



## Centrality measures to identify key stakeholders in Family Violence Councils



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### ABSTRACT

The Family Violence Councils (FVC) are collaborative settings that bring together various organizations involved in the systems response to family violence. Social network analysis (SNA) is a technique that allows one to assess the connections between members (e.g., agencies) within a particular bounded network (Scott, 1991) and is well-suited to the study of councils. Centrality measures in SNA indicate which members in the network are central and prominent players in the setting, and therefore might be critical to engage in change efforts. The current study applied three centrality measures in five councils to identify consistent patterns regarding which organizations tend to be most central in the exchange of information among agencies responding to family violence. Further, the study examined whether and which type of centrality was related to the degree to which a given organization's policy and practices were influenced by council efforts. The study found domestic violence programs were significantly more likely to emerge as central in these settings. The study also found a relationship between an organization's centrality and perceived shifts in its policy and practices. However, only one type of centrality measure, namely closeness centrality, emerged as significantly predicting outcomes of interest when all three were examined simultaneously. The implications of these findings for research and practice will be discussed.

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### Las medidas de centralidad en la identificación de las partes interesadas en los Consejos de Violencia Familiar

#### RESUMEN

Los Consejos de Violencia Familiar (Family Violence Councils, FVC) son espacios de colaboración que reúnen a diversas organizaciones que participan en el sistema de respuesta a la violencia familiar. El análisis de redes sociales (ARS) es una técnica que permite evaluar las conexiones entre los miembros de una red concreta (por ejemplo, agencias de servicios) (Scott, 1991) y es muy adecuada para el estudio de los consejos. Las medidas de centralidad en ARS indican qué miembros de la red son centrales y prominentes en un contexto determinado, y por tanto puede ser fundamental implicarlos en los esfuerzos de cambio. En este estudio aplicamos tres medidas de centralidad en cinco consejos, para identificar patrones consistentes en el intercambio de información entre las entidades que intervienen contra la violencia familiar. Además, con esta investigación examinamos si la centralidad se relaciona con el grado en que las políticas y las prácticas de una organización determinada fueron influenciadas por los esfuerzos del consejo. Los programas de violencia doméstica eran con mayor probabilidad centrales en los contextos analizados. También encontramos una relación entre la centralidad de la organización y los cambios percibidos en su política y sus prácticas. Sin embargo, sólo un tipo de medida de centralidad, concretamente la cercanía (closeness), predijo los resultados de interés cuando se tuvieron en cuenta las tres simultáneamente. Se discuten las implicaciones de estos hallazgos para la investigación y la práctica.

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*Collaboratives* are popular structures formed to address systems change in response to various social issues (e.g., domestic violence, child welfare services, juvenile delinquency, community health; Berkowitz, 2001). Collaboratives include coordinating councils, community-based coalitions, and interagency teams (herein referred to as councils; Allen, Watt, & Hess, 2008; Berkowitz, 2001; Wolff, 2001) and typically bring together various stakeholders to promote an integrated response to complex issues. Frequently, interagency coordination is the specific method encouraged to produce such an integrated response across organizational boundaries (Alter, 1990). That is, councils encourage multiple organizations to work together as part of a coordinated whole by, for example, exchanging information, making referrals to one another, and sharing resources (e.g., Foster-Fishman, Salem, Allen, and Fahrback, 2001; Himmelman, 2002). Given the emphasis on interagency coordination, social network analysis (SNA) provides a potent tool for examining such connectivity.

The current study explores the use of a specific class of network indices, centrality indices, to examine the nature of interagency coordination in the form of information exchange, as well as the role that specific organizational types play in encouraging such exchange. Examining centrality can provide a picture of the specific roles organizations take within inter-organizational collaborative networks. Each approach to centrality has a different theoretical framework for determining centrality: degree centrality is based on social capital theories (e.g., Mandarano, 2007), betweenness centrality is based largely on brokering theories (Burt, 1995), and closeness centrality has yet to be theoretically explored, but has been most closely associated with the speed of diffusion of information (Freeman, 1979). The former centrality measures have been explored at the individual and organizational levels, while closeness has been examined primarily at the individual level. Yet, it is not clear which of these is most relevant to the study of collaborative phenomenon. Examining centrality in councils, and the theories behind each type, expands the current literature on network structures by contributing to theories of centrality in collaborative settings. Further, the current study examines how and to what extent each centrality measure is related to the degree to which a given organization's policy and practices are influenced by council efforts (in terms of perceived changes in policy and practice).

### The case of Family Violence Councils (FVC)

The current study focused on Family Violence Councils (FVC; herein referred to as FVC or councils). These councils are formed to improve the systems response to family violence by encouraging interagency linkages between domestic violence service providers and criminal justice agencies, in particular. The FVC are organized by judicial circuits in the State. Judicial circuits are regions organized by the State court system and typically include multiple counties. Thus, the FVC in the current study have strong ties to the judicial system and are typically chaired by Chief Judges of the circuit or their appointees. The local FVCs in the circuit get funding and technical assistance from the State Family Violence Coordinating Council and its state staff. Each local FVC attempts to engage the various organizations in the circuit (both within and across counties) that are involved in the systems response to family violence. These organizations include, for example, domestic violence shelters, batterer's intervention programs, child welfare agencies, law enforcement, probation, and courts. As their name would imply, the councils aim to increase interagency coordination in their response to family violence. This includes not only working in a more coordinated fashion, but informing and shaping inter- and intra-organizational practices through collaborative work. For

example, FVCs have created protocols to enhance the response to elder abuse by including the perspectives of multiple constituencies including elder care services, law enforcement, and domestic violence advocates. Each brings a unique perspective that shapes not only new protocols for their own organizations, but potentially for the protocols and practices of other partners (e.g., advocates shaping law enforcement practices).

In a given circuit, some of the critical responding organizations are active members in the council, some are peripherally involved in the council, and some are non-members, or not actively involved in council efforts. The active member organizations may be particularly important for a given local FVCs efforts, because they are likely to be better connected with other organizations than are more peripheral members or non-members (Allen, 2005). Therefore, identifying those agencies within a network that are both active and central members in the network may reveal the specific nature of the diffusion of new knowledge or innovation throughout the network. Further, identifying which organizations are central using different criteria of centrality will allow a comparison of centrality types by examining whether similar organizations emerge as central in each type. Finally, examining multiple centrality types allows for a study of how they are related to the degree to which organizations adapt changes because of council efforts.

### Social network analysis

Social network analysis (SNA) is a technique that allows one to assess the linkages between members within a particular bounded network (i.e., network with a clearly defined set of members; Scott, 1991). SNA is well suited to the study of councils because it has a variety of tools that can be used to assess interagency linkages, including, for example, information exchanges, and the relationships between members in a setting of interest. One set of tools is the indices of network centrality, or metrics that capture the extent to which an actor in the network is connected to other actors in the network. In this study, settings refer to given networks of councils, and actors refer to the organizations that are part of the council networks.

### Centrality measures

Centrality is an important structural attribute of social networks. It is related to other group properties and processes (Freeman, 1979), including, for example, which member in the group has access to more information. Borgatti, Mehra, Brass, and Labianca (2009) in a recent review of network theory and literature state that a "fundamental axiom" in network research is that an actor's (or *node* in network language) position in the network determines in part the opportunities and constraints the actor encounters, "and in this way plays an important role in a node's outcomes" (p. 894). An organization's power is then a result of the power of all other organizations in the network, and the organization can be affected by changes in the network far away from it (Borgatti et al., 2009). Thus, the more central an organization is the more powerful or influential its position in the network is, or the more central an organization the better positioned it is to be influenced by the efforts of the collaborative network.

The current study will apply three different types of centrality measures, degree, betweenness, and closeness, in five coordinating councils to identify patterns regarding which organizations tend to be most central in the networks and to examine how these are similar and/or different based on the particular measure of centrality. Identifying central organizations may reveal which organizations need to be engaged to most effectively diffuse information and knowledge among such organizations.

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