Network Manager

Much has also been written about the role and importance of the professional manager in leading public and nonprofit organizations. In the case of a network, leading requires for managers to also have certain skills in areas such as organizing, identifying financial and human resources, and solving conflicts between members—among others (Agranoff & McGuire, 2001; Milward & Provan, 2006). We suspect that the more experience and education an individual has, the more effective she or he may be in leading the network to positive outcomes in areas such as recruiting members and securing funding. Gazley (2010) finds that experience indeed matters in collaboration.

Public managers with nonprofit experience or who work in a government that has volunteer involvement are more likely to report that their partnership with a nonprofit is effective. In a different study on networks in emergency management, McGuire and Silvia (2009) do not find evidence to suggest that education matters in explaining perceived network effectiveness. There are differences, however, between networks involved in disaster response and networks involved in the health and human service arena. Emergency management networks are predominantly active when disaster strikes whereas other types of networks (e.g., human service) may work continuously to address the social problem. Thus, we predict that the education level of the network manager may be a more relevant managerial characteristic in networks involved in, for example, addressing social issues. We conceptualize the professionalization of the individual leading a collaborative network twofold: years of experience in managing the network and level of education (e.g., whether network leader has a graduate degree or not).

H_3: An increase in the years of experience managing the network is positively associated with perceived network effectiveness.

H_4: An increase in the years of experience managing the network is positively associated with an increase in network funding.

H_5: Individuals with a graduate degree are more likely to perceive higher levels of network effectiveness than individuals with less education.

H_6: Individuals with a graduate degree are more likely to secure network funding than individuals with less education.

Other Factors

We control individual, network and community attributes in order to test our hypotheses. Women, for instance, have different interpersonal skills than men, and as such, may be more likely to exhibit certain transformational leadership strategies. Kark, Waismel-Manor, and Shamir (2012), for example find that a leaders' 'femininity' was strongly associated to effective leadership. The characteristics of a network may also influence the relationship between managerial characteristics and network effectiveness; therefore, we control for the size of network and the age of the network (e.g., how long it has been in existence). Because every community that a network serves is likely to vary, we also control for the homelessness rate and the average household income of the population within the network's jurisdiction.

Research Design

Research Context

We explore the relationship between leadership style and collaboration effectiveness within the context of homeless services. Since 1994, the U.S. Department of Housing and Urban Development (HUD) has encouraged communities to tackle the incidence of homelessness through network collaboration with the assumption that the pooling of local resources and expertise would best serve the needs of each community since homelessness issues are likely to vary from community to community (Homelessness, 2010). This approach was codified into law in 2009 with the adoption of the HEARTH Act. These networks are responsible for identifying their own system of governance, holding membership meetings, and designing and operating a Homeless Management Information System (HMIS) that tracks homeless services and population (Homeless, 2012; Introductory Guide, 2012). Member agencies engage in collaborative activities such as yearly counts of homeless people within their community as well as regular meetings to update each other and seek better approaches to homelessness. Homeless

networks are expected to be comprised of a variety of cross-sector actors, including: public entities (e.g., local government, county departments, and education providers), nonprofit organizations (e.g., human service nonprofits and faith-based organizations), and private enterprises (e.g., local businesses and housing providers) (Homeless, 2012; Valero & Jang, 2016). This context presents an ideal laboratory to explore the role of leadership in public service networks when these networks are self-organized at the local level, which allows for the organic selection and development of network leadership.

Data and Method

This study is based on data collected from HUD, U.S. Census Bureau, and a nation-wide online survey that we developed and administered in October 2015. In 2014, through the use of HUD's Exchange website (https://www.hudexchange.info), we identified a total of 382 networks and the collaborative applicant of each network. The collaborative applicant is the term used by HUD to refer to the lead agency responsible for submitting a grant application and overseeing the administration of funded projects. From this same source, we also collected key information such as total homeless population served by each network and amount of yearly funding awarded to each network.

Our survey was sent to the collaborative applicant of each of the 382 networks, and respondents were asked a series of questions to assess their perceived level of network performance and the extent to which they engage in transformational leadership. We measured these concepts in multidimensional form by creating indices comprised of multiple survey items. We received a completed survey from 237 networks, for a response rate of 62%.

Dependent Variable

Following the network effectiveness model proposed by Provan and Milward (2001), we measure the network level effectiveness in two ways. Our use of multiple dependent variables to measure the same concept will strengthen the conclusions that we can draw from our results about the effectiveness of these homeless networks—particularly when comparing subjective and objective indicators (Gazley, 2010). The goal here is to assess the performance of the network as a collective unit as opposed to measuring the success of individual members or the impact of the network's effort on the community it serves.

1. Perceived effectiveness of the collaborative network (Data source: Effective Leadership in Public Service Collaboration Survey)
2. Dollar amount of competitive HUD funding won by the network per capita (Data source: HUD)

The first dependent variable is the respondents' assessment of the extent to which the network as a whole achieved collective benefits in the following areas:

- Increase network membership
- Increase range of services
- Reduce the duplication of services
- Increase member commitment

Respondents rated these areas of network performance using a five point Likert-scale ranging from (1) *did not experience success at all* to (5) *experienced success to a very great extent*. For each respondent, the answers to the four items were summed and then divided by 20 and multiplied by 100 to create an index of network effectiveness (Cronbach's $\alpha = 0.678$).

The second variable is measured using an objective indicator: dollar amount of HUD funding awarded to each network per capita. This is an appropriate proxy for network performance when a network "must become a viable interorganizational entity if it is to survive (Provan & Milward 2001, 417)" by securing financial resources. We consider this to be also an appropriate measure of "network level" effectiveness when each network is required to submit one grant application to HUD and the funds are coming to the network to implement community programs.

Independent Variables

The independent variable in this study is the manager's self-rated leadership style, and we rely on Bass and Avolio's (2004) Multifactor Leadership Questionnaire (Form 5X-Short) to assess the extent to which network managers exhibit transformational leadership. The MLQ is the standard tool used to measure transformational leadership and there is strong precedent for the validity and reliability of this instrument (Avolio, Bass, & Jung, 1999; Bass & Avolio, 1994; Bass, 1998; Judge & Bono 2000; Trautmann, Maher & Motley, 2007; Valero, Jung, & Andrew, 2015). Although the original questionnaire uses 45 questions to measure transformational leadership and other styles of leadership, we used a condensed version of 16 survey items because of our interest on transformational leadership, with 4 indicators for each dimension: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration.

In addition, we modified and structured indicators to be fitting of leadership within a multi-actor playing collaborative network context as this tool was originally developed for measuring leadership style within an organization. For each item, respondents were asked to assess each statement using a five point Likert-scale ranging from (1) "never" to (5) "very often."

We created an index by adding up the scores of each question and then divided by 80 and multiplied by 100 (Conbrach's $\alpha = 0.921$).

The professionalization of the network manager is operationalized in two ways: education level and experience in leading the network. We ask each network manager to identify their level of education, but ultimately we measure this variable in dichotomous form (1 = graduate degree, 0 = bachelor's or less). We also ask the network manager to identify the number of years that they have been in the position of 'collaborative applicant.' This is the label that HUD uses to identify the lead organization within the network.

Control Variables

We control the analysis for manager, network and community attributes. First, we control for the leader's gender (1=male, 0=female). With regards to network attributes, we consider the size of the network in terms of membership and number of years that network has been in existence. Lastly, community attributes include key demographic indicators such as homeless population per capita[1] and average household income[2].

Results

Our first research question asks: *what are the key transformational leadership activities that are exercised by network leaders?* To answer this question, we asked network managers to self-assess the degree to which they engage in transformational leadership. Table 1 provides descriptive statistics on the four dimensions of transformational leadership and we rank each indicator based on the mean response for each item. These results indicate that network managers are placing a focus on both respecting partner differences and cultivating an

environment of sharing ideas and open dialogue when *intellectual stimulation* is the highest rated dimension of transformational leadership (average mean of 4.1). In addition, "seeking the counsel of key stakeholders of the network" was the most frequent transformational leadership behavior reported by network managers. From this we learn that the desired impact of collaboration can be realized by gauging the interests and buy-in from key stakeholders. We also found that "being open to the ideas and suggestions of network members," was the second most frequent transformational leadership behavior reported, which confirms that managers make efforts to balance the collaboration's vision and participating organizations' mission and vision. The members of collaboration are likely to commit to the mission of the network if their unique approaches to the collaborative goals are acknowledged and accepted. For example, managers are with frequency, establishing a fair process in managing resources and considering the individual needs of partner organizations. This means that there is some level of recognition by network leaders that each organization member differs, and as such, learning about the needs and interests of member agencies and ensuring that their requests are fairly considered may strengthen their network ties.

[Table 1 about here]

[Table 2 about here]

Table 2 provides information on the type of organization that is responsible for leading the efforts of the homeless network. Overall, results indicate that nonprofit organizations are with greater frequency taking the lead in managing the affairs of a collaborative network than government and private business organizations. Although our data does not capture the sector composition of network members, these results lend some support to the idea that there is some variance in sector representation within these networks.

Table 3 and 4 present the descriptive statistics of the variables included in our regression models as well as the intercorrelations of dependent, independent, and control variables. The results of the bivariate correlation analysis indicate that there is a range of weak to strong positive and negative relationships between various independent variables and our measures of network effectiveness. For example, transformational leadership has a strong and positive relationship with perceived effectiveness, which lends initial support to our first hypothesis. While some of the correlations are statistically significant, none of these exceeds 0.70, which suggests that the possibility of multicollinearity is not a serious problem (Vigoda, 2000). In addition, tolerance values for all variables were well above the standard threshold and the variance inflation factor for all variables was below 5.

[Table 3 about here]

[Table 4 about here]

Next, we estimate the predicted impact of individual, network and community attributes on network performance using OLS regression in order to answer our second research question (See Table 5). The overall strength of each model varies, with model 1 exhibiting greater explanatory power than model 2.

[Table 5 about here]

In model 1, we consider the impact of leadership style and professionalization of network manager on the perceived performance of networks. An adjusted R^2 of 0.31 suggests that the individual, network, and community attributes included in our model explain 31% of the variance in perceived network effectiveness. Our results confirm that transformational leadership is an important and strong predictor of the ability of organizations to achieve collective benefits such as increasing the number of network members and increasing the

commitment of members (β=0.50, p<.01). This suggests that on average, a respondent's perceived level of network effectiveness is predicted to increase by 0.50 standard deviations for every one standard deviation increase in a respondent's level of transformational leadership.

In addition, we find some support for the importance of a professional manager leading a network's efforts. Network managers with an advanced degree are more likely to have a greater impact on the performance of a network than those managers without one. For instance, a respondent's perceived network effectiveness is predicted to increase by 0.17 standard deviations when they have a graduate degree compared to those respondents with less education. Other individual characteristics such as a respondent's years of experience in managing the network and gender did not show a statistical impact on the performance of the network.

With regards to network attributes, our results indicate that while the age of the network may not matter, the size certainly does (β=0.12, p<.05). The larger the network, the more likely that a network manager will perceive that the network is effective in recruiting members, increasing the range of services, and reducing the duplication of services. Out of the community attributes, the perceived effectiveness of network is associated with the average household income of the community that the network serves.

In model 2, we assess the impact of leadership style on the dollar amount of HUD funding won by networks, in our attempt to understand effectiveness with an objective lens. The per capita HUD funding is a good measure to evaluate how the network secures resources to address the incidence of homelessness within their community. An adjusted R^2 of 0.15 suggests that the individual, network, and community attributes included in our model explain 15% of the variance in HUD funding per capita. Unlike the first model, leadership style seizes to have an impact on a network's performance. This suggests that exhibiting transformational leadership

does not directly translate into networks having an increased likelihood of winning a competitive HUD grant. The level of education of the network manager continues to have a positive and statistically significant relationship with the amount of HUD funding per capita (β=0.14, p<.05)—suggesting that leaders with an advanced degree understand the government funding opportunity and are more successful in securing these types of grants.

Of the network attributes, age of the network has a statistically significant relationship with HUD funding per capita (β=0.21, p<.01). This suggests that HUD funding per capita is predicted to increase by 0.21 standard deviations for everyone one standard deviation increase in the age of the network. Homelessness rate, as a community attribute, also yields a statistically significant result (β=0.35, p<.01).

Discussion

First, we sought to expand a leadership theory that has been extensively studied within organizational boundaries by testing its relevance to cross-sector collaboration within the context of homeless services. Our results indicate that, indeed, network managers are exhibiting various levels of transformational leadership—with managers paying more attention to some dimensions over others. For example, network managers seem to be exhibiting greater levels of intellectual stimulation (average mean of 4.1) when compared to the other three dimensions of transformational leadership. One interpretation of this finding is that network managers understand that in order to build an effective team of organizations working together, they must build a culture of exchange and innovation that welcomes and actively seeks a variety of perspectives. This is congruent with previous research findings: transformational leadership has an impact on affective commitment through a process of creating an inclusive culture (Ashikali & Groeneveld, 2015).

Second, as predicted, respondents who exhibit higher levels of transformational leadership also perceive that their network is effective. Out of the explanatory variables in model 1, transformational leadership has the strongest effect on perceived effectiveness. Thus, there is evidence to support our first hypothesis. This finding confirms our theoretical argument about the relevance of transformational leadership style for effective collaboration, and this finding adds to the empirical work on the impact of transformational leadership on effective management (Belle & Sanzo, 2014; Caillier, 2014; Dwyer et al., 2013). This means that network managers need to engage in the various dimensions of transformational leadership activities such as identifying a vision for the network to pursue collectively, motivating members that may come from diverse agencies and other stakeholders through inspiration to achieve the various goals of the network, and being open to the ideas and suggestions of network members.

Our second hypothesis asserts that transformational leaders will also have an impact on the effectiveness of networks by securing HUD funding for their operations and programs. Our results indicate that the relationship between transformational leadership and HUD funding is not statistically significant. Thus, we do not find support for our second hypothesis. We anticipated that transformational leadership would have an impact on a network's success in winning a grant when innovation is often an important criterion in grant applications.

Third, we analyze the relationship between the professionalization of the network leader and positive collaboration outcomes. Our results indicate that the number of years in experience as network manager does not share a statistically significant relationship with perceived effectiveness and HUD funding per capita. Accordingly, hypotheses 3 and 4 are not supported by our findings. On the other hand, we do find that the level of education yields significant results in both models. Thus, hypotheses 5 and 6 are supported. This suggests that the more

education a network manager has, the more likely that she or he is able to manage the network effectively to achieve collective benefits and to secure HUD funding per capita. This finding is contrary to what previous research has found about the impact of professionalization of leaders in effective collaboration (McGuire & Silvia, 2009).

Lastly, out of our control variables, we were intrigued by the findings that both network size and network age matter in explaining perceived effectiveness and HUD funding per capita, respectively. For example, the larger the network, the more likely that a network manager perceived that his or her network was effective. One interpretation of this is that resources matter in collaboration—larger networks are able to leverage from the increase in resources that are brought to the table by its member organizations. With regards to network age, experience is likely a byproduct of network age—the longer in operation, the more experience the network has in building a relationship with HUD and securing financial resources for the network. Thus, more recently established networks may be at a disadvantaged when competing for HUD funding.

Conclusion

The purpose of our study was to explore the relationship between managerial characteristics—namely, transformational leadership style and level of education and experience—and their impact on the performance of cross-sector networks working to address homelessness within their community. Our findings confirm that transformational leadership matters in explaining perceived network effectiveness, which we measured in multidimensional form: network membership, member commitment, range of services, and duplication of services. In addition, our results indicate that the education level of the individual charged with managing the affairs of the network matters. Taken together, these results suggest that collaborative

networks need to think carefully about the important leadership activities and qualifications of individuals that are appointed or selected to lead the cross-sector service collaboration.

From a theoretical perspective, this study fills the gap in the current literature in the public and nonprofit management field by establishing empirical evidence of the link between transformational leadership style and network effectiveness. More specifically, we expand upon a leadership theory well studied in organizational settings by applying it to interorganizational collaboration. In addition, we provide evidence of the impact of leadership in network performance in a different policy context—homeless service provision. Previous work has explored the relationship between leadership and network performance in the emergency management context (McGuire & Silvia, 2009).

Our results have several implications for practice. First, when establishing a collaborative network and beginning discussions on who should be charged with leading the process, networks should take a close look at the leadership and educational competencies of candidates. For networks that are already established, opportunities should be created to allow network managers to develop transformational leadership style and/or pursue continuing education to acquire the professional skills necessary to lead a collaborative network. Second, our results indicate that the age of the network is a key predictor of the competitiveness of networks in the HUD grant process. HUD should consider developing supportive programs that allow younger networks to develop expertise to even the competitive field—which ultimately, helps ensure that all communities have the same potential in accessing federal resources and addressing homelessness effectively.

This research has some limitations, however. First, we rely on subjective, self-reported measures of transformational leadership. Our survey, for example, does not take into account the

perception of network members. Second, our study does not take into account the formality of the network, which may influence perceptions of effectiveness and the ability to secure funding. Future research should consider assessing the formality of the network and the governance structure that networks adopt as a predictor of network performance. Lastly, our work did not consider the impact that leadership style may have on a network's ability to make a difference in the community—in this case, a reduction in homelessness. Thus, future research should consider the relationship between transformational leadership and positive community level outcomes.

Endnotes

[1] Homeless population data was collected from HUD Point-in-Time (PIT) Count, a count of "sheltered and unsheltered homeless persons on a single night in January" of each year (HUD Exchange 2016). We calculated the per capita rate by diving the homeless population by total population and then multiplied it by 1,000.

[2] Household income data was collected from US Census based on the jurisdiction that each network covers.

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Table 1: Transformational Leadership of Homeless Network Managers

Dimension	Measure	Avg. Mean	Mean	Rank
Idealized Influence	Considering the needs of network members before those of my own organization	3.9	4.0	6
	Instilling fairness in the process of managing resources in the network		4.2	3
	Expressing the need to adhere to ethical standards among members of the network		4.0	7
	Focusing efforts in building future leadership of network		3.3	16
Inspirational Motivation	Inspiring network members to work cohesively for common purpose	3.9	4.1	4
	Expressing confidence in network members' ability to achieve network vision		3.9	8
	Making an effort to build a network vision to internal and external stakeholders of the network		3.8	10
	Helping each member of the network understand their unique role in network mission		3.6	13
Intellectual Stimulation	Seeking the counsel of key stakeholders of the network	4.1	4.4	1
	Being open to the ideas and suggestions of network members		4.3	2
	Helping network members look at issues from different perspectives		4.0	5
	Creating opportunities for network members to engage in creativity and innovation		3.7	11
Individualized Consideration	Providing assistance to network members so that they are able to overcome challenges they encounter	3.7	3.9	9
	Paying special attention to the individual needs and challenges of network members		3.7	12
	Teaching and coaching network members		3.6	14

Helping assimilate new network members		3.6	15

Table 2: Organizations Leading Homeless Network

Sector	Frequency	Percent
Public, government	97	40.9
Public, nonprofit hybrid organization	10	4.2
Nonprofit	123	51.9
Private	4	1.7
Other	3	1.3
Total	**237**	**100**

Table 3: Descriptive Statistics

	Mean	SD	Min.	Max.
Perceived Effectiveness	73.15	14.02	20	100
HUD Funding Per Capita	6.34	7.39	0	50.04
Transformational Leadership	77.71	12.70	38.75	100
Education Level	0.49	0.50	0	1
Yrs. Experience as Mgr.	5.61	4.94	0	25
Gender	0.27	0.45	0	1
Network Size	37.47	28.13	0	200
Network Age	13.27	6.46	2	37
Homelessness Rate	2.32	2.38	0.02	16.46
Average Household Income	72357.02	19357.53	39326.60	160023.44

Table 4: Intercorrelations

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]
Perceived Effectiveness	1									
HUD Funding Per Capita	-0.01	1								
Transformational Leadership	0.50***	-0.09*	1							
Education Level	0.18***	0.12*	-0.04	1						
Yrs. Experience as Mgr.	-0.04	0.01	0.01	0.03	1					
Gender	0.056	-0.05	0.09*	-0.16***	-0.04	1				
Network Size	0.17***	-0.01	0.11*	0.05	0.03	-0.15***	1			
Network Age	0.03	0.16***	-0.05	-0.03	0.45***	-0.06	0.17***	1		
Homelessness Rate	-0.07	0.43***	-0.02	-0.01	-0.09	-0.03	-0.02	-0.03	1	
Average Household Income	0.14**	-0.01	-0.06	0.15**	-0.06	0.13**	-0.01	-0.01	-0.06	1

Notes: N = 237; * p<.10, ** p<.05, *** p<.01

Table 5: OLS Regression Estimates of Homeless Network Effectiveness (N=237)

	MODEL 1		MODEL 2	
	Perceived Effectiveness		HUD Funding Per Capita	
	Beta	Std. Error	Beta	Std. Error
Individual Attributes				
Transformational Leadership	**0.50*** **	0.07	-0.07	0.03
Education Level	**0.17*** **	1.75	**0.14** **	0.82
Yrs. Experience as Mgr.	-0.08	0.19	-0.06	0.09
Gender	0.05	1.97	-0.07	0.09
Network Attributes				
Network Size	**0.12** **	0.03	-0.04	0.02
Network Age	0.05	0.15	**0.21*** **	0.07
Community Attributes				
Homelessness Rate	-0.06	0.37	**0.35*** **	0.18
Average Household Income	**0.13** **	0.01	-0.03	0.01
Constant	16.77***	7.16	4.23	3.43
R^2	0.33		0.18	
Adjusted R^2	0.31		0.15	
F	11.74		6.06	

Notes:
**p<.05; ***p<.01
The comparison group for education level is bachelor's degree or less.
The comparison group for gender is female.