MAPPING A COUNTY'S CHILD WELFARE PREVENTION AND SERVICE DELIVERY NETWORK: A MIXED-METHODS ANALYSIS OF HOW ORGANIZATIONS INTERACT TO SERVE CHILDREN AND FAMILIES

by

MARIANNA L. COLVIN

(Under the Direction of Alberta J. Ellett and Shari E. Miller)

ABSTRACT

Network analysis has distinctive utility for measuring, visualizing, and understanding interorganizational relationships and is well-matched for informing the complex interactions in contemporary child welfare practice. In this study, community-wide connections were examined through the lens of complexity theory and social network principles to enhance the understanding of child welfare efforts as they exist across organizations, and promote a holistic and interdisciplinary response to child maltreatment. Mixed-methods were integrated to analyze the structural properties of a county's interorganizational landscape around 11 tasks, including referrals, case coordination, shared resources, and evaluation activities, among others. The study's design allowed for a comparison across the dimensions of prevention and service delivery efforts and the benefits and challenges experienced when interacting within these structures were explored in-depth.

Data collection included a survey instrument and qualitative interviews. Of the 105 organizations identified for inclusion, 80 participated in the survey and 67 provided qualitative

data. The sample was bounded to match the county-level implementation of local child welfare services and to emphasize the complex context in which social interventions by and among organizations distinctly evolve and perform. Findings revealed differences in participation and network cohesion across tasks, including a dominance of referral activity. Structural and qualitative contrasts and similarities were evident between prevention and service delivery and a common thread of instability emerged across challenges. Network-wide benefits were also identified, in addition to organization-level benefits, and data suggested each were linked to serving clients and the community better. These and other findings are discussed for their applicability to inform network development in the community under study, as well as their broader policy, practice, and theoretical relevance. Directions for future research are detailed to promote systemic network research in child welfare settings and to further the use of network analysis as a means to empirically apply complexity theory and advance knowledge of the complicated practice and policy implementation systems that are paramount in the social work profession.

INDEX WORDS: Child maltreatment, Network analysis, Mixed-methods, Complexity theory, Interorganizational collaboration, Prevention, Service delivery, Referrals

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by

MARIANNA L. COLVIN

BA, Birmingham Southern College, 2003

MSW, University of Alabama, 2005

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MARIANNA L. COLVIN

Major Professor:	Shari E. Miller
	Alberta J. Ellett
Committee:	Larry Nackerud
	Orion P. Mowbray

Electronic Version Approved:

Suzanne Barbour
Dean of the Graduate School
The University of Georgia
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DEDICATION

For Henry, who gave selflessly and abundantly in this pursuit.

And for my grandparents, Morland Landis and Marjorie Elizabeth Flegel, who taught me to love and care for my community.

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My gratitude is deep for the many people who contributed to my doctoral experience at the University of Georgia. The professors on my committee were unflagging pillars of support and each distinctively enriched my development as a scholar. I'll begin by trying, and certainly failing, to express my full appreciation for the two co-chairs of my committee – Shari Miller and Bert Ellett. Shari Miller trekked beside me through every step of this study's conception and implementation. She was a source of wonderfully difficult questioning and allowed me space to explore and grapple along the way. I am grateful for her insight, theoretical rigor, endless commitment, and her holistic and instrumental mentorship. It is something I will treasure. Bert Ellett has likewise been a source of invaluable guidance. Her expertise in child welfare is an inspiration and she exemplifies the commitment I hope to offer the profession. It has been an immense privilege to learn from and watch her in action and I am grateful for her open door and the many priceless words of advice. Larry Nackerud and Orion Mowbray rounded out my committee and are two of the best. It was a joy to learn from Larry Nackerud in the classroom and beyond. I will forever remember his guidance when trying to write my first article for publication. He read and critiqued it in ways that were transformative, not just for that paper, but for me going forward and how I approach writing and defending my ideas. Finally and with no less gusto, I'd like to thank Orion Mowbray. He gave his time and his invaluable opinion every single time I needed it. This meant that he probably drank more coffee than necessary some mornings, but he welcomed every question and is largely responsible for helping me navigate to

the end. I admire his critical-reasoning and methodological expertise, and I will attempt to model his tremendous encouragement with future students.

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CHAPTER 1

INTRODUCTION AND CONCEPTUAL FRAMEWORK

Context and Purpose of the Study

Issues of child maltreatment epitomize what Rittel and Webber (1973) termed *wicked problems*, "challenges that cannot be handled by dividing them up into simple pieces in near isolation from each other" (O'Toole, 1997, p. 46). Such problems are entrenched in society and their complexity, cost, and ambiguity require a dispersed response across organizations, sectors, and professional disciplines. Of interest, then, is how varying professions and organizations collectively navigate the multifaceted needs of children and families. In this study, community-wide interactions – in the form of interactions across organizations – are explored through the lens of complexity theory and social network analysis, with the aims to (a) enhance the understanding of child welfare efforts, as they exist across organizations, and (b) promote a holistic and interdisciplinary response to child maltreatment.

Definition of Child Welfare and Child Maltreatment

For the purposes of this dissertation, the term child welfare is understood as an overarching label that refers to "an array of services [including prevention efforts] designed to ensure that children are safe and that families have the necessary support to care for their children successfully" (Child Welfare Information Gateway, 2014, p. 1). Child welfare and the label, child maltreatment, will comprise the primary language applied in this study. While the legal definition of child maltreatment varies across states, it is minimally defined by the Federal Child Abuse Prevention and Treatment Act (CAPTA) (2010) as "any recent act or failure to act

on the part of a parent or caretaker which results in death, serious physical or emotional harm, sexual abuse or exploitation; or an act or failure to act which presents an imminent risk of serious harm."

The most current national statistics compiled by the U.S. Department of Health and Human Services (US DHHS) estimated that 1,520 children died in the U.S. due to child maltreatment in 2013 and that approximately 679,000 child-victims experienced substantiated maltreatment in the same year – a rate of 9.1 per 1000 children (US DHHS, 2015). Consequences of maltreatment include immediate and long-term physical, mental, social, and emotional needs, including adverse effects in the areas of health (Corso, Edwards, Fang, & Mercy, 2008; Jud et al., 2013), mental health (Holmes & Sammel, 2005; Springer, Kuo, & Carnes, 2007), delinquency and criminal behavior (Fang & Corso, 2007), and economic well-being (Currie & Widom, 2010). Fang et al. (2012) calculated that the U.S. likewise experiences a substantial financial impact, estimating the "new cases of child maltreatment incurred in 2008" to have a conservative lifetime cost of approximately $124 billion (p. 157).

Statement of the Problem

The need for a network perspective in child welfare. Undoubtedly, efforts to combat child maltreatment require minimally cooperative, if not integrative actions by various service sectors and professional disciplines. Indeed, over half of all child maltreatment reports are made by professionals (62%), a statistic dominated by personnel in education, law enforcement, and social services (US DHHS, 2015). As organizations rely on the procedures and policy implementation of other agencies to progress their own work processes, it follows that network-level analysis is needed to extend focus beyond singular institutions and to build an understanding of community-wide prevention and service delivery efforts. In other words, a

network perspective "correct[s] the tendency of organizational theory to focus on the trees rather than the forest, on the actions of individual organizations rather than the organization of their actions" (Salancik, 1995, p. 345).

Social Network Analysis (SNA) methods were applied in this study for their distinctive utility for measuring, visualizing, and understanding multi-organizational relationships. Further, they offer practitioners, policy-makers, and other relevant stakeholders the ability to visually receive and engage with research results. Indeed, the strength of SNA for translating results to community stakeholders was a particular focus in the study's conception and implementation. The terms "social network analysis" and "network analysis" are sometimes referenced without identifiable distinctions in the literature and are used interchangeably by leading authors (e.g., Provan et al., 2007 and Provan, Leischow, Keagy, & Nodora, 2010). The term SNA will be employed here as it is more universally referenced across disciplines (Kadushin, 2012).

Defining the term network. To begin applying a network perspective, the term network must first be clarified. Contextual elements determine the defining characteristics of a network and vary per application. Fundamentally a network "contains a set of objects (in mathematical terms, nodes), and a mapping or description of relations between the objects or nodes" (Kadushin, 2012, p. 14). In the social world, nodes can be as diversely defined as individuals, groups, organizations, cities, states, or countries. For the purposes of this study, organizations were the nodes of interest.

When determining what constituted a network for this application additional contextual elements were included after considering prominent definitions by public administration scholars. Child welfare is largely publically mandated, funded, and administered [in some capacity through a state organization], with involvement from multiple public organizations. It

is, therefore, similar in context to network studies found in the public administration literature. Widely-cited definitions from scholars in public administration include, Agranoff and McGuire's (2001) conception of networks as "multiorganizational arrangements for solving problems that cannot be achieved, or achieved easily, by single organizations" (p. 296), Provan and Milward's (2001) definition of networks "as collection[s] of programs and services that span a broad range of cooperating but legally autonomous organizations" (p. 417), and O'Toole's (1997) assertion that networks are "structures of interdependence involving multiple organizations or parts thereof, where one unit is not merely the formal subordinate of the others in some larger hierarchical arrangement" (p. 549).

Each of the above provides a unique and meaningful component for setting child welfare network parameters for the purposes of this study, specifically denoting that networks have a problem-solving agenda, and are comprised of legally autonomous yet cooperating programs and services in which members maintain interdependence outside of a hierarchy. As such, network members expected to meet these parameters in child welfare practice include participatory agencies from such fields as education, health care, mental health, law enforcement, substance abuse and domestic violence treatment, court systems, child advocacy, among others.

Emergence of networks in human services. Despite a traditional research focus on singular institutions (Agranoff & McGuire, 2001), a networked environment is not new. Since the 1980's, the widespread adoption of inter-sector (i.e., public, non-profit, for-profit) service provision has elevated the prevalence of networks in public service settings. As early as 1995, the trend toward privatization of public services and a devolution of policy to local domains resulted in Dilulio and Kettl's (1995) declaration that "in addition to the huge role that state and local governments play in the 'Washington bureaucracy,' almost every major federal domestic

policy directly involves either private contractors, or nonprofit organizations, or both" (p. 17). In short, services that were traditionally the responsibility of only public entities now involve private and/or nonprofit interaction, resulting in an increased need to understand how diverse players work together both individually and holistically (O'Toole, 1997; Provan & Lemaire, 2012). The administration of such an environment has been labeled, democratic network governance (Bogason & Toonen, 1998; Sorenson & Torfing, 2007), defined as governance that is "cross-sectoral and based in civil society involvement where issues of deliberation, citizen responsibility, as well as questions of equity, accountability, and democratic legitimacy to serve public purposes are at stake" (McGuire & Agranoff, 2011, p. 266). The scope of examining this form of governance encompasses questions of public network functions and management (McGuire & Agranoff, 2011), and includes the realm of child welfare services.

The state of collaboration in child welfare. As a "wicked problem", and in light of policy devolution, services for children and families are clearly conducted in a networked landscape. However, despite required service interaction, the field has had a consistent and cross-national history of poor integrative success. Even in 1990, Kamerman and Kahn reflected after a two year study:

> The typical situation in the field of social services has been for some time extreme and irrational categorical fragmentation…we have not found any sustained effort to create a satisfactory system of social services to meet the needs of families and children (as cited in Meyers, 1993, p. 548).

More recently and with critical implications, Reder and Duncan (2003) denoted that "since the 1970's, virtually all reviews of fatal child abuse cases in the United Kingdom report that there was evidence of communication failures between professionals" (p. 82). They go on to conclude

that, “no single professional appreciated the whole picture because they either were not informed or failed to seek information from wider sources” (p. 83). Corresponding accounts, such as not seeking contact with medical and/or school professionals and inconsistent communication with contracted service providers are documented as failures in child fatality reviews in the United States (New York City Department of Investigation, 2007). There is also extensive literature detailing the effects of poor case coordination across different intervening systems, including such examples as disconnects that jeopardize the academic needs of children in foster care (Zetlin, Weinber, & Kimm, 2003), and consequences as detrimental as unnecessary and permanent family separation when immigration enforcement and child welfare systems collide (Rabin, 2011).

Research at the ‘whole’ network-level is needed to counter fragmentation and extend examination beyond a network’s component subparts (i.e., individual organizations or dyadic partnerships). However, ‘whole’ network research is notably limited across human service settings (Provan, Fish, & Sydow, 2007), including child welfare. Indeed, an examination of community-wide efforts across organizations in response to child maltreatment has not been identified in a review of literature, to date. Instead, the child welfare studies that have examined interagency interaction or collaboration primarily focus on a topical relationship (e.g., collaboration between child protection case managers and substance abuse treatment providers (Green, Rockhill, & Burrus, 2008)). As such, the number of actors in analysis is limited to subcomponents of a much larger system (Ayasse, Donahue, & Berrick, 2007; Chen, 2008; Chuang & Wells, 2010; Ehrle, Scarcella, & Green, 2004; Green, Rockhill, & Burrus, 2008; Weinberg, Zetlin, & Shea, 2009; Wells et al., 2011).

Findings from these studies, along with conceptual papers focused on interorganizational partnerships (Horwath & Morrision, 2007; Meyers, 1993; Percy-Smith, 2006; Reder & Duncan, 2003; Webb & Vulliamy, 2001), identify and link various aspects of interorganizational interaction to the specifics of child welfare practice. While content in this literature speaks clearly to practice integration across multiple organizations, sectors, and professionals, the field is still missing a holistic network understanding.

Purpose of Study

This study sought to enhance the understanding of child welfare efforts as they exist across organizations to promote a holistic and interdisciplinary response to child maltreatment. It applied a community-wide orientation to child welfare practice, and broadened the scope of analysis beyond dyadic partnerships or subgroups by encompassing the broader multitude of organizations involved. Inclusion was sought from the full-range of sectors and professional disciplines identified to interact on activities related to child maltreatment[1]. Through the mixed use of SNA and qualitative methods, the structural properties of the organizational landscape were analyzed, and the study's design allowed for a comparison across the dimensions of 1) prevention and 2) service delivery. Finally, the benefits and challenges experienced by organizations when interacting within these structures were explored.

Conceptual Framework

The Call for a System's Approach to Child Maltreatment

With input from an array of experts in child welfare, Wulczyn and colleagues (2010) recently articulated the need for a systems approach to promote a "common understanding of child protection systems" and as a "prerequisite for moving child protection efforts forward" (p.

[1] See the section on boundary specification in Chapter 3 for details of how organizations were identified and determined to be relevant for inclusion.

1). Following stakeholder interviews and an integrated review of systems literature in child welfare and similar settings (i.e., health care, education, and other social work settings) they endorsed the potential for a systems focus specific to child maltreatment, and constructed a framework of component parts, including, structures, functions, capacities, continuum of care, process of care, and accountability.

The study herein builds on the recommendations of Wulczyn and colleagues (2010) by making an empirical contribution to understanding the interdependency of organizations working in child welfare prevention and service delivery and explicitly applying systems thinking in its construction (i.e., complexity theory). As Wulczyn et al. (2010) proposed:

> Clarity regarding a shared understanding of the boundary (i.e., the structural relationship or embeddedness) between a child protection system and other formal systems (e.g., education, health, mental health)…is an important aspect of the child protection system that has implications for how one goes on to define functions, capacities, the process of care, governance, and accountability" (p. 26)

The identification of structure was undertaken in this study to improve the understanding of child welfare practice, inclusive of relationships with the entities mentioned by Wulczyn et al. (2010) (i.e., education, health, mental health, and others). Through multiple sources of data and analysis, this study specifically responded to the recommendation of identifying the "framework or context within which system functions are carried out" (Wulczyn et al., 2010, p. 12).

Principles from SNA and complexity theory were combined to form a conceptual framework to ground this inquiry. The following sections introduce concepts of SNA and complexity theory and discuss applications in the field of social work and in interorganizational contexts. The use of SNA is explicated as a complementary research approach with principles

complementary to complexity theory. A final section then discusses the interrelatedness of constructs identified in this framework and denotes characteristics of child welfare that exemplify its definition as a complex adaptive system (CAS).

The Combination of SNA and Complexity Theory

In the words of Mischen and Jackson (2008), "social network analysis becomes a useful way of making relationships visible" (p. 323), and makes "the abstractions used by complexity theory concrete" (p. 316). As such, complexity theory is often applied in network inquiries and in conceptual network contributions (Levy, 2000; Mischen & Jackson, 2008; Quinn, Woehle, & Tiemann, 2012; Rhodes & MacKechnie, 2003; Trevillion, 2000; Wolf-Branigin, 2009; 2012); both offer principles for interpreting data.

An extension of systems theory (Bertalanffy, 1974; Katz & Kahn, 1966), complexity theory promotes the understanding of interconnection and emergent behavior in complex systems through a non-linear and dynamic framework (Levy, 2000). For example, it gives specific focus to improving knowledge of a network's current state and how it came to exist in that state (Rhodes & MacKechnie, 2003). As a complement, SNA is "an analytic technique that enables researchers to represent relational data and explore the nature and properties of those relations" (Monge & Contractor, 2003, p. 35). It is structural relations that form a "key orienting principle" in SNA (Knoke & Yang, 2008, p. 4) and are represented in analysis. When combined, the individual utility of both SNA and complexity theory are enhanced. SNA measures relational data and contributes analytic concepts to express and assess the structural properties formed by relations. The interpretation of those relational data is strengthened by the depth of conceptual substance offered by complexity theory regarding how relations come to exist, function, and evolve.

In this study, the relations that form an interorganizational network in child welfare practice are viewed as the structural components of a CAS, and complexity theory is combined with principles of SNA for understanding aspects of that structure and related functioning (Stevens & Cox, 2008; Stevens & Hassett, 2007). As such, the focus of this study advances the empirical application of a complex systems perspective in the field of child welfare and for social work research.

Overview and assumptions of SNA. This section clarifies the basic assumptions of SNA that arguably create an "integrated set of theoretical concepts and analytic methods" (Knoke & Yang, 2008, p. 9). First, structural relations (i.e., a type of interaction) are represented in analysis and are used to interpret consequences and actions. The assumption follows that structural relations are influential and are contingent upon context, whereby behavior can vary across relationships despite attributes of a person (e.g., race or education) or organization (e.g., size or sector) remaining constant (Knoke & Yang, 2008). This perspective is specific to SNA as the "focus on relations, and patterns of relations, requires a set of methods and analytic concepts that are distinct from the methods of traditional statistics and data analysis" (Wasserman & Faust, 1994, p. 3).

A second assumption specifies that structural mechanisms between network members, such as the type and degree of interaction, impact outcomes (i.e., perceptions and actions). For instance, the path of knowledge transfer may influence the degree of shared values among organizations. Network analysts therefore attempt to understand these mechanisms and related contingencies (Knoke & Yang, 2008), and this study investigates the type and degree of interaction among organizations supporting children and families with the expectation that the structure of those relations matter.

Third, SNA assumes that structural relations are not stagnant, but are altered by the interactions of network participants. Knoke and Yang (2008) explained with summarized findings from Kenis and Knoke (2002) that "…antecedent communication structures affect subsequent strategic alliance choices. In turn, these interorganizational relations alter the flow of information, which creates further opportunities or constraints on future alliances" (p. 6).

***Central concepts of SNA*.** Basic concepts of SNA are listed below and defined in terms of their interorganizational application in this study.

- **Actors or nodes** are organizations that through *relations* (i.e., a type of interaction) comprise *dyads* (i.e., a pair of actors). The combination of actors and relations form a social network (Knoke & Yang, 2008). In this study, the term organization will be used to distinguish and characterize the type of actors/nodes under examination.
- **Subgroups/Cliques** describe "three or more fully interconnected organizations" (Provan et al., 2005, p. 605).
- **Reciprocity** refers to a reciprocated relation. It is reported as a proportion of the number of reciprocated ties divided by the total number of ties (Borgatti, Everett, & Johnson, 2013).
- **Multiplexity** is the "strength of the relationship between individual network partners, based on the number of types of different links (joint programs, referrals, etc.) they maintain" (Provan et al., 2005, p. 605). A relationship is understood as "stronger" if three links exist rather than one, whereby if one or two links are severed, the relationship is still maintained.

- **Density** measures the connectedness of a network (Provan et al., 2005), calculated as the total number of possible links divided by the number of occurring links (Kilduff & Brass, 2010). This concept describes network cohesion, in that greater density implies a more fluid transfer among organizations. Redundancy is related to density in the form of potential inefficiency (Kadushin, 2012).
- **Centrality** identifies the most central organization or organizations in a network per the number of links, and includes multiple forms for consideration (Freeman, 1979; Provan et al., 2005).
- **Degree centrality** is one form of centrality and refers to the overall number of links. It is often connected to assumptions of power and influence. Categories include *in degree* centrality (i.e., the number of ties others indicate having with a focal organization) and *out degree* centrality (i.e., the number of ties a focal organization indicates having with others) (Kapucu & Demiroz, 2011).
- **Betweenness centrality** is another form of centrality that captures the position of organizations, specifically when an organization links two otherwise non-connected actors or non-connected subgroups (Kapucu & Demiroz, 2011).
- **Centralization** is a measure of centrality at the network-level of analysis and reveals to what "extent a network is dominated by a single node" (Borgatti, Everett, & Johnson, 2013, p. 159).

The above core concepts are not an exhaustive representation of SNA concepts, but offer an introduction to the key variables relevant to this study. As typical for SNA scholars to apply concepts to meet the focus of inquiry, these were selected for this study for their utility in understanding 'whole' network properties.

It is important to note that while organizational network scholarship has produced consistent findings around topics such as a relationship between centrality and power and the similarity of actors and their cooperation, generalizability of network research remains limited as the evidence reveals an ever present influence of context, and the inability to universally explain outcomes. This, in turn, prevents scholars from making overarching predictions and exemplifies the need for a complexity framework when applying and interpreting network data. Its clear utility is in understanding organizations beyond their role as individual actors, and instead as collectives engaged in complex structural patterns (Galaskiewicz, 2007).

Overview of complexity theory. Complexity theory is a form of "systems thinking," which is broadly defined as "a general *conceptual* orientation concerned with the interrelationships between parts and their relationships to a functioning whole" (Trochim, et al., 2006, p. 539). By definition, complexity theory is non-linear and is oriented toward the notion that systems and relationships between parts are dynamic and complex. It has roots in general systems theory and cybernetics (Williams & Iman, 2006), and is commonly referred to as complex adaptive systems theory (Mischen & Jackson, 2008; Quinn, Woehle, & Tiemann, 2012). Lewin (1999) defined a CAS as "one whose properties are not fully explained by an understanding of its component parts" (p. px). Instead CAS's are characterized by "networks of adaptive agents, feedback, self-organization, and emergence" (Trochim, Cabrera, Milstein, Callagher, & Leischow, 2006, p. 539). Specifically complexity theory brings focus to the non-linearity and dynamics of interactions (Levy, 2000), and its application "seeks to identify an underlying pattern in what appears initially as randomness" (Wolf-Branigin, 2009, p. 116).

Complexity theory in social work and organizational scholarship. Social work scholars have widely recognized the potential utility of complexity theory for the profession (Halmi,

2003; Hudson, 2000; Quinn, Woehle, & Tiemann, 2012; Warren, Franklin, and Streeter, 1998, Wolf-Branigin, 2012). Trevillion (2000) characterized social work research "as an applied 'relational' research discipline concerned with developing our understanding of interdependency" (p. 515). Complexity theory's application for examining organizations and networked organizations is also gaining ground (Levy, 2000; Mischen & Jackson, 2008; Quinn, Woehle, & Tiemann, 2012), and includes specific consideration for public service systems (Rhodes & Mackechnie, 2003). It offers a framework for examining processes inclusive of broad dynamics, such as, policy implementation, knowledge management and decision-making (Mischen & Jackson, 2008); how and why organizations join or leave initiatives (Rhodes & MacKechnie, 2003); and how organizations organize over time (Carroll & Burton, 2000).

Central concepts of complexity theory. The following key concepts derived from complexity theory contribute to the conceptual framework for this study

- **Agents** are the interdependent components of a network or system, such as "cells within an organism" (Mischen & Jackson, 2008), units in an organization, or organizations in a network (Wolf-Branigin, 2009). In SNA terms, these are the *actors* or *nodes* among which relations are measured. For purposes of this study, they will be referred to as *organizations* as organizations are the focus of analysis.
- **Interdependence** Organizations are not only connected, but their actions are linked such that "behavior is as much a product of interactions...as it is a result of individual actions" (Stevens & Hassett, 2007, p. 129). The SNA measure of *density* captures the extent to which organizations are linked in a network and can be considered one way to quantify interdependence.

- **Schemata** Organizations have *schemata*, defined as "inputs to the agents' decision processes along with the filtering rules that the agent applies to decide what information to process" (Rhodes & MacKechnie, 2003, p. 59).
- **Histrocity** Organizations in the system have a memory of past events and this memory influences the ability and speed by which organizations make decisions and/or adapt (Mischen & Jackson, 2008).
- **Fitness landscape** refers to the "the space of possibilities" within which organizations make choices. In this sense, there are peaks in the landscape that "maximize the collective utility of the members of the system" (Mischen & Jackson, 2008, p. 320). The fitness landscape itself is dynamic and emergent (Rhodes & MacKechnie, 2003).
- **Feedback** Feedback loops are "circular causal relationships which define the functioning of physical, biological, and social systems" (Hudson, 2000, p. 218). In the process of interacting, *feedback* mechanisms are at play and can include negative feedback (i.e., reinforcing stability) and/or positive feedback (i.e., deviating from stability) (Hudson, 2000). Positive feedback is a "mechanism of change" (Mischen & Jackson, 2003, p. 319), resulting in a break with the status quo or an innovative response to environmental forces (Wolf-Branigin, 2009).
- **Interpretation** Feedback is more than the "mechanical process of stimulus and response" and requires interpretation (Rhodes & MacKechnie, 2003, p. 63). Interpreting feedback gives value and meaning to the processes of 'stimulus and response' and is derived per the orientation and perception of individual organizations.

- **Adaptation** Organizations may change in response to preferences observed and interpreted in the system. In other words, they *adapt* (Wolf-Branigin, 2013).
- **Emergence** The organization and reorganization of organizations results in emergent behavior that is irreducible to its component parts (Wolf-Branigin, 2009).
- **Non-linearity** Emergence is a non-linear process. Unlike linear relationships with "a proportional relation between cause and effect", non-linear relationships are those with a "nonproportional relation between cause and effect" (Hudson, 2000, p. 220).

While additional terms can be discussed, these concepts represent basic elements of a CAS (Mitleton-Kelly, 2003), and were applicable in the context of this study.

Interrelating the Concepts

Figure 1 represents the interconnection of concepts from SNA and complexity theory that guided the questions posed in this study as well as the interpretation of data. Most simply, the premise of this conceptual framework is summarized by Mischen and Jackson's (2008) statement that "the study of complex systems is the study of agents interacting in networks" (p. 317). For example, SNA situates organizations per their interactions in a system and can reveal insight into inquiries such as the origins of change in that system or processes of information sharing among organizations, including the identification of feedback loops (i.e., understanding how the system behaves). To follow is a detailed description of the components of Figure 1 with links to the terminology of child welfare.

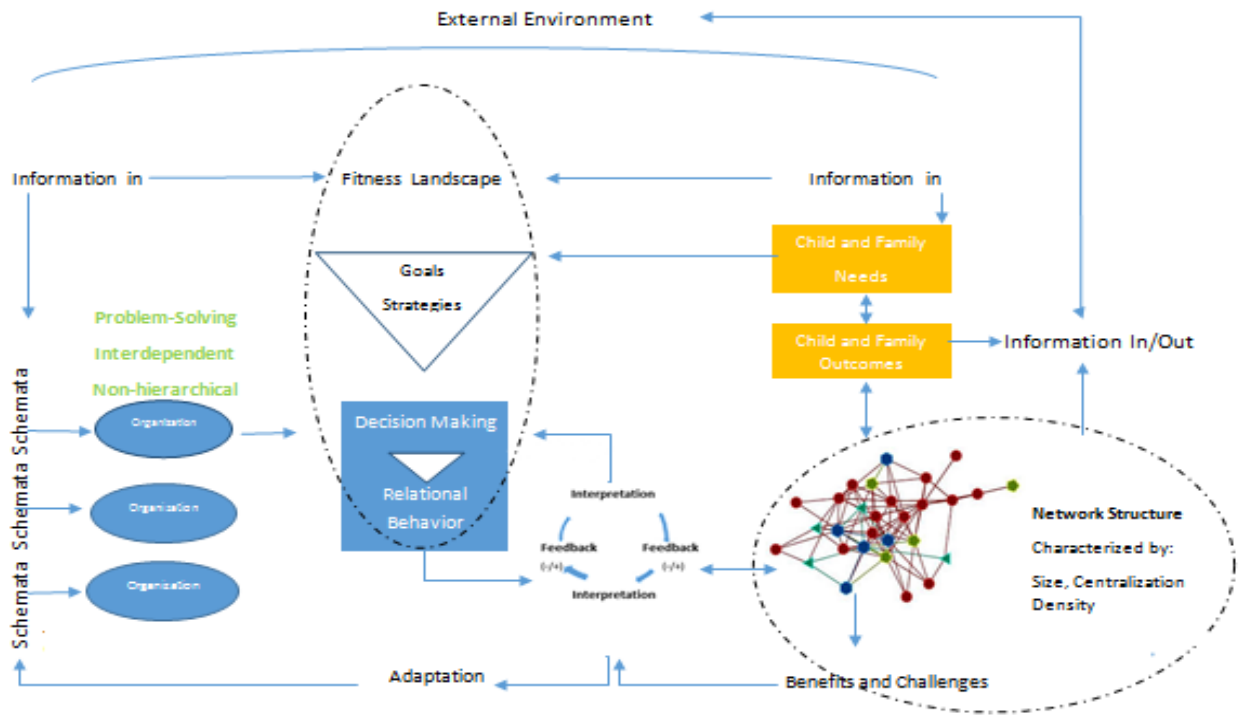


Figure 1. Conceptual framework.

Child welfare as a complex adaptive system. Applying key concepts of complexity theory in a child welfare context begins with the acknowledgment that exact incidence of child maltreatment cannot be predicted. Correlating factors are known and risk can be mitigated; however, the date, time, location and severity of an occurrence of child maltreatment remains elusive despite well-informed knowledge of contributing factors. Similarly, organizations follow procedures and policies in response to child maltreatment, yet, from the point of initial contact with a family, the ripple of complex interactions, communications, actions, and outcomes for any individual case and family are not predictable.

Instead, complexity theory helps explain why the power of prediction is negated by an interrelatedness of component parts in families, communities, and organizational service systems (Steven & Hassett, 2007). Interventions by and among organizations distinctly evolve and

perform per the complex context wherein they are applied. For example, the application of complexity theory to inform prevention programs evolved out of failures of interventions guided by "individual-level theorizing" when, instead, community dynamics were at play (Hawe, Shiell, & Riley, 2009). Families, intraorganizational dynamics, and interorganizational relationships are all examples of complex adaptive systems [their unison being an example of systems embedded within systems] and speak to the fit of complexity theory as a framework for understanding child welfare practice (Stevens & Cox, 2008; Stevens & Hassett, 2007). SNA methods offer a way to measure these dynamics and contribute concepts that identify and express how linkages create structural properties of a network, which can then be interpreted.

Applying the language. In Figure 1, a broad visualization of complexity theory is depicted, with the inclusion of the collective and dynamic structure that forms from interacting organizations represented through SNA.

Basic components. On the far left, *organizations* are the participating actors/nodes/agents that interact to some degree on tasks related to prevention or service delivery in child welfare. Per the definition of networks for this study, the participating organizations are non-hierarchical, problem-solving, and interdependent. *Interdependence* refers to sequential actions, whereby one organization's actions are contingent on another acting first, or concurrent interdependence, whereby organizations act in parallel. For example, in child welfare practice, different organizations rely on the procedures and policy implementation of other organizations to progress their own work processes (Mischen & Jackson, 2008). Consider, for example, how referrals must first be received to launch a response or how policy changes are enacted concurrently.

Each organization is guided by its own *schemata* (e.g., policy rules and organizational culture) and has a function of choice in the system (i.e., represented in Figure 1 by "decision-making"). *Decision-making* is influenced by each organization's schemata, and related to the goals and strategies within the organization's fitness landscape (i.e., the scope of possibilities). What attracts organizations within the network to make choices may include influence from a combination of their schemata and external sources. For example, following a child death, "complexity theory suggests that … exposure to criticism acts as an attractor" that will influence an organization and/or disrupt the system (Stevens & Cox, 2008, p. 1330). Other attractors may include an organization gaining legitimacy and/or improving their ability to meet client needs (Provan & Milward, 2001).

Relational behavior is the point of action by an organization. Specifically, it chooses to interact in some capacity with one or more other organizations. This then becomes a link or relation that collectively builds the network. *Feedback* from interaction, including the benefits and challenges experienced by organizations, is a continual process that is interpreted and likewise influences decision-making. Note that the use of feedback and an organization's schemata is not necessarily theorized to result in a system of better quality. For example, an organization's schemata and use of feedback may restrict the organization to a familiar choice or path, thus reinforcing institutionalism (i.e., accepted ways of doing things), rather than a choice that maximizes the system's potential (Mischen & Jackson, 2008).

A couple of clarifications are worth noting here. Limitations in the fitness landscape can be influenced by the schemata of individual organizations (e.g., policy) and by external constraints (e.g., the economy). In addition, a single organization does not necessarily recognize its full scope of possibilities or where paths exist that would better maximize the system's

potential. It is through the receipt and interpretation of feedback that organizations may learn from each other, create shared goals, and begin to recognize the broader landscape of possibilities. Alternatively, the process of feedback and interpretation among organizations could instead contribute to reinforcing institutionalism more broadly, i.e., across organizations (Mischen & Jackson, 2008) – a result more specifically labeled as *isomorphism* (Rainey, 2009). An example of the interrelatedness of these concepts applied to the child welfare system in the state of Georgia (the site of this research) is the implementation of SHINES as an electronic case management tool (Georgia Department of Human Services, n.d.). This choice was a shift from institutionalism and may result in feedback and interpretation to change the way work processes are conducted within the implementing organization and among organizations. Likewise, a shift in the fitness landscape of future possibilities would be expected to take place.

The system as non-linear. The system depicted in Figure 1 is *dynamic* and *non-linear*, as illustrated by the multi-directional and circular arrows connecting the framework's components. The difference between a linear and nonlinear system is summarized by Pinskey (2010), as follows:

> "A simple linear system is completely described by linear equations, such as $x_{t+1} = ax_t + c$, where x_t is a variable *x* at time *t*, and *a* and *c* are constants. Importantly, linear relationships define straight-line relations where an increase in one value results in a proportional change in another. Another characteristic of a linear system is that the variables in a linear system are not interdependent. Thus, the overall behavior of any linear system containing many variables is the sum of the individual components. Relevant to life, linear systems are predictable at a given time if earlier conditions are known. Although linear systems are common in industry (e.g., internal combustion

engine power output vs. piston gas flux), they are extremely rare in nature (Pinskey, 2010, p. S650).

In a non-linear system, the interworking nature of interdependence, feedback, interpretation, and the critical role of choice among organizations, in addition to the influence of histrocity, delineates the non-linearity of emergent patterns (Mischen & Jackson, 2008). As such, instead of predicting behavior, complexity theory explains how actions by one organization can result in a wide assortment of actions by and among other organizations (Stevens & Hassett, 2007). Researchers, then, "ask how changes in the agents' decision rules, the interconnections among agents, or the fitness function that agents employ produce different aggregate outcomes" (Anderson, 1999, p. 220). This principle is exemplified by the idea that outcomes are more than the mere sum of contributing parts (Lewin, 1999; Stevens & Cox, 2008).

Example of non-linear emergence. For instance, SNA becomes particularly powerful in combination with complexity theory in time series designs, whereby emergent behavior can be identified as it changes. Quinn, Woehle, and Tiemann (2012) described such observations after applying SNA in a group scenario, stating that, "if one member connects to members in another previously unconnected part of the network, the size of the overall connected component increases dramatically. So, the large global change may be precipitated by relatively small local efforts, a nonlinear phase change" (p. 616).

Non-linearity in child welfare. Specific to child welfare, consider the observation that "the linear approach to risk and its consequence lead policy makers and organizations to encourage *cause and blame* explanations for harm to children" (Stevens & Hassett, 2007, p. 134). For example, the search for blame is often halted when human error is identified and the dynamic and systemic forces that allowed or even accelerated human error are left unaltered. As

such, response mechanisms traditionally involve higher scrutiny and oversight, increased rigidity of worker protocols, and standardized assessment instruments, versus measures that address more complex causality (Munro, 2005). This study focuses on the 'whole' in an attempt to begin to shed light on the complex dynamics.

Understanding complexity in network terms. As stated by Mischen and Jackson (2008), "the defining characteristic of a CAS is that patterns of behavior emerge from these interconnected agents who are responding to their fitness landscapes through various forms of feedback" (p. 321). This process describes how organizations interact, such as sharing information or resources (Wolf-Branigin, 2009). Interactions have meaning under network and complexity principles, and the structure that emerges is defined and can be understood by SNA characteristics, including: size, centralization and density. As such, a network's density (i.e., cohesion) is shaped and reshaped by "interconnected agents who are responding to their fitness landscape through various forms of feedback" (Mischen & Jackson, 2008, 321). The network's size, centralization, and density, in turn, have consequences that are likewise dynamic and provide input into feedback loops and the external environment. In this sense, it is not only the organizations themselves, but their interactions that matter for child and family outcomes.

Informed by this conceptual framework, the importance of an interorganizational network perspective in child welfare is described below, followed by the research questions that guided this study.

Importance of the Study

The growth in network research since the 1990's speaks to its value for policy and practice applications (Kenis & Provan, 2009). Network questions clearly match today's era of network governance, yet a transition is required as traditional research has largely focused on

understanding single institutions (Agranoff & McGuire, 2001). For example, Provan and Lemaire (2012) specified that the needed shift "involves developing a fundamentally new understanding of managing," specifically how to manage "not only within but also across organizations" (p. 638). In addition to management, network research can contribute to the process of policy development, particularly related to questions of structure, resource and knowledge flow, mandated coordination, and unfunded collaboration. Child welfare advocates, practitioners, and administrators have been operating in the midst of interorganizational collaboration for some time, all the while being poorly informed of how networks function, how they can be improved, their influence on practice outcomes, or the inherent costs and benefits involved (Kenis & Provan, 2009). As such, a network perspective is a critical addition to child welfare research. It can inform multi-organizational response efforts for broad application and can serve as a tool for local communities to assess and improve their network development (Provan et al., 2005).

This study alone could not accomplish the full-range of goals stated above, but by systematically identifying the presence and extent of interdependence among organizations it makes multiple contributions that relate to practice and policy, theory, and research. Mapping the full scope of relations provides an empirically constructed picture of organizational interaction and the study's results can serve as a tool for strengthening child welfare practice at the local research site. As such, progress can be tracked and provided to organization leaders for targeted strategic planning (Provan et al., 2005). Likewise, this study can be replicated across counties and states for local child welfare network development purposes. As complexity theory is noted to be "underused in social services" (Wolf-Branigin, 2009, p. 115), this study contributes to the empirical application of complexity theory and extends its utility beyond abstract description.

The application of SNA is likewise limited in the social work field (Quinn, Woehle, & Tiemann, 2012) and its applied value in child welfare interorganizational contexts is largely untapped.

Research Questions

Three research questions were constructed to guide this study.

Q1. What is the structure of interorganizational relations involved in the prevention of child maltreatment and service delivery?

1a How are child welfare interorganizational networks connected in terms of activity links per prevention tasks, defined and measured as fundraising, joint advocacy, community awareness/education, joint programs, and shared resources?

1b How are child welfare interorganizational networks connected in terms of activity links per service delivery tasks, defined and measured as case coordination, referrals sent, referrals received, joint programs, shared resources, shared training, and evaluation activities?

Q2. How does structure differ and/or overlap between service delivery and prevention tasks?

2a What are structural distinctions between service delivery versus prevention networks (e.g., size, centralization, and density)?

2b How does the network for prevention activity interact with the network for service delivery?

Q3. What benefits and challenges are experienced when interacting with other organizations in child maltreatment prevention and service delivery?

Chapter Summary

After summarizing the need for network questions in child welfare, this chapter introduced the constructs of SNA linked with complexity theory to build the conceptual

framework that informed this research. It then articulated a few contributions of this study for policy/practice, theory, and future research and posed immediate research questions.

Chapter 2 presents a review of child welfare organizational and interorganizational scholarship, with specific focus on the challenges faced when organizations interact. The history and application of SNA is then broadly discussed, with specific focus on the relevance of public health applications that informed this study's research questions.

Chapter 3 introduces the research approach conducted in this study, including decisions for the choice of research design and the methodological procedures for sampling [inclusive of boundary spanning], data collection, and data analysis.

Chapter 4 details the data analysis and presents results and interpretation of findings.

Chapter 5 describes the study's strengths and limitations; details the interpretation of results and includes discussion and implications of findings for policy/ practice and social work education, along with theoretical implications and recommendations for future research.

CHAPTER 2

REVIEW OF THE LITERATURE

Introduction

This chapter begins with a brief description of the context of public human service organizations, including their existence, common characteristics, evolution, and lack of theoretical guidance in structure and administration. The unique subset of public child welfare organizations is then examined to convey the value of addressing network questions in this setting, and to identify gaps in the body of knowledge. An overview of network literature will follow, with specific attention paid to SNA applications in public health settings, per their relevance for informing initial applications in child welfare.

Context of Human Service Organizations

Generally speaking, public human service organizations serve to meet societal obligations and promote social cohesion in a manner that reflects larger public interests (Patti, 2009). As such, society's values and attached moral assumptions influence the course, scope, and implementation of services, and have impacts upon such organizational characteristics as resource allocation and institutional norms**.** This moralistic foundation and subsequently derived clientele hints at the complexity faced by human service administrators, particularly in their role of simultaneously catering to varying stakeholders, including, diverse clients, internal staff, partnering organizations, competing interests groups, and political powers (Hasenfeld, 2009). Navigating the complexity of this environment can present an ideological conflict for organizations and their management. Defined by Gidron and Hasenfeld (1994), practice

ideologies are the "belief systems by which an organization justifies, rationalizes, and validates the choice and uses of its intervention strategies" (p. 162). In this light, critical theorists argue that human service organizations routinely balance dual ideologies of domination, as well as emancipation (Garrow & Hasenfeld, 2009), simultaneously acting as agents of both social support and social regulation (Watkins-Hayes, 2010).

Complexity is further demonstrated by distinctive organizational characteristics (Patti, 2009). For instance, addressing issues of human well-being and interrelated social conditions is not a prescribed process, particularly compared to the technology used by other businesses providing products or services in mechanistic, routine settings. The diversity of need and non-routine tasks delegated to human service organizations requires heightened professional skill and discretion (Austin, 2002; Hasenfeld, 1992). It is further compounded by difficulties in identifying, articulating, and measuring service effectiveness, particularly under the pressure of new performance management (Hasenfeld, 2009). Additional challenges include third-party funding (Austin, 2002; Hasenfeld, 1992) and changing political tides that are not necessarily reflective of agency consumers or performance, and can likewise, run counter to their best interests and/or impede long-term strategic planning (Patti, 2009).

Evolution of Human Service Organizations

The complexities of human service provision have been shaped over time, largely by workforce professionalization during the 20th century, and growth of public social welfare programs (Reisch, 2009). With roots in informal, local charities, often fraught with racial and religious undertones (Reisch, 2008), social services today are primarily formal, spanning federal, state, and local jurisdictions with public mandates and public funding. Even private nonprofit providers are largely reliant on public financing, as 31% of expenditures of U.S. nonprofits are

derived from government funds, increasing to 52% when the scope is narrowed to social services (Ginsberg & Gibelman, 2009).

Going back to the late 19th century, the introduction of business-minded principles and the field of "scientific charity" marked a clear shift in how society approached social needs. The divergent philosophies of Mary Richmond and Jane Addams during the Progressive Era also influenced the trajectory for the newly evolving profession of social work (Reisch, 2009). Note that Mary Richmond is known for pioneering social case work and Jane Addams for community-based empowerment practice (Kirst-Ashman, 2013). With legitimacy largely awarded to the adoption of corporate structure and decision-making, both private and public responses to social welfare expanded, to include expansive state bureaucracies, and coinciding human service administration. Reisch (2009) provided an overview of this history and denoted that "over time, the new public welfare agencies turned to the field of public administration for guidance in establishing administrative procedures, rather than casework-centered social work" (p. 35).

By the 1980's, the "Reagan Revolution" and negative perceptions of bureaucracies fueled a trend toward privatization of human services, thought to be more cost-efficient, and a devolution of policy to state and local domains expanded private contracts. This devolution continued, including the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) of 1996, and remains evident in today's social service landscape (Reisch, 2009).

Theoretical Guidance for Human Service Organizations

According to Hasenfeld (2009), throughout this evolution, "no distinct theory of human services administration has emerged" (p. 53). For instance, the insight of Mary Parker Follett in the 1920's grew out of her direct social work experience and promoted that leadership should not function with directives from above, but jointly, whereby decision-making involves a process of

empowerment (Hasenfeld, 2009). Alternatively, scientific management (Taylor, 1919) and the later adoption of mainstream, often trendy, management theories superseded Follett's approach and largely dominated human service administration throughout the 20th century (Austin, 2002).

The universal application of private management theories however, raises questions of fit and effectiveness. For instance, Hasenfeld (2009) described that adherence to a rational approach in the form of divisions of labor and formal hierarchies continues to pervade human service organizations, yet denoted that this structure is "theoretically weak" (Scott & Davis, 2007), fails to account for external contingencies, and arguably reinforces the concentration of power in upper-level management versus all actors in the organization, including clients (Creed & Miles, 1996). In addition, the structure of bureaucracy has been declared incompatible with a need to respond to non-routine tasks characteristic of human service providers (Burns & Stalker, 1961). As such, evaluated today, theory to guide decision-making lacks critical examination and empirical support specific to human service settings, and fails to account for the complexity involved. Without this foundation, all levels of administration are more vulnerable to the whims of politics or public discourse, and issues such as structure, work process, knowledge management, motivation, and leadership are less informed.

Human Services as Networks

The above discussion describes general themes related to human service organizations individually, yet the context of modern services extends beyond singular institutions to involve larger networks. This is not to say that consideration for each, both the institution and the network of institutions, does not remain relevant. It is not expected that entrenched, large, and authority laden bureaucracies will dissolve in the near future (Kenis & Provan, 2006). Instead, McGuire and Agranoff (2011) asserted that "operating with networks has changed the way

bureaucracy works – as have other, earlier, phenomena such as intergovernmental grants and contracts for services…[as such] the agency remains, but in an altered state of institutional design" (p. 275). Moving forward, as Bogason and Toonen (1998) described, "people working in government and administration will have to think of organization as an external, not internal activity" (p. 205). Likewise, research will need to inform this structure, as well as examine the subsequent exchanges involved in networked service delivery (McGuire & Agranoff, 2011).

Overview of Child Welfare Organizational Literature

The above introduction to human service organizations frames the context for understanding the unique subset of child welfare practice. Child welfare organizations are not an exception, but instead exemplify the characteristics of humans services described above. They are predominantly bureaucratic in structure, with a formal hierarchy and poor interpretive interaction as traditionally found in the rational approach to organizational theory (Cohen & Austin, 2004; Smith & Donovan, 2003). In this context, bureaucracy's focus on efficiency and legal authority may constrain service delivery and case managers have been observed to negatively modify their behavior in response (Smith & Donovan, 2003). Additional human service complexities also apply, such as diverse and competing stakeholders (i.e., individual children, siblings, biological parents, foster parents, judges, cooperating organizations, politicians, and the public), non-routine/ambiguous tasks that require heightened professional discretion, difficulty identifying and measuring performance, third-party funding, and shifting politics (Potter, 2009). In addition, competing ideologies are evident as child welfare is a process of both supporting and regulating parents/caregivers.

Organizational studies in the field have explored topics such as environmental challenges (Smith & Donovan, 2003), organizational climate (Glisson, Dukes, & Green, 2006; Glisson &

Hemmelgarn, 1998), organizational culture (Ellett, 2009; Westbrook, Ellett, & Asberg, 2012), work place conditions (Yoo & Brooks, 2005), mission clarity (Potter et al., 2007), and work processes and bureaucratization (Lewandowski, 2003). These lines of inquiry are relevant to understanding organizational attributes that contribute to networks (i.e., pieces of the whole); however, the following literature review will combine organizational attributes with knowledge of interorganizational collaboration in child welfare to begin building a network perspective.

Collaboration and Networks in Child Welfare

Defining collaboration. The concept of collaboration involves work processes between or among multiple organizations, disciplines, and/or sectors. Described by Chen (2010), "in a collaborative relationship, there exists a set of process-related constructs that help guide the flow of information, manage the depth and breadth of interactions, and capture the complex and dynamic interchanges between partners" (p. 386). Chen (2010) goes on to measure collaboration with five "process constructs" adapted from (Thomson & Perry, 2006), including: 1) joint decision-making, 2) joint operation, 3) resource sharing, 4) building trust, and 5) reduced organizational autonomy.

Similarly, service links between organizations have been used to distinguish relationships as cooperative, coordinative, or collaborative. For example, Mandell and Keast (2007) prescribed that *cooperative* networks are characterized by "loose and infrequent linkages and low levels of intensity of relationships" (p. 577); *coordinative* networks have integrative activities with stronger relationships, yet organizations still maintain their own independence and vision; and *collaborative* networks "recognize that they can no longer remain independent" (p. 577). They are likely to integrate resources and share decision-making and are characterized by dense, reciprocal relationships with high trust (Mandell & Keast, 2007).

A third orientation is Horwath and Morrison's (2007) framework of collaboration along a continuum from communication to integration. In their application, the term *collaboration* includes *communication, cooperation, coordination, coalition, and integration,* differentiated by the following descriptions:

1. Communication: individuals from different disciplines talking together.
2. Co-operation: low key joint working on a case-by-case basis.
3. Coordination: more formalized joint working, but no sanctions for non-compliance.
4. Coalition: joint structures sacrificing some autonomy.
5. Integration: organizations merge to create new joint identify (Horwath and Morrision, 2007, p. 56)

Each level along this continuum indicates different collaborative behaviors, however, the label *collaboration* is applied as an overarching construct.

The term collaboration will be referenced broadly in this study's findings as an overarching term, particularly when benefits and challenges are discussed. Certainly, interactions measured among organizations in analysis speak to collaboration, however, its varying forms were not distinguished in this study. Quantitative data were analyzed per SNA concepts – not interpreted as a particular degree of collaboration. Yet, because collaboration is often the term used to discuss and explore interorganizational exchanges, its varying definitions were important to introduce. Likewise, related literature is reviewed here for its relevance in understanding interorganizational interactions in child welfare. Note too that not all scholars in the following review distinguish among related or encompassed concepts of collaboration (e.g., cooperation or coordination) and often apply the label liberally.

Interorganizational collaboration in child welfare literature. While the need for a multiorganizational response in child welfare is clearly evident and long-established (Horwath & Morrision, 2007; Meyers, 1993; Percy-Smith, 2006; Reder & Duncan, 2003; Webb & Vulliamy, 2001), challenges continue in the field and empirical research informing how networks can better serve children and families is sorely lacking. The few studies that have examined interorganizational collaboration have primarily focused on singular topical relationships (e.g., educational needs or substance abuse treatment), limiting the number of actors in analysis to subgroups of a much larger system. Examples include the collaboration among child welfare case managers, school personnel, and group home staff (Ayasse, Donahue, & Berrick, 2007); collaboration between child welfare staff, courts, and substance abuse treatment providers (Green, Rockhill, & Burrus, 2008); collaboration between contracted family preservation organizations and their partners (Chen, 2008); and collaboration between TANF organizations and child welfare organizations in the aftermath of welfare reform (Ehrle, Scarcella, & Green, 2004). Weinberg, Zetlin, and Shea (2009) also looked at the role of interorganizational meetings and joint training for educational outcomes for foster children, and Glisson and Hemmelgarn (1998) included a measure of service coordination and interorganizational relationships in their evaluation of child outcomes. Additional research from Australia (Darlington, Feeney, & Rixon, 2005; McLean, 2012) and the UK (Horwath, 2010, France, et al., 2009) adds to the body of work relevant to interorganizational child welfare practice.

In findings from these studies, along with conceptual articles that discuss interorganizational partnership (Horwath & Morrision, 2007; Meyers, 1993; Percy-Smith, 2006; Reder & Duncan, 2003; Webb & Vulliamy, 2001), scholars identified and linked organizational factors and various aspects of collaboration to the specifics of child welfare practice, including

the identification of common challenges and proposals for improved intervention. While the term "network" is rarely applied in this literature, the nature of content speaks clearly to service integration across multiple organizations, sectors, and professionals.

Complexity is evident in this dialogue at every level of providing interorganizational child welfare services, starting with the unpredictable and complicated nature of client cases, and extending to the characteristics previously described of human service organizations, as well as the compounded difficulty of coordination across multiple large, similarly complex bureaucracies (Horwath & Morrision, 2011; Meyers, 1993). The following section identifies challenges to interorganizational relationships and collaboration that exemplify why network questions matter in a child welfare context, as well as what questions should be posed for improving integrative practice using a complex systems approach.

Challenges in Child Welfare Networks

Meyers (1993) summarized that "although there are compelling arguments for greater service coordination, there are also significant forces in organizational systems that encourage continued fragmentation" (p. 548). While each barrier discussed below has been cited as applicable in child welfare settings, it should be noted that empirical support is primarily derived from other settings and/or disciplines. Analysis results and/or examples from child welfare specific studies are included when available, but the field is currently at a disadvantage with limited context-specific evidence at its disposal.

Shared goals/mission. Berman and Wang (2000) labeled *mission orientation* as "activities that aid the establishment of service goals, the evaluation of progress of the missions, and the identification of service needs." They additionally acknowledge that "missions/goals may be multifaceted and contradictory" (p. 406). In networks, the overlap of a client population

does not equate to an overlap of organizational goals or similarity in evaluation standards. For instance, child welfare organizations will likely prioritize children's needs related to abuse, whereas law enforcement will have an orientation for addressing criminal behavior, and health providers will focus on medical symptoms (Durfee & Tilton-Durfee, 1990). Summarized by O'Toole and Montjoy (1984), "an organization is somewhat bound by its own goals, world views and routines so that its ability to respond to a new mandate or to cooperate with another organization may be limited" (p. 492). As such, the potential conflict among organizations resulting from variation in mission/goals is a necessary consideration when evaluating a network's functioning.

Frontline versus management. A second challenge is identified by extending goal conflict to how frontline members in collaboration interpret and prioritize objectives in a manner that differs from managers (Lipsky, 1980). Specifically, the costs and benefits of coordination are not the same across administrative levels. Meyers (1993) inferred from a review of literature and case studies that "until the additional effort of coordinating referral, planning, assessment, and service delivery with other professionals is rewarded with tangible improvements in client outcomes and…day-to-day working conditions, staff will have little incentive to participate" (p. 567). Interorganizational coordination in child welfare is carried out by frontline staff in day-to-day case transactions, placing success of interorganizational relationships not solely in the hands of upper management, but across workforce levels.

Mandated coordination. Another consideration for goal alignment is articulated by Horwarth and Morrision (2007) in their assertion that a mandated working collaboration threatens shared goals. Specifically, the motivation to cooperate is external and may not have been communicated or decided upon internally. In addition, mandates without additional

funding, otherwise called “tack on mandates,” have been evaluated as ineffective (O’Toole, 1986). For example, Green, Rockhill, and Burrus (2008) found that substance abuse treatment staff did not regularly attend child welfare case planning meetings due to time not being “billable.” To inform both policy and practice initiatives, it is necessary to consider how network success is shaped by the origins of network relationships and the levels of funding that facilitate collaboration.

Accountability. While the benefits of collaboration are theorized and largely assumed, Glission & Hemmelgarn (1998) raised red flags about framing it as unconditionally positive in terms of child welfare outcomes. Their findings identified that service quality significantly decreased with an increase in service coordination. These results, along with similar findings by other public administration scholars (Provan & Lemaire, 2012), warn that a diffusion of responsibility in networks makes no singular entity accountable, and can threaten rather than improve goal achievement. Given the lack of evaluation and evidence from coordinative intervention efforts in child welfare, primary questions of benefits are still unanswered. Specifically, when is a coordinated response better than singular organization intervention, and what network factors contribute to the success or failure of this coordination?

Turf and trust. While multidisciplinary involvement is valued for its diversity, variation in professional perspective and procedure can result in conflict, stalemate, and poor working relationships. This is particularly a concern when organizations or professionals involved in collaboration are simultaneously vying for the same pool of resources or perceived legitimacy (Meyers, 1993). A review of network research in public sector organizations by Provan & Lemaire (2012) reinforced this challenge, labeling it *culture clash* or the variation in “decision

making, methods of treatment or provision of service, type of training, and level of professionalism" (p. 642).

Related conflicts have been identified in child welfare by Ehrle et al., (2004), and in a report by the Department of Health and Human Services (DHHS) that examined relationships between child welfare and substance abuse treatment staff. DHHS concluded that, "perspectives and philosophies may impede cooperation, causing agencies to mistrust each other, hamper one another's efforts, and stymie progress" (DHHS, 1999, ch.6 para 1). Almost a decade later, Green, Rockhill, and Burrus' (2008) identified the largest barrier to collaboration between child welfare and substance abuse treatment staff to be "negative cross-system attitudes, mistrust, and a lack of understanding of each other's activities, perspectives, and priorities" (p. 59). The influence of these "clashes" reasonably creates critical consequences for families and requires specific attention when examining how networks can improve interworking relationships.

Size and transaction costs. It should not be assumed that a greater number of participants will improve service outcomes. Instead, policy implementation research identifies that larger involvement increases the possibility of delays or veto (Pressman & Wildavsky, 1984). While there is not a defined optimal size or "theoretical upper limit" (Provan & Milward, 2001), transaction costs are a known barrier in network contexts in the form time and effort (Agranoff, 2007; McGuire & Agranoff, 2011). Likewise, a cost/benefit consideration regarding the number of organizations involved in child welfare can help determine when dispersed interactions impede, rather than improve, work processes.

Environmental uncertainty. While interorganizational partnerships can serve to mitigate unstable external contingencies, such as funding shifts or unpredictable caseloads, these contingencies can oppositely create resistance to collaboration as some organizations limit their

interaction in a defensive attempt to maintain centralized control in the face of uncertainty. For instance, media attention and consent decrees offer examples of when administrators in child welfare might be incentivized to tighten their scope of control and likewise alter how a network collaborates (Meyer, 1993).

Connecting stages of child maltreatment intervention. Recognition is needed for the ways in which efforts across organizations are interpreted. There is an expected mutual impact given agencies make inferences based on the interventions of other organizations. For example, evidence supports that there is a consequential relationship between a CPS worker's knowledge of prevention programs and the CPS case decisions made (e.g., whether or not cases are screened in for assessment or opened for ongoing services) (Maguire-Jack & Byers, 2013). Such influence should be understood and managed accordingly, including consideration for the ways in which program outcomes are assessed (Maguire-Jack & Byers, 2013) and the ways in which programs coexist in terms of planning and collaboration (e.g., shared training and shared resources). In addition, communicating the needs and experiences at various stages of intervention offers persons and organizations committed to alleviating child maltreatment a broader perspective, that if not communicated can leave gaps in how child maltreatment is holistically addressed. Such diffusion of information, including research findings and innovations, is critical to combat the alternative of a disparate network serving children and families.

Summary of Gaps in Knowledge

As the challenges to interorganizational relationships in a child welfare context are numerous, dedicated research is needed to inform how to understand and improve upon 'whole network' responses to meet the needs of children and families. This review described the characteristics of human service organizations, particularly those relevant for child welfare

practice, which offers a backdrop to inform how multiple organizations then interact to provide child welfare services. Viewing interorganizational networks in child welfare as complex adaptive systems offers a framework that encompasses the multi-level, interwoven complexity of interorganizational interaction in order to better understand the holistic structure, paving the way for understanding related processes and outcomes.

The following section discusses applications of SNA in varying fields, and more specifically reviews its use in the related field of public health. The field of public health has a considerable body of literature applying SNA methods to examine interorganizational interactions, and is similar in numerous ways to child welfare practice to warrant its reference. Similarities include participation among public, private and non-profit organizations, a reliance on multiple professional disciplines, the provision of complex human services, susceptibility to broad public policy, and the need to respond to local community needs. The scholarly foundation in public health can therefore offer guidance in applying SNA methods in child welfare and other human service contexts.

Network Analysis Literature

The history of SNA spans multiple, largely isolated, academic traditions and a lack of consideration for research agendas across disciplines has created a markedly "complex and often confusing picture" (p. 539). While some scholars maintain that network applications are distinctive enough that isolation between fields is of little consequence, it is valuable to be aware of how SNA developed and the progress and interpretation different traditions have achieved (Berry et al., 2004). A brief history will be described below with more detail focused on the tradition in public administration and public health in order to introduce the variety of theoretical frameworks employed and the fundamental network questions posed.

Sociological Roots

The oldest network tradition, sociology, dates back to Moreno's (1934) study of runaway girls. He used *sociometry*, "a technique for eliciting and graphically representing individuals' subjective feelings toward one another," to conclude that a girl's position in a network was connected to her runaway status (Borgatti, Mehra, Brass, & Labianca, 2009, p. 892). While much earlier assertions by Durkheim conceived of human societies as interrelated (Pope, 1975), *sociometry* allowed for a visual image of these social structures. A decade later, matrix algebra and graph theory began to advance analysis capabilities, and by the 1960's anthropologists started applying network methods to such questions as kinship patterns and the concept of "roles" versus individuals (Borgatti et al., 2009).

Notable contributions to SNA also include the development of the "ego-centered" approach (i.e., the network centered around an individual) and such concepts as *density* by Mitchell (1969), *blockmodeling* by White and associates (referred to as the *Harvard Structuralists*), and Granovetter's (1973) strength of weak ties theory (Berry et al., 2004). Probably the most heavily cited theory of SNA, the premise underlying the strength of weak ties holds that strong ties produce redundancy in terms of information and resources, whereas weak ties offer extended or new information, thus laying the groundwork for the theory of social capital (Borgatti et al., 2009).

Today, the use of SNA can be found in both the physical and social sciences. Its range includes analysis related to individuals, smalls groups, organizations and communities, with questions as broad as the spread of disease to combating terrorist activity. With dedicated software and its own journal (*Social Networks*), SNA is well-established and has demonstrated extensive usefulness, particularly for applied purposes (Borgatti et al., 2009).

Public Service Systems

The much younger tradition of SNA in public administration began in the 1980's (Gage, 1984), but did not fully gain momentum until the mid-1990's. Isett and colleagues (2011) attributed its growth "… to a new administrative reality driven by social, political and economic forces," and identified three primary lines of inquiry in the field (p. 160). These include policy networks, governance networks, and collaborative networks, the last of which encompass "networks focusing on the provision and production of collaborative goods and services" (p. 158).

Application of SNA in public administration has centered primarily on questions of network existence and function, how to manage networks and the relationship between networks and such variables as performance or decision-making (Berry, et al., 2004). Its promise in these realms is highly regarded (Galaskiewicz, 2007), however, debates about the progression of theory remain and reinforce the need to apply complexity theory in this study to strengthen the conceptual footing of SNA.

For example, considered a classic critique, Salancik's (1995) essay titled "Wanted: A good network theory of organization" is still applicable today. More recently, Proven et al. (2007) articulated this contention in a review of the empirical literature of interorganizational whole networks. They concluded that "a shared language with definite, concrete meanings in the study of networks has not been developed" (p. 481) and claim that "most scholars who study the topic would agree that no single grand theory of networks exists" (p. 482). In Salancik's view a grand theory would require theorizing either:

1. How adding or subtracting a particular interaction in an organizational network will change coordination among actors in the network; or

2. How network structure enables and disenables the interactions between two parties (1995, p. 348).

The lack of consistent prediction reinforces how a complexity-informed framework aids in applying and interpreting network data in interorganizational contexts. Concepts such as feedback, historicity, schemata, and the fitness landscape elucidate *how* a network comes to exist in a given state, and *how* and *why* that state differs across contexts.

Throughout the literature, varied approaches to synthesizing behavioral and other theories with network concepts have been prevalent in the study of interorganizational relationships. Examples include game theory (O'Toole, 1997), resource exchange and dependency theories (Chen, 2010), transaction costs theory (Chen, 2010; Horn, 1995), rational choice theory (Alter & Hage, 1993), contingency theory (Hansen, 1999), institutional theory, population ecology theory (Alter & Hage, 1993), social learning theory (Brummel et al., 2010), and social capital theory (Burt, 2000). This diversity of theory in conjunction with the diversity of phenomena studied by network scholars (e.g., organizational reputation to creativity) led Kilduff and Brass (2010) to reflect that "the growing popularity of the network approach…may have come at the cost of programmatic coherence" (p. 318-319). For example, one element of this incoherence, otherwise interpreted as breadth, is demonstrated by the multiple levels of analysis applied (i.e., organization, dyads, and network), also referred to as micro and macro-levels (Provan & Lemaire, 2012). In all, from theory to topical interests to design methods, it is safe to suggest that the current development of network research in organizational contexts remains highly diverse in application and open to continued debate.

Applications in organizational settings. The last two decades have seen increased interest in network studies across disciplines, including research in private, nonprofit, and public

sectors (Provan & Lemaire, 2012). While a longer history examines dyadic relationships between organizations (Levine & White, 1961; Warren, Rose, & Bergunder, 1974), a macro focus on 'whole' networks has only more recently emerged and been applied to issues such as policy implementation (Agranoff, 1991; Alter &Hage, 1993; OToole, 1997), innovation (Powell, White, Koput, & Owen-Smith, 2005), and mental health services (Provan & Milward, 1995). As scholars make headway, it is evident that a network perspective has broad and practical applications that are relevant to child welfare practice. This relevance is particularly apparent in the public health literature, where a focus on understanding interoganizational networked collaboration is still new, yet well-established as a focus of research.

Public Health

Shift to a Systems and Network Perspective

Just as a systems approach to child welfare was recently vocalized by Wulczyn et al. (2010), "scholars in public health have moved toward taking a systems approach to design and evaluate public health programs" (Luke & Harris, 2007, p. 84). This approach is described as

> a paradigm or perspective that considers connections among different components, plans for the implications of their interactions, and requires transdisciplinary thinking as well as active engagement of those who have a stake in the outcome to govern the course of change (Leischow & Milstein, 2006, p. 403).

It is noted that "fittingly, this [systems] approach is taking a more prominent role in public health at the same time that network analysis is becoming a more widely employed tool" (Luke & Harris, 2007, p. 84).

The strong footing network research has achieved in health-related services is notably informed by the efforts of Provan, Milward, Douglas, and Leischow, to name a few. Provan and

Milward (1995) conducted a seminal case comparison of the structure of four mental health service networks, and continued work by applying SNA as an evaluation tool to examine interorganizational collaboration in single cases as a means to build community capacity for service delivery (Provan, Veazie, Teufel-Shone, & Huddleston, 2004). Longitudinal analyses followed these groundbreaking efforts, including a case comparison of the evolution of two mental health networks over four years (Milward, Provan, Fish, Isett, & Huang, 2009), as well as the examination of each case's individual evolution (Provan & Huang, 2010; Provan, Isett, & Milward, 2004).

Other examples include work by Leischow et al. (2010) in the mapping of leadership communication across organizations in the Department of Health and Human Services relative to tobacco control. Research on this topic also extends to comparisons of state tobacco control networks (Harris, Luke, Burke, & Mueller, 2008; Luke et al., 2010) and insight into the "dissemination of evidence-based guidelines in state tobacco control programs" (Luke, Wald, Carothers, Back, & Harris, 2013).

Guidance for Initial Child Welfare Applications

As described above, to usher a system's approach and network analysis methods into child welfare scholarship, consideration for the body of literature in public health is warranted. From a review, it is evident that building a research-informed initial map of network connections is a necessary step in conducting network inquiries. Components of the work conducted by Provan, Leischow, Keagy, and Nodora (2010) and a follow-up analysis by Harris, Provan, Johnson, and Leischow (2012) particularly helped to shape the structure of this study, specifically the stages of research (i.e., an initial mapping and description followed by an analysis of drawback and benefits) and specific consideration for network structure and function

divided by task. Provan et al., (2010) began with an analysis of a single coalition network (i.e., 18 organizations) and distinguished network participation along three cancer research components (i.e., discovery, development, and delivery). The overall network was evaluated, with subsequent comparisons made between task-specific networks (e.g., how the discovery and delivery network differed in density and centrality). Harris et al., (2012) built on this research by examining the distinctive drawbacks and benefits to collaboration along the discovery, development, and delivery continuum. Inherent in this division was the goal of improving collaboration across tasks, specifically narrowing the gap between discovery and delivery efforts. A similar design was applied in this study to distinguish between interactions on child maltreatment prevention efforts and child welfare service delivery efforts to better understand how they differ and/or interact.

Chapter Summary

This chapter reviewed literature on human service organizations and situated child welfare in a human service context, with a specific focus on 1) the complexity of child welfare practice and 2) the current state of scholarship relevant to interorganizational interaction in child welfare settings. A gap in knowledge was articulated given that it does not appear network analysis has been utilized to understand the holistic participation of organizations in the prevention of child maltreatment and related service delivery. This gap persists despite the clear and longstanding existence of interorganizational interdependence in the field and the common recognition that multiple organizations exert influence on the outcomes of children and families, including influence specific to how well and what ways organizations work collectively.

Literature focused on the history and applications of SNA was also reviewed in this chapter with specific attention to public health applications specific to interorganizational human

services. The methods outlined below in Chapter 3 rely on this review of public administration research, particularly in health and mental health settings. It provided the foundation for initiating an informed network research agenda in child welfare and is complemented by the context-specific challenges established earlier.

CHAPTER 3

METHODOLGY

This chapter details the methodology of this study, including the 1) research design; 2) sampling procedures; 3) data collection; and 4) data analysis.

Research Design

SNA and qualitative methods were employed in a mixed-methods design to examine child maltreatment prevention and service delivery in a bounded county setting. In the spirit of a case study, wherein the inquiry "arises out of the desire to understand complex social phenomena" (Yin, 2009, p. 4), the attention to a context-specific location and use of multiple sources of data collection and analysis attended to the combined SNA and complexity theory framework that guides this study. The use of mixed-methods enhances the potential of gaining a holistic understanding of organizational interdependence in a specific context and enables the examination of "broader or more complicated research questions than case studies alone" (Yin, 2009, p. 64).

Choice of Design

The choice of design was informed by the pros and cons of different SNA methods and the emphasis on context posed by complexity theory and articulated by Nadel (1957).

SNA. Specific to SNA, McGuire and Agranoff (2007) reinforced that no superior method for studying networks exists. For instance, feasibility in the form of time and costs limits obtaining a large sample of whole networks for analysis (Provan et al., 2007), yet the large-*n* access of egocentric data (i.e., individual actor's relationships) is countered by limitations in

description and a lack of structural insight (McGuire & Agranoff, 2007). The value of dyads should not be discounted; they are in fact the building blocks of networks. However, studying dyadic relationships should be acknowledged for the micro perspective they offer versus a macro understanding of the 'whole' (Provan & Lemaire, 2012).

Nadel's paradox. Nadel's (1957) position that context is inescapable in social structure is a necessary consideration across research designs. As an anthropologist, he theorized the importance of roles, as summarized by Berry et al. (2004) that "roles are defined…not only by structural relationships - that is, the particulars of who speaks to whom or who influences whom - but also by embedded context and institutionalized expectations, often local and particularistic" (p. 540). The role of context in relationships is similarly acknowledged by complexity scholars. For instance, Mischen & Jackson (2008) described that "through feedback loops … agents self-organize and create behavioral 'paths' within a limited space of possibilities. What emerges is a pattern of behavior that is influenced greatly by the historicity and locality of the system" (p. 316). They go on to note that as a consequence "implementation researchers often feel stymied by the wide variation in policy outcomes in different locations" (p. 322), thus reinforcing considerations of context in research designs that measure structural relationships.

As such, while the use of SNA allows for standardized comparisons of network structures, scholars argue that without understanding relevant context, one network is "fundamentally incomparable to others" (Berry et al., 2004, p. 540). This is formally referred to as *Nadel's paradox* and poses a methodological hazard for network analysts. Consideration for this paradox and the pros and cons of SNA research methods strengthened the importance of grounding this research in a mixed-methods design to understand the complexity of a network in a bounded setting. In doing so, the study's design "[attends] to the world in which the research

process and those participating in it are located" (Trevillion, 2000, p. 512). The entirety of context is beyond the scope of this single inquiry, however, network statistics will be interpreted in conjunction with qualitative data to achieve greater depth of understanding, as well as promote future analytic generalizability across communities.

Sample and Sampling Procedures

Research Site

Athens-Clarke County in the state of Georgia was chosen as the research site for this study, per the following considerations.

- *University's Presence*. The University's presence in the community was expected to offer a degree of familiarity and trustworthiness. Athens-Clarke County was prioritized over other communities where University relationships, including the familiarity of being approached for research, did not exist.
- *Manageability*. As a single research site, Athens-Clarke County is sized well to provide a mix of depth, yet manageability in the number of organizations represented locally. For example, a more rural county would not offer the variety of service providers, yet a more urban county's size and number of service providers would make data collection unmanageable within the time and resource constraints of this study.
- *Accessibility to professionals throughout the community*. Participation is critical for completing the intensive data collection required by network methodology. While the researcher had not worked professionally at the research site (i.e., Athens-Clarke County) and did not personally have relationships with potential key informants that might influence perceptions and responses, faculty and staff at the University of

Georgia who do maintain community relationships were available to facilitate introductions.

Athens-Clarke County has a population of approximately 121,000, with 22.5% of households including children under age 18 (Georgia avg. = 31.6%). It is located in the Northeast region of Georgia and is the most populous of surrounding counties (U.S. Census Bureau, 2014). Consistently, Athens-Clarke County has experienced high poverty rates (DeNavas-Walt, Proctor, & Smith, 2010). In 2013, the rate of children living in poverty was 38.4% (Georgia 26.7%), and between 2009 and 2013 49.3% of families fell below 150% of the poverty-level (Georgia 32.3%). Approximately 82% of school-aged children in the county are eligible for free or reduced lunch programs (Georgia 59.7%) and approximately 47% rely on public health insurance (Georgia 37.9%). High school graduation rates are also lower than the state average, 63.2% in 2014, compared to Georgia's rate of 72.5%. (Annie E. Casey Foundation, 2014).

Given that the implementation of child protective services (CPS) varies across states, it is important to clarify that CPS, foster care, and adoptions are conducted through a state agency in Georgia, the Department of Human Services, under the Division of Family and Children Services (DFCS), and are administered through 159 local county offices. The Office of Family Independence is also contained within DFCS and oversees eligibility programs, including: Temporary Assistance for Needy Families, Food Stamps, Medicaid, and other social support services (DFCS, 2014).

Entering the Field

Before describing the procedures for initiating this study, a description of the researcher's (i.e., my own) subjective biases and assumptions is needed.

Statement of subjectivity. Critical self-reflection played an integral role throughout the conception, implementation, and analysis of this study. The terms "reflection' and 'reflexivity" are noted to be distinctly defined (Findlay et al., 2003; Sochacka, 2009). Findlay et al. (2003) identify that 'reflection' looks back on events after they occurred, while 'reflexivity' is a present and continuing process during events. Following, Sochacka (2009), the term 'critical self-reflection' is used in this statement as an encapsulating term of both 'reflection' and 'reflexivity'. This involved consideration for the impact of my own experiences, behaviors, and values in recognition that I was an instrument in the research process (Findlay & Gough, 2003).

From the point of this study's conception, it was my direct social work practice experience that led me to prioritize research questions specific to holistic and coordinated action among organizations. I have worked in public child welfare as a case manager and supervisor in multiple county/state settings and am likewise predisposed to certain assumptions about child welfare practice and the functioning of public organizations (e.g., high caseloads/understaffed, policy-driven, negative cross-organizational perceptions). Specific to interorganizational relationships, I have felt the rewards and frustrations of working across organizations from the perspective of a case manager and supervisor in a public child welfare organization. As such, it is the public child welfare organization that I easily empathize with. Conversely, it is also the public child welfare organization I feel most informed to critically critique.

During data collection and analysis, critical self-reflection made me careful to not dwell on challenges that I have personally experienced in practice at the jeopardy of paying attention to data that did not align with these biases. Indeed, data were often very distinctive from my own practice experience (e.g., empathetic community perceptions, trust among organizations). In addition to exerting caution, I specifically noted in a field journal when personal feelings and

judgments conflicted with a key informant's perspective. This rarely happened [two times], but was something I was careful to record. I also used members of my committee as a reliability check of my interpretations.

In the field, I communicated my professional experience and my current pursuit of a PhD in social work when introducing this study to organizational representatives. I did not discuss my experience beyond a statement that I had worked in public child welfare for years before pursuing my PhD, and that it was my professional experience that led me to ask questions specific to how organizations are connected to support children and families. Potential advantages of disclosing my child welfare experience included the proverbial *street cred* it may have garnered. In particular, having direct-practice experience allowed me to communicate an authentic commitment to conducting research with practice-oriented implications.

Potential disadvantages included the possibility of key informants viewing me through their own notions of DFCS employees. This possibility was hopefully minimized by my never having worked professionally in the county under study, the overall supportive opinion of local DFCS [not always positive, but consistently empathic], and the explicit *community*-orientation to serving children and families prioritized in the study. In other words, the holistic focus of this study may have helped key informants recognize that I valued and was interested in the diverse roles and orientations associated with serving children and families, lessoning any notions that I only approach child maltreatment through a singular lens. In addition, the study was not formally linked to any specific community organization, outside of my position as a student in the School of Social Work at the University of Georgia that may have introduced a biased perception.

Finally, my identification as a social worker itself should be acknowledged for its potential influence. Given that the study encompassed participation from an array of professions,

it cannot be assumed that responses during data collection were the equivalent of what would have been conveyed to a researcher within each key informant's own discipline or vice versa and/or how these findings may have been interpreted by researchers emerging out of other disciplines/professions. However, I did not perceive hesitation among key informants to be a barrier during data collection. I, instead, noticed that key informants shared about frustrations related to both of my identifying labels (i.e., DFCS and social worker). Also related to professional orientations, opinion may vary on such topics as what constitutes child maltreatment or how to prioritize the strengths and needs of families. Values such as these were discussed by key informants as topics within the relationships under study, although the intent of this study was not to judge values, but instead to explore the ways values (if at all) are a challenge when organizations interact, thereby lessoning the influence of potential biases on the study's findings.

Internal Review Board. The study was submitted for review to the University of Georgia's Internal Review Board (IRB). It was determined to be non-human subjects research as the data collected were specific to organizations, rather than to individual respondents. No identifying information specific to an individual factored into data analysis. Instead, organizations themselves were identified and labeled per their position in the network(s). Note that identification only extended to data points specific to SNA (e.g., an organization's centrality); other data collected using the survey instrument (e.g., demographic variables and challenges and benefits experienced) were not attributed to any identified organization. Qualitative data were likewise confidential. During data collection, two additional IRB reviews were completed with the Clarke County School District (CCSD) and Georgia's Department of Juvenile Justice, per the internal requirements to participate in research for individual organizations. Both were approved.

Boundary Specification

The process of sampling in this study, referred to as boundary specification by network analysts, employed two techniques. First, purposeful sampling – defined as selection of research sites and/or participants that purposefully inform the topic under study – was used to initiate sampling (Babbie, 2007). Second, a "realist approach", whereby organizations were "included or excluded to the extent that the other actors judge[d] them to be relevant" was used to define the network's boundary (Knoke & Yang, 2008, p. 15). Throughout, organizations were identified for inclusion based on the criteria of being named by others as having interacted on one or more of the 12 designated service delivery/prevention activities within the last 12 months.

Initial Procedures

In the sample county, initial meetings were held with administrative representatives from the *DFCS* – the primary public organization designated to intervene in cases of child maltreatment – and *Family Connection* – an organization that coordinates community partnerships to serve children and families. These organizations were purposefully chosen as the first points of contact, per their direct role with the target population. Both organizations expressed interest and willingness to participate.

After receiving confirmation in August 2014 from the University of Georgia's IRB that the study was determined to be non-human subjects research, sampling was initiated. Purposeful sampling again drove the decision to begin with the county's *DFCS* as the first point of contact. A county-level representative with Clarke County (CC) DFCS was sent an email requesting an individual meeting. At this meeting, the local representative was introduced to the purpose and procedures of the study and was asked to initiate the boundary specification process. Each named organization was then likewise introduced to the study and invited to identify the organizations

they interact with, per the inclusion criteria. Described as a modified snowball sampling procedure (Harris, 2008), this process continued until a refined list of organizations was constructed, as visually depicted in Figure 2.

Figure 2. Process of boundary specification.

In total, 128 organizations were initially identified[2]. Of these, the organizations individually named during boundary specification were automatically included for representation on the survey, except in instances when (a) the department/program named was part of a larger organization already included (n = 8); (b) the named organization was found to be closed (n = 3); (c) duplicate identification (n = 4); (d) a single individual was identified (e.g., singular attorney)

[2] While the term "organization" is referenced throughout this study and is primarily accurate in describing agents that comprise the network, participation did extend to entities that do not represent a traditionally defined organizations (e.g., judicial branches).

(n = 2); and (e) the organization responded to the introduction email with the request to not be included (n = 1). These exclusions reduced the total to 110 entities to be included on the survey for distribution.

Decisions were made with input from participants regarding how to designate potential subunits of an organization (i.e., incorporate multi-departmental representation from large organizations to capture interaction specific to distinguishable branches of an organization). For example, braches of CC DFCS – Social Services and Office of Family Independence – were listed separately on the survey, yet both were under the umbrella of a singular organization and were counted as a single organization in the sample. In addition, subprograms of organizations were sometimes identified in parentheses on the survey to trigger key informants' recognition of the subprogram belonging within an organization.

During data collection, the sample was finalized to include 105 singular organizations for participation. The reduction from 110 to 105 was expected in two instances due to intentionally listing the sub-branches of organizations on the survey, as described above. In addition to separating the branches of CC DFCS, the CCSD and Early Headstart were identified during boundary specification separately, and were listed on the survey separately in order to capture the ways community organizations interacted with Early Headstart specifically versus the school system as a whole. Yet, Early Headstart is a component of the CCSD and they comprise a single organization in the sample. These two instances brought the sample of organizations down to 108. The three remaining reductions occurred for the following reasons:

1) One organization had changed names and was differentially identified during boundary specification by its previous and current name. Both names were initially listed on the survey and were later combined to represent a single organization.

2) One organization was found to not serve Athens-Clarke County after survey distribution began.
3) One organization, originally believed to be an independent organization, was instead found to be a subprogram within another identified organization and they were combined for analysis and counted as one organization in the sample.

Methods of Recruitment

To complete the process of boundary specification, two primary methods were implemented in the form of meeting in-person or by-phone, and/or sending a scripted recruitment email.

Request to meet in-person. When agencies were named that were either (a) a public organization; (b) an organization known to play a direct role in responding to child maltreatment (e.g., hospitals); or (c) an organization with language specific to child maltreatment in their mission statement (accessed online), the director, coordinator, or other administrative representative was sent an email that introduced the study and requested an in-person appointment (n=17). Requests to meet in-person with these organizations were made in an effort to promote participation from the organizations expected to play a direct role in responding to child maltreatment, as well as public organizations that potentially required an internal process of approval to participate in research. During these meetings, the purpose and procedures of the study were described and boundary specification was completed. These meetings were also used to schedule a future data collection appointment. See Appendix A for a sample communication to schedule initial in-person meetings. The researcher met with 11 organizations in-person and two by phone during boundary specification, in which 69 organizations were directly named as network members for inclusion.

Scripted recruitment email. As it was not feasible per time and resources to meet individually with every named organization in the five week period scheduled for boundary specification, a scripted-email was sent to the director, coordinator, or administrative-level representative for all other organizations identified for inclusion (n = 88)[3]. This email introduced the study and likewise asked for the identification of organizations that met inclusion criteria and had not been identified. A web-based link was included in the email that directed the recipient to a single survey page where inclusion criteria were defined. On this web-link, the organizations that had already been identified were listed, and space was provided to add organizations. See Appendix B to view the recruitment email and the boundary specification language found on the web-link. Twenty-four responses were received through the emailed recruitment script/web-based link, in which 32 organizations were identified. Note that the number of newly named organizations continued to lessen as the list became increasingly comprehensive. It was updated on the web-based link regularly so that newly contacted organizations always reviewed and added to the most recent list.

Minimum Standard of Communication

Organizations that met in-person or by-phone for boundary specification also received the scripted email communication following that contact (n = 13). This provided a minimum standard of communication across organizations when introducing the study, and allowed the organizations that met in-person for boundary specification to add organizations through the web-based link, in their own time, as afforded to other recipients. In addition, organizations that did not respond to the initial request to meet in-person were likewise sent the scripted email and given the opportunity to add organizations through the web-based link, as an alternative (n = 4).

[3] Note that this n reflects the number of agencies in the sample that were sent the scripted email only during boundary specification, opposed to a request to meet in-person. The scripted email was sent to *all* agencies in the sample as a procedure to achieve a minimum standard of communication.

In total, all organizations named during boundary specification were given the opportunity either in-person and/or through email to add additional organizations for inclusion.

Resource Guide

During the boundary specification process, one organization referenced a resource guide (i.e., a compiled list of resources and services), indicating that their organization referred children and families to *all* organizations listed in the resource guide. The guide had been updated in September 2014, within the same time period as boundary specification. Since the organizations listed in the resource guide were not directly and individually named by the key informant, the full guide was not immediately included and was held to the end of boundary specification for consideration. After all named organizations had been given the opportunity to add organizations, the researcher considered the organizations that were listed in the resource guide that had not been otherwise identified. The following criteria were developed and applied for inclusion.

- Organizations that provide a social service to the target population were included if they were present in the community. This encompassed organizations with the primary goal of addressing and/or preventing child maltreatment, as well as organizations that provide housing/shelter, counseling, mental health treatment, parenting classes, substance abuse treatment, legal services, safety, food, improved access to transportation, health care, education, employment services, and other financial services to children and families.
- Organizations that provide the direct delivery of a social service, oversight of service delivery, provision of resources/funding for service delivery, related training, and/or program evaluation of service delivery, to include the target population, were

included, and/or organizations that participate in one or more efforts of fundraising, advocacy, education/awareness, joint programs, and/or shared resources specific to the prevention of child maltreatment.

The following organizations were excluded:

- Nation-wide referrals and online-only services.
- Transportation companies that did not offer services to improve access to transportation or direct client interaction.
- Apartment complexes that did not offer housing assistance, beyond waived application fees.
- Individual psychologists and individual attorneys. This choice was made in consideration of IRB approval as non-human subjects research and a general concern to avoid pinpointing the activities of a single individual in the network.

Organizations listed in the resource guide were researched online and if the organization's services fit into the designated categories of inclusion above, they were included for representation on the survey (n = 27). The organizations identified through the resource guide, but not mentioned directly by others during boundary specification, primarily included churches with established service programs, for-profit child and family counseling services, and tutorial and mentoring programs. Note, again, that any organization named individually during boundary specification was automatically included and not investigated per the above criteria. These criteria were developed to manage decisions in response to the resource guide only.

Data Sources and Collection

The research questions in this study were examined through quantitative and qualitative sources of data, including a survey instrument and two forms of qualitative interviews (i.e., semi-

structured interviews and in-person survey completion). In total, out of the 105 organizations contacted to complete the survey, 80 participated (75% response rate) and qualitative data were gathered from 67 of these 80 organizations (84%).

While the following sections describe the sources of data separately, the process of data collection was predominantly concurrent, whereby a survey instrument and a semi-structured interview were completed together, in-person with key informants (n = 44). As such, given recognition of the emergent nature of this study, data collection evolved from the original expectation of the study's design to include not only a survey instrument and a semi-structured interview protocol, but the reactions, descriptions, clarifications, and interpretations expressed by key informants during the completion of the survey itself (e.g., spontaneous examples and reflections on the types of activities from the perspective of their organization). In addition to these processes of data collection occurring concurrently, three additional combinations of survey and/or interview completion took place and are summarized in Table 1.

Table 1

Combinations of Data Collection Completed (n=80)

Survey + Semi-structured Interview **In-Person n=42** **By Phone n=2**	**n = 44**
Semi-structured Interview In-person + Survey Independently	n = 12
Survey In-person, No Semi-structured Interview	n = 11
Survey Only and Independently	n = 13

Note. Independently indicates the survey was completed without the researcher present

Data Sources

Survey instrument. Referred to as *key informants* for their knowledge of interorganizational interactions, the director, coordinator, or other administrative representative from each organization was invited to complete a survey (see Appendix C). The survey was revised from a model provided by Provan et al. (2005). It was altered to align with child welfare services and expanded to include additional points of data relevant for this setting and of interest to this study. The survey was piloted in a web-based distribution with comparable organization representatives in non-participating counties (n = 3), and modified as needed for clarity.

The survey listed the 110 organizations/programs identified during boundary specification, and each key informant responded to a traditional network question capturing the types of interaction (i.e., service delivery links and/or prevention links) between their organization and each listed organization. The measure employed in this study was strictly behavioral and was meant to capture the interacting links occurring between organizations around a specified task.

Service delivery links. *Service delivery links* were defined as: 1) referrals sent, 2) referrals received, 3) case coordination, 4) joint program, 5) shared resources, 6) shared training, and 7) evaluation activities. See the survey instrument instructions for a definition of each link in Appendix C. For the types of interaction categorized as service delivery, this study followed Provan and Milward's (1995) distinction of a "service implementation network", whereby links between organizations are related to client needs and services, not general connections. Also note that while interactions were defined to involve clients who were also clients with DFCS (e.g., does your agency coordinate cases with the agency listed regarding families or children who are also clients with the Department of Family and Children Services), numerous organizations

would not necessarily be knowledgeable if a child/family they serve is also involved with DFCS. Clarification was provided in the survey's instructions (See Appendix C, p. 194)

Prevention links. In contrast, for the types of interaction categorized as *prevention links,* general connections were included regardless of direct client connections. Prevention links were defined as: 1) fundraising, 2) advocacy, 3) community awareness/education, 4) joint programs, and 5) shared resources.

Benefits and challenges. A second section in the survey captured each organization's perceived benefits and challenges experienced when participating in the network. The listed benefits and challenges were adapted from measures used by Leischow et al., (2010) and Provan et al., (2005), and reflected interorganizational challenges identified in the interoganizational child welfare literature[4]. Key informants were asked to respond to each listed benefit and challenge, denoting whether their organization had *experienced* the benefit or challenge when working with other organizations in the provision of services to children and families, and separately, when working with other organizations on prevention efforts. The full list of benefits and challenges can be referenced on the survey instrument (Appendix C, p. 212). Space was also available for key informants to add additional benefits and/or challenges, if not listed.

Interviews. Interviews took shape in two distinguishable, but often integrated formats, whereby key informants completed:

1. The survey in the presence of the researcher, allowing for additional points of communication relevant to the content of the study; and/or
2. In-depth interviews that followed a semi-structured protocol that was grounded in the literature review and conceptual framework that guided this study (see Appendix D).

[4] Leischow et al., (2010) examined impediments for DHHS agency collaboration and Provan et al., (2005) provided a survey model promoting the use of SNA locally to strength community capacity.

Both portions were audio-recorded [with verbal consent] and transcribed verbatim for analysis. Of the 55 surveys completed in-person, six were not audio-recorded, and three of the 56 semi-structured interviews were not audio-recorded – none due to a refusal by the key informant, but instead due to either technical failure or not having the tape recorder available. In these instances, extensive notes were taken and documented in the field journal. Combined, interviews lasted an average of 62 minutes each, with a range between 20 minutes and two and a half hours. This range included three combinations of time spent with key informants (i.e., survey only, semi-structured interview only, and the full survey and semi-structured interview together).

The content of semi-structured interviews focused on the organization's experience working with network members in the prevention of child maltreatment and/or in the provision of services to children and families, with specific attention to the challenges and benefits they have encountered, the strengths of the network, the perception of their organization's role in the network, and how they describe the network's quality as related to interorganizational interaction. Demonstrated as valuable by Provan and Milward (1995), key informants were also asked to reflect on the history of the network's working relationships, including points of change. Throughout, attention was paid to the social, political, and economic context specific to the research site. The degree of qualitative data collection was beyond the scope of the research questions posed in this study. Findings reported here are specific to an examination of how prevention and service delivery activities differ and/or interact and the identification of the challenges and benefits experienced when participating in the network.

Data Collection

In total, data were collected over four months – October 2014 through January 2015. This followed the five week boundary specification process that began in September 2014.

Organizations were contacted iteratively (e.g., approximately 10 a week) in order for the researcher to manage the amount of communication and appointment dates. Almost exclusively, interviews were held on-site at each organization. On four occasions, interviews took place at restaurants or on the University's campus, per the request of the key informant. Two interviews, including concurrent survey completion, were conducted by phone. See Table 2 for a summary of responses to all recruitment methods, followed by a detailed discussion of each.

Table 2

Data Collection Recruitment Methods (N=105)

Type of Response	***n***
Responded to an email requesting an in-person meeting	56
Responded to a change in contact methods	15
Completed the survey through the online link contact alone	9
Did not respond to any method of recruitment	25

Similar to boundary specification procedures, organizations were primarily contacted by email to schedule an in-person data collection appointment (see Appendix E for an example communication). A follow-up email was sent if no response was received. Finally, if still no response, a link to the survey was sent as an alternative way to participate, followed by two reminders.

To balance time constraints and still maximize survey completion rates, a subset of organizations was sent a direct link to the survey as the first attempt for data collection, opposed to a request for an in-person meeting that involved more time on the part of the researcher (n = 39). If the organizations that were sent the web-based link first, plus one reminder (see Appendix

F for examples of these communications), did not complete the survey through these requests, they were then sent an email inviting them to meet in-person for data collection and a follow-up reminder. Organizations chosen for this order of recruitment methods were primarily those not identified by DFCS in the category of case coordination. All organizations identified by DFCS as participants in case coordination were contacted to meet in-person as the first request. While this criterion was a primary decision point, requests to meet in-person as the first method were still sent to a few organizations not falling into this category. For example, organizations that had responded with positive interest in the study during boundary specification were contacted with a direct email to meet in-person, as were three organizations in which the researcher had been introduced to a representative through activities with the University's School of Social Work.

In short, most organizations were sent either two requests to meet in-person, followed by the survey and reminders if no contact was made, or the survey first with two reminders, followed by two requests to meet in-person. A few organizations were contacted by phone when needed, such as when the email address available was generic to the organization, not an individual contact (e.g., "organizationname"@__.com), and in two instances when the organization in question was known per policy to play a direct role in child maltreatment and had not yet responded. Phone calls were not routinely used as a method of recruitment.

Notably, it was observed during implementation that the shift in communication – from sending a link to the survey by email to a request to meet in-person – frequently elicited a response. In turn, the opposite shift – from a request to meet in-person to sending the survey alone – also frequently elicited a response. In total, 15 additional responses were gathered from shifting the method of communication during recruitment.

Prior to initiating the study, it was anticipated that points of introduction through mutual community contacts would be integral in facilitating data collection. This method, however, was minimally used, only on three occasions. Instead, organizations primarily responded to the direct recruitment communications by the researcher, without a third party. However, it cannot be determined what influence communication among organizations themselves may have had, outside of the researcher's knowledge (i.e., an organization talking with another about their participation in the study, prior to the second organization being contacted). It can only be assumed that linked organizations discussed this research project, as it involved community-wide input, and their positive or negative reflections may have influenced subsequent participation decisions.

Finally, there were instances when multiple key informants from a single organization collectively completed the survey instrument and /or participated in the semi-structured interview (n = 6). In these instances, between two and three key informants together completed a single survey instrument and discussed responses. Naturally, these data collection appointments were longer in duration. This scenario most often occurred at the request of larger organizations with the desire to best capture the full scope of interactions, given that aspects of a large organization may not be fully understood by a single key informant. In the same light, other organizations that had only one key informant often asked to have additional staff in their organization review responses for accuracy before submitting the survey. This review process and/or multiple key informants were never a requirement made by the researcher of responding organizations, but were welcomed as additional procedures to promote reliability when key informants made the request.

Data Analysis

Survey Data Management

In preparation for analysis, raw data for the traditional network question were entered into Excel 14.0 (Microsoft, 2010) spreadsheets, with a separate spreadsheet for each service delivery and prevention activity. The spreadsheets were constructed as adjacency matrices (i.e., one mode networks in which the rows and columns are the same) (Kadushin, 2012).

In this structure, each cell represents the tie between a pair of organizations (i.e., actors or nodes). The relation follows the rows. For example, row *i*, column *j* [a_{ij}] records a tie, as indicated by the organization in row *i* – a tie (= 1) or no tie (= 0). Row *j*, column *i* [a_{ji}] records the tie, as indicated by the organization in row *j*. If a_{ij} and a_{ji} are both 1, the relationship is reciprocal (i.e., confirmed). If both are 0, no tie is indicated by either organization – labeled symmetric. If they do not match, a relationship is indicated by one organization, but is not reciprocated and the matrix becomes asymmetric.

	Organization A	Organization B	Organization C	Organization D
Organization A	-	0	1	0
Organization B	1	-	1	0
Organization C	1	1	-	1
Organization D	0	0	1	-

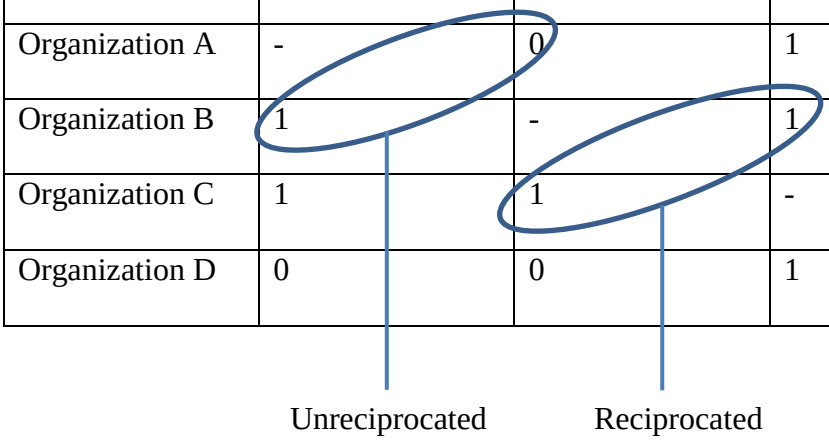


Figure 3. Example of a completed adjacency matrix.

The notion of reciprocity applied to 10 of the 12 activities that were conceived to be *non-directed*. For example, if Organization A coordinates cases with Organization B, it is expected that Organization B coordinates cases with Organization A. Organization A, however, may not recognize or interpret the relationship in the same way as Organization B, and if responses differ, the network would then be asymmetric. Alternatively, a relation can be conceived as *directed* (e.g., sending referrals to an organization is a directed action and is not indicative of a reciprocal response). Two of the twelve matrices, *referrals sent* and *referrals received*, were *directed*. Each was constructed separately initially, and a combined matrix – labeled *referrals* – was then created, whereby the maximum score between the referrals sent and referrals received matrices was applied to form a new matrix. This matrix captured if a tie for referrals sent or referrals received was present between any two organizations, and therefore represented overall referral activity.

In addition to these 11 matrices representing each measured task as a separate network, three valued matrices were created, in which relationships between rows and columns were no longer binary, but valued to represent multiplex relations. Matrices were combined into the (1) full service delivery network (SDN); (2) service delivery network without referrals (SDNwr); and (3) full prevention network (PN). Cells in the SDN were valued between "0" and "6" ["0" representing that no service delivery tie existed between organizations and 6 representing that all six service delivery ties existed between organizations]. The six service delivery matrices were used as inputs for this matrix, including: *referrals* (combined), *case coordination*, *joint programs* – service delivery, *shared resources* – service delivery, *shared training*, and *evaluation activities*. The SDNwr represented a combination of the above six service delivery activities minus *referrals* (i.e., cells were valued between "0" and "5"). Likewise, the cells in the full PN

were also valued between "0" and "5" ["0" representing that no prevention tie existed between organizations and "5" representing that all five prevention ties existed between organizations]. The five prevention matrices used as inputs were: *fundraising, advocacy, community awareness/education, joint programs* – prevention, *and shared resources* - prevention. Referrals were separated in this stage of analysis to better facilitate a comparison given that referral activity far exceeded the other tasks measured. Separating it from the remaining service delivery tasks not only created an equal number of prevention and service delivery tasks for examination, but also allowed for the characteristics of the remaining service delivery tasks to be clearly recognized.

In addition to the one-mode matrices, the following two-mode matrices were also constructed.

1. Attributes were organized in a matrix in which the rows represented the 105 organizations in the sample and the columns represented the attribute data for each organization. In other words, information about each node in the network, such as the sector type, organization size, and tenure of executive director was recorded in the columns. In this matrix, codes in each cell corresponded to categories of response on the survey (e.g., the column for *sector type* was coded 1 = public, 2 = non-profit, and 3 = for-profit).
2. A binary matrix was created whereby rows represented the 105 organizations in the sample and the columns represented the *benefits* and *challenges* experienced by each organization when interacting in the network, indicated by a '1' if that benefit or challenge was experienced by the organization and a '0' if it was not experienced.

Note that when the matrices were constructed, the instances of combining organizations was completed in iteration, preserving the entirety of data for the 110 entities and reducing the matrices by one organization at a time, saving all versions. Specifically, as raw data represented all 110 entities included on the survey, the following steps were completed to reduce each matrix to the 105 organizations included in analysis.

1. DFCS-Social Services was combined with DFCS-Office of Family Independence, labelled CC DFCS
2. Early Headstart was combined with CCSD, labelled CCSD
3. Athens Peer Court was combined with the Fanning Institute, labelled the Fanning Institute
4. Legal Aid was combined with the Public Defender's Office, labeled the Public Defender's Office
5. Adult and Non-traditional Education Resources was removed

A summary of each matrix created for analysis is presented in Table 3.

Table 3

Summary of Matrices used in Analysis

	Name of Matrix	**Mode**	**Binary/Multiplex/Valued**
1	Referrals Sent	1	Binary
2	Referrals Received	1	Binary
3	Referrals	1	Binary
4	Case Coordination	1	Binary
5	Joint Programs - Service Delivery	1	Binary

	Name of Matrix	Mode	Binary/Multiplex/Valued
6	Shared Resources - Service Delivery	1	Binary
7	Shared Training	1	Binary
8	Evaluation Activities	1	Binary
9	Whole Service Delivery (SDN): # 3-8	1	Multiplex
10	Fundraising	1	Binary
11	Advocacy	1	Binary
12	Community Awareness/Education	1	Binary
13	Joint Programs - Prevention	1	Binary
14	Shared Resources - Prevention	1	Binary
15	Whole Prevention (PN): #10-14	1	Multiplex
16	Service Delivery without Referrals (SDNwr): # 4-8	1	Multiplex
17	Attributes	2	Valued
18	Benefits and Challenges	2	Binary

Managing non-response. Decisions were made for managing non-response as the matrices were constructed. Network analysis is considered to be sensitive to missing data (Knoke & Yang, 2008) yet, some argue that the degree of sensitivity is overstated (Borgatti, Carley, & Krackhardt, 2006). Specifically the pattern of non-response matters and one non-response may not equal another (e.g., information from a central vs. peripheral network member is more critical to accurately represent the network) (Borgatti, Everett, & Johnson, 2013). This section

discusses the pattern of missing data in this study and the procedures implemented to structure data for analysis.

In the literature, missing data are primarily handled in one of two ways.

1. One option is to remove the missing organizations entirely (i.e., reduce the size of the network from 105 to 80). This method, however, would forfeit meaningful information, as responding organizations did specify interaction with the non-responding organizations.
2. A second option, labeled *reconstruction* (Stork & Richards, 1992), preserves the entirety of collected data and is cited as the most accepted way to manage non-response (Harris et al., 2008). In this method, missing values are entered as a reciprocal relationship, per the input of responding key informants (i.e., transposing the column in an adjacency matrix with the corresponding missing rows; Xmisij = Xji). This method relies on the reasoning that in an undirected network if Actor A nominates Actor B, then Actor B would nominate Actor A. Different strategies would apply in directed networks, where the nature of the relationship measured is directional (e.g., gives advice to). In this study, the questions of referrals were directional, but were asked in two ways (i.e., referrals sent and referrals received). It was therefore possible to still apply reconstruction, using data across these two matrices (i.e., the transpose of Xij in Matrix A, with Xmisji in Matrix B). While a process of reconstruction may not be exactly accurate, it is a more precise approximation than treating the missing response as a non-member in the network (Borgatti, Everett, & Johnson, 2013).

In order to achieve the best approximation of accuracy, reconstruction was implemented in this study. Following Harris et al., (2008) the remaining missing cells in the adjacency matrices (i.e., non-responding organization's interaction with another non-responding organization) were assigned a zero value to represent no interaction. Studies support that a process of reconstruction in cases with less than 30% missing data preserve the primary network statistics (Huisman, 2007; Stork & Richards, 1992) and the extent of missing data in this study falls well within that recommendation.

Pattern of non-response. Fortunately, in this study, response was high from central members in the network. Non-responding organizations were primarily located on the periphery. This remained evident even when the ties for missing organizations were coded as the reciprocal of ties indicated by responding organizations. A rate of 100% reciprocity would result in the maximum representation of non-responding organizations in the network per the information available, and the majority still remained on the periphery consistently across all activities.

Further, none of the non-responding organizations were documented participants per local child abuse protocols or had child maltreatment as a documented part of their organizational mission. This adds confidence that the findings in this study are a close representation of the network, per input from its core members. Still, the effect of missing data is unknown and should be interpreted with caution, particularly considering the principles of complexity regarding non-proportional consequences (e.g., adding one connecting link can alter the properties of a network beyond the equivalent of a singular tie).

In future analysis, the pattern of non-response is itself informative and can be explored further. For example, of the 25 non-responding organizations, six were churches (representing six of the eight churches included in the sample, 75%). Questions of how the presentation of the

study during recruitment influenced participation should be considered and/or how non-responding organizations may perceive their membership/role in the network. Response burden also may have contributed to non-response. In other public organization network studies, a documented barrier has been obtaining participation from often large, central organizations due to their time constraints (will add citation); however, in this sample, central organizations participated. Instead, peripheral organizations may not have viewed the commitment to completing an extensive survey worth their time if they did not view themselves to play a critical role in child maltreatment prevention or response. Although, responses were received from numerous peripheral organizations and this explanation is only one consideration.

Quantitative Analysis

Once the matrices were constructed, quantitative network statistics were computed using UCINET 6.528, Social Network Analysis software (Borgatti, Everett, & Freeman, 2002), and network visualizations were produced using Netdraw 2.141 (Borgatti, 2002). Attribute data were managed and examined in SPSS 22 (IBM, 2013), as well as imported as a corresponding two-mode matrix to the network adjacency matrices. In doing so, non-confirmed ties (i.e., all links between nodes) were evaluated. Again, a confirmed tie requires that organization A and organization B each identify the other as interacting on a task. Confirmed ties are considered more reliable (Provan et al., 2010); however, unconfirmed ties provide meaningful insight about a network (e.g., identifying points of potential for network development) (Provan et al., 2005) and are cited to be an accurate measure of existing relationships (Scott, 2000). As such, they are a primary concern per the purpose of this study and are the focus of reported findings. In addition, unreciprocated ties may be interpreted using other sources of data (e.g., qualitative descriptions of that relationship) and become meaningful when drawing conclusions.

In this study, the primary unit of analysis is the whole network(s) and calculations of overall *cohesion* and *shape* measures inform the first and second research questions. These questions seek to measure how child welfare interorganizational networks are connected per prevention and service delivery tasks. Measures were calculated for each singular activity, resulting in eleven embedded task-specific networks (e.g., referrals and case coordination), as well as the combined SDN, SDNwr, and PN.

Structure in this study is defined by how the agents in the network are connected (i.e., interact on the activities identified). As defined in the data collection procedures, connecting *links* are the operationalized representation of network structure (Wasserman & Faust, 1994). From these links, measures are calculated. Variables chosen for analyses [as measures of whole network *structure*] were size, active nodes/isolates, density, centralization, subgroups, and reciprocity. These measures were conceptually introduced in Chapter 1, but are detailed here in Table 4 regarding their measurement and interpretation. The definitions in the Table 4 are derived from Borgatti, Everett, & Johnson's (2013) *Analyzing Social Networks* text.

In addition to the 'whole' network statistics in Table 4, node-level measures that identify where specific organizations are positioned in the network(s), such as which organizations are most central, which organizations act as bridges between other unconnected organizations (i.e., betweenness centrality), and which organizations are members of cliques/subgroups are referenced in a way that contributes to understanding the network as a 'whole', and may lead to implications that can be more closely examined in future research but are not primary points of analysis in this study.

Table 4

Definitions of SNA Statistics

SNA Statistic	Description	Interpretation
Size	Size was measured in this study by the overall number of *active nodes* in the network. By default, the number of isolates per task was also identified. Size provides an overarching description of involvement on service delivery and prevention activities conducted community-wide to serve children and families, and allows for initial considerations for the degree of interdependence.	Per the number of organizations in the sample's defined boundary, the number of active nodes ranged between 0 and 105 for each network. Higher numbers of active nodes indicated that a greater number of organizations participated in the network.
Density	Density is the proportion of observed ties in the network out of all possible ties. The higher the density score, the higher the likelihood than any randomly chosen tie will exist in the network.	Scores range between 0 and 1.0, and are primarily presented as a percentage in analysis with higher scores indicating higher cohesion.

SNA Statistic	Description	Interpretation
Centralization	Centralization is a network-level measure that represents the variance of centrality scores across nodes in the network. In other words, centralization is "the extent a network is dominated by a single node" (p. 159).	Scores range between 0 and 1.0, with 1.0 being the highest, more centralized score.
Subgroups	Three or more fully interconnected organizations.	Triads are noted to involve different interactions than dyads. For example, participants in a triad have less individuality and less power in comparison to a dyadic relationship. In addition, the presence of a third party can moderate conflict (Simmel, 1983). As such, Krackhardt concluded that "the key to understanding the quality of a tie between two actors can be reduced to asking whether it is part of a strong triad or not" (Krackhardt, 1998, p. 24).
Reciprocity	Reciprocity is the extent relationships or ties are reciprocated between	Reciprocity is reported as a percentage, with higher values indicating higher mutual agreement that a tie exists.

SNA Statistic	Description	Interpretation
	organizations. It is calculated as a proportion by dividing the total number of ties by the number of reciprocated ties. Symmetric pairs include both reciprocated ties, as well as the number of reciprocated zeros, whereby neither organization chose the other.	

In addition to examining network structure per tasks, the examination of challenges and benefits experienced in the network for RQ3 also included a quantitative component. Percentages for each benefit and challenge experienced during interaction on service delivery tasks and separately on prevention tasks, as captured on the survey instrument, were calculated using UCINET 6.528 (Borgatti, Everett, & Freeman, 2002). The two-mode matrices for benefits and challenges within each category were then mapped using Netdraw 2.145 (Borgatti, 2002) to observe how benefits and challenges clustered together, thereby extending the comparison of how benefits and challenges are distinctively experienced when interacting on service delivery tasks versus prevention tasks beyond frequency differences.

Qualitative Analysis

To assist with qualitative data management and analysis, interviews were transcribed verbatim (i.e., both the semi-structured interviews and in-person survey completion) and transcripts were imported into the qualitative software package Atlas. ti 7.5.2 (Scientific

Software Development, 2002). A field journal was also kept that documented critical reflections as interviews were conducted, and additional details about each interview process (e.g., number of key informants, location and description of the interview environment, such as its privacy and/or the pace of work occurring). The entirety of qualitative data were analyzed in this study to explore differences between *prevention* and *service delivery* as a component of RQ2, and the *challenges* and *benefits* experienced in the network, per RQ3.

Qualitative analysis was conducted using the constant comparative method (Glazer & Strauss, 1967) and began with a process of coding guided by the labels – *prevention vs. service delivery* for RQ2 and *challenges* and *benefits* for RQ3. There were no *a priori* codes for examining prevention in comparison to service delivery, and despite the pre-conceptualized challenges and benefits represented on the survey instrument, coding also remained open. Specifically, the categories listed on the survey were not considered to be exhaustive and/or, the experience of any one pre-conceptualized challenge or benefit may have been variably articulated by key informants. In fact, qualitative data were coded prior to quantitative analysis of challenges and benefits, and the categories on the survey instrument were purposefully not referenced during the initial coding phase. The processes of qualitative analyses are separated into stages below and described in more detail while acknowledging that fluidity existed among stages, as data were examined and reexamined in multiple iterations.

Stage 1. Coding was initially constructed by identifying passages within the overarching labels of "challenge", "benefit", and "prevention vs. service delivery". These labels were followed by a descriptive expression that restated verbatim or closely summarized the challenge or benefit experienced (e.g., "Challenge_need to focus on own mission" and "Benefit_they give us balance") or the key informant's reflection on prevention versus service delivery (e.g.,

"Prevention vs. Service Delivery_prevention takes a backseat"). In this initial stage, data were coded "into as many categories as possible" (Glaser & Strauss, 1967, p. 105).

Stage 2. As coding progressed, saturation became apparent whereby similar observations in the data were repeated without additional substantive insight. At this stage, the newly examined data were compared with previously coded categories and were determined to either fit or require a newly constructed code (Glaser & Strauss, 1967). For example, when the following excerpt was first considered, the code "Benefit_*not in it* alone" already existed to describe a sense of camaraderie among organizations. The following passage similarly described not being alone, but more explicitly expressed needing other organizations to get the job done, different than the feeling of camaraderie. Rather than applying the code "Benefit_not in it alone", a new code "Benefit_*can't do it* alone" was instead created.

> *[Relationships] help us to do our work because kids do better [in this service setting] when families are supported. So, any way that they [other organizations] can support families outside of what we can do [is good]. Again, we are always mindful that our primary part is [limited and] we need the support of those in the community (P 42).*

While data were already being compared in this stage, coding remained open in an effort to reflect the data as closely as possible, and to continually capture points of distinction for further consideration. The full body of qualitative data was analyzed in this way before moving to stage three.

Stage 3. The next stage of coding moved beyond considering the expressions of individual passages to the identification and clustering of similar properties across codes (Glaser & Strauss, 1967). Codes were examined through the use of filters in Atlas. ti 7.5.2 (Scientific Software Development, 2002)– separating coded text from the full transcripts to observe patterns

and commonalities. During this review, codes were merged in Atlas. ti into clustered categories – each labeled with a summarizing description. Examples of transitioning initial codes into clustered categories are listed in Table 5.[5]

Table 5

Examples of Merging Codes

Stage 1. Initial Code	**Stage 3. Clustered Category**
Challenge _trusting someone new Challenge_who to call when people leave Challenge_*we* have to train *their* new staff	Challenge_ Turnover
Challenge_elected officials change the course Challenge_mission drift to match politics Challenge_political uncertainty stunts our action	Challenge_Politics
Benefit_asked to be at the table Benefit_recognized as 'subject matter expert' Benefit_enhanced community buy-in to our program	Benefit_Heightened Public Profile[6]
Benefit_avoid blaming Benefit_humanized relationships	Benefit_Empathy for Each Other

[5] Only a subportion of codes from stage 1 were included in Table 5 in order to demonstrate the analysis process. These codes are not fully inclusive of *all* codes that comprise each category.
[6] This category was originally named Benefit_Reputation during qualitative coding and was renamed Benefit_Heightened Public Profile to align with the survey instrument after referencing the two sources of data together.

During this stage, some categories seemed similar upon first consideration, but were determined to have distinctions to warrant continued separation. For example, the clusters labelled “Challenge_Different Professional Perspectives” and “Challenge_Different Agency Goals” were considered for their similarities, but remained separate categories under the reasoning that organizations could have the same goal and still negotiate different professional perspectives on how to achieve that goal. More explicitly, the codes for differences in professional perspectives described differences among organizations in definitions (e.g., what is ‘child well-being’?), ideologies, and case recommendations, whereas, the challenge of different agency goals described the challenge of combining missions and identifying points of mutual benefit.

After clustering was conducted through strict reference to the qualitative data, clustered categories were compared and considered in relation to the survey list of benefits and challenges to result in a final compilation. The categories listed on the survey were determined to 1) be supported by the qualitative data; 2) found to exist in combination with other categories or in an extended form per the qualitative data; or 3) found to be either minimally, or not, supported by qualitative data and therefore excluded. This process is detailed in Figures 12 and 13 in Chapter 4. When the qualitative data aligned with a singular category listed on the survey instrument, the labels from the survey instrument were applied for consistency.

The final version of identified benefits and challenges reflects the product of expanding, collapsing and excluding categories from the survey per the qualitative data, and adding emergent challenges and benefits into a final version that represents a more informed summary of challenges and benefits experienced in the network.

Throughout, memos were used in Atlas. ti 7.5.2 (Scientific Software Development, 2002) to document fleeting thoughts and reactions to the data during each stage of coding, and were closely referenced during the clustering stage. In the end, all identified challenges and all identified benefits were considered for common themes. The results presented in Chapter 4 include the identification of each challenge and benefit, as well as common themes, but do not detail the ways in which benefits or challenges interrelate or their place in relation to other points of data (e.g., contextual elements). Each was found to have depth and diversity in construction, functional properties, and related implications that can be examined through further analyses, but these intricacies are beyond the scope of this study.

Notably, the process of analysis for 'Prevention vs. Service Delivery' unfolded slightly differently. Overarching contrasts emerged in the initial process of coding, which were then examined more closely for subcomponents instead of going through the process of clustering initial codes. For example, the "No Funds vs. Funded" and "Exploratory vs. Set Criteria" contrasts were immediately evident. Subcomponents of these contrasts (i.e., "Hard sell vs. Pulls at Heartstrings" and "less-defined vs. well-defined outcomes measures" respectively) were identified as component parts after their overarching contrasts were considered saturated.

Chapter Summary

This chapter reviewed the methods applied in this study, beginning with the study's research design and detailed the processes of sampling, data collection, and data analysis. Chapter 4 presents the study's findings.

CHAPTER 4

RESULTS

This chapter presents the results of this study. It begins with a descriptive summary of the organizations that comprised the sample and then details the analysis of structural properties across the 11 task-specific networks. An examination of the similarities and distinctions between the PN, SDN, and SDNwr follows. Lastly, the benefits and challenges of network interaction are presented and organized to reveal common threads.

Descriptive Summary of Organizations

A full summary of descriptive variables is provided in Table 6 to detail the characteristics of participating organizations (i.e., the component parts of the network). The majority of organizations were non-profit (65%), followed by public (30%), and a small portion of for-profit organizations (5%). Most were well-established in longevity, with 65% being more than 20-years-old. Yet, 10% were comparatively new (i.e., less than 5 years). Almost half (42%) were small in size (i.e., less than 10 employees), and 13% were much larger (i.e., more than 150 employees).

The use of volunteers varied widely. Twenty-six percent of organizations used fewer than 10 volunteers annually, while 24% used more than 150 volunteers annually. Eighty-three percent of organizations reported that administration spent less than 50% of their time working across organizations, compared to working on internal management. There was also variation in the tenure of executive directors. Ten percent of organizations had a new director (i.e., less than a year). When combined with directors who had been in their positions between one and three

years, this percentage jumped to 38%. Longer executive tenure was also observed in the sample; specifically, 33% of organizations had the same director in place for more than 10 years.

Table 6

Descriptive Summary of Organizations (n=80)

Variable		**n**	**%**
Sector			
	Public	24	30
	Non-Profit	52	65
	For-Profit	4	5
Age of Organization			
	Less than 5 years	8	10
	6 to 20 years	20	25
	More than 20 years	52	65
Number of Employees			
	Less than 10	34	43
	11 to 50	23	28
	51 to 150 employees	13	16
	More than 150 employees	10	13
Number of Volunteers			
	Less than 10 volunteers	21	26
	11 to 50 volunteers	27	34
	51-150 volunteers	13	16

Variable		n	%
	150 volunteers	19	24
External Administration			
	Less than 10 percent	18	23
	10 to 50 percent	47	60
	51 to 90 percent	10	13
	More than 90 percent	3	4
Tenure of Executive Director			
	Less than a year	8	10
	1 to 3 years	22	28
	4 to 10 years	23	29
	More than 10 years	26	33

Network Boundaries

The range of organizational characteristics also included breadth of professional fields and primary missions represented. Specifically, the organizations identified for inclusion in this study spanned orientations in education (e.g., schools, mentor programs, and literacy programs), law enforcement (e.g., police departments, juvenile justice, probation services), health (e.g., hospitals, clinics, forensic nurse examiners), law (e.g., courts and legal services), religion (e.g., churches), and a comprehensive range of social services focused in mental health, employment, financial support, housing, food, aging, domestic violence, disabilities, recreation, and others. This breadth strongly supports a conception of child welfare practice as a multidisciplinary

intervention process, and speaks to the importance of understanding boundaries, roles, and responsibilities among contributing organizations in the field.

Note that while the diverse representation discussed here does reveal intersectionality among disciplines, it is not fully distinguishable. For example, while organizations may be oriented in a primary field, not all organizations have a singular focus, nor are all organizations comprised of singular professions (e.g., social workers and educators are employed in the school district). Therefore, while collective participation among disciplines is informed by this study, it is likely more nuanced than this data can fully reveal. Reference the full list of organizations that comprised the sample in Appendix G.

Findings per Research Questions

RQ 1: What is the Structure of Interorganizational Relations Involved in the Prevention of Child Maltreatment and Service Delivery Networks?

After establishing the overall network boundary, identifying the structural properties including the size, density and centralization of the resulting network(s) was the focus of RQ1.

The data analyzed to answer RQ1 were derived from the traditional network question on the survey instrument, whereby organizations indicated whether they interact with other organizations on each identified task. These data were constructed into the adjacency matrices as detailed in Chapter 3 for analysis. The 11 task matrices that were individually analyzed, included: *referrals, case coordination, joint programs for service delivery, shared resources for service delivery, shared training, evaluation, fundraising, joint advocacy, education/awareness, joint programs for prevention,* and *shared resources for prevention.* Analyzing each as a separate network revealed the task-specific ways organizations interact, thereby adding more depth of understanding regarding the explicit manner in which organizations work collectively to serve

children and families, compared to what an 'any link' representation of the network would provide. Specifically, an 'any link' network only represents whether or not 'any link' exists, and does not distinguish among types of links. By separating tasks for analysis a more comprehensive picture is constructed of local service delivery and prevention efforts.

Number of ties and active organizations. The *referral* network was found to be the largest, with 2,051 ties. It was followed in size by *education and awareness* (737 ties) and *case coordination* (716 ties). Interactions around *evaluation activities* (289 ties) and *fundraising* (211 ties) were the smallest[7].

The number of *active* organizations versus *isolates* was high across all activities. This lends support to the idea that the organizations identified during boundary specification were indeed participating members in the network, rather than an inflated representation. Notably, they participated in a variety of ways. Almost all organizations, 104 of 105 (99%), were active in the *referral* network. Ninety-one percent of organizations participated in the *education and awareness* network, and 88.5% of organizations participated in both *joint programs* and *shared resources* for service delivery. The fewest number of active organizations were in the *fundraising* network (74). Yet, this rate of participation still reflects that 70% of organizations interact around fundraising, reinforcing that none of the 11 activities included in analysis were occurring in isolation, but rather with high interdependence.

Full details on the *number of ties*, *active organizations*, and *isolates* for each activity are presented in Table 7. Notably, service delivery and prevention activities were mixed in size. Specifically, when referrals were not considered, interaction around the five remaining service delivery activities and the five prevention activities occurred at similar rates (density = .11 and .09 respectively). Contrasting analyses will be discussed in the section for RQ2 to explore

[7] The ties reported include unconfirmed ties and were measured after reconstructing missing data.

similarities and differences between the ‘whole’ prevention and ‘whole’ service delivery network(s) more closely.

Table 7

Network Size and Node Activity, per Activity

Type of Activity		**Number of Ties**	**Active Nodes**		**Isolates**
			n	**(%)**	
Referrals	Service Delivery	2051	104	(99.1)	1
Education/Awareness	Prevention	737	96	(91.0)	9
Case Coordination	Service Delivery	716	90	(85.7)	15
Joint Advocacy	Prevention	504	93	(88.5)	12
Joint Programs	Service Delivery	504	93	(88.5)	12
Shared Resources	Service Delivery	495	93	(88.5)	12
Shared Training	Service Delivery	412	89	(84.7)	16
Shared Resources	Prevention	354	87	(82.8)	18
Joint Programs	Prevention	342	87	(82.8)	18
Evaluation Activities	Service Delivery	289	81	(77.1)	24
Fundraising	Prevention	211	74	(70.4)	31

Measures of cohesion. The structural properties of each task-specific network were explored in this study through the use of multiple measures of network cohesion including: density, centralization, average degree centrality, and subgroups. Detailed findings for each are presented below.

***Density*.** Density is perhaps the simplest way to measure cohesion and is the proportion of ties found to exist in a network out of all possible ties (Borgatti, Everett, & Johnson, 2013). Analysis identified the referral network to be the densest of the 11 activities measured (.188). In other words, approximately 19% of ties were found to exist. Considering the size of the network (n = 105) and given that not all organizations in the network directly interface with client populations, the density score for referral activity was relatively high; whereas, the density scores for all other activities were relatively low. The next highest categories for density were similar – *education and awareness* (6.7%) and *case coordination* (6.6%). Only 5% or fewer ties were found to exist in the remaining eight of the 11 categories of activity. The lowest was *fundraising*, wherein only 1.9% of ties were found to exist out of all possible ties.

Notably, density is difficult to interpret across network studies and should be done so with caution. For example, deciphering an optimal density is contingent on the type of relation being measured and within what context. Network relationships considered to be negative, such as holding a grudge or contracting a virus, would have an ideal density score of zero. Further, it is difficult to compare networks of different sizes. While calculating density is a more informative choice for comparison versus reporting the number of ties alone, given that it is a proportion, Borgatti, Everett, and Johnson (2013) noted that "densities are almost always lower in large networks than in small networks" (p. 151), as maintaining relationships with all members in a network of 10 organizations is more feasible than maintaining relationships will all members in a network of 100 organizations.

Despite these challenges in interpretation, by including embedded networks in the design of this study the density scores have particularly informative value. Their differences distinctly highlight the extent of one type of activity conducted across organizations relative to others and,

in this application, density scores identify stark contrasts. For instance, the extent of referral activity is almost three times greater than case coordination activity, indicating that referrals are predominantly sent and received without additional means of coordination. A second notable distinction is the strikingly low density scores in the *joint evaluation* and *fundraising* networks which were shown to be minimal relative to other activities.

To add to the interpretation of density scores, while the differences appear small numerically, bootstrap paired sample t-tests were conducted in UCINET 6.530 (Borgatti, Everett, & Freeman, 2002) to compare the mean densities between activities to test for "differences in the probability of a tie of one type and the probability of a tie of another type" (Hanneman and Riddle, 2005, p. 18). Analysis revealed significant differences. For example, the density of *referral* activity among organizations was significantly greater than the densities of all other activities, *case coordination* was significantly greater than *shared training (*avg bootstrap difference = 0.027, 95% boot-strap CI [0.012, 0.043], $p < .001$) and evaluation activities (avg bootstrap difference = - 0.038, 95% boot-strap CI [0.022, 0.055], $p < .001$), and *shared resources for service delivery* was greater than *shared resources for prevention (*avg bootstrap difference = - 0.012, 95% boot-strap CI [-0.024, -0.001], $p < .05$*)*. See Appendix H for full results for bootstrap paired sample t-tests between network tasks.

***Centralization*.** While density scores revealed the extent of interaction, they do not reveal the pattern of that interaction. Centralization was therefore examined to discern the extent to which the ties in each network were organized around a central or few central organizations. Despite having almost identical densities, the network for *case coordination* was more centralized (.342) than the network for *education and awareness* (.213). The *referral* network had the highest centralization score (.412), while the lowest was found in the network for *shared*

resources for prevention (.113). The *shared training* network also had a notably low centralization score (.195) considering its role in disseminating consistent messaging and evidence-based practice, which is evidenced to be a strength of more centralized network structures according to Valente, Chou, and Pentez (2007).

Table 8

Measures of Cohesion, Per Activity

Type of Activity	**Density**	**Centralization**
Referrals	**0.188**	**0.412**
Education/Awareness	0.067	0.213
Case Coordination	0.066	0.342
Joint Advocacy	0.046	0.186
Joint Programs Service Delivery	0.046	0.245
Shared Resources Service Delivery	0.045	0.187
Shared Training	0.038	0.195
Shared Resources Prevention	0.032	**0.113**
Joint Programs Prevention	0.031	0.153
Evaluation Activities	0.026	0.148
Fundraising	**0.019**	0.155

Average Degree Centrality. To reveal the degree of interconnection conducted by organizations on specific tasks, the average degree centrality in each network is presented in

Table 9.[8] These scores provide a more digestible understanding of cohesion by communicating the degree of interaction with less interference by the size of the network (Borgatti, Everett, & Johnson, 2013). For example, organizations were found to send or receive referrals with an average of 20 organizations in the network (*SD* =18.71, *Md* = 13). On the low end, organizations participated in fundraising with an average of two organizations (*SD* = 5.73, *Md* = 0). Each network had a positively skewed distribution of activity at the node-level, with standard deviation scores exceeding the mean scores across all networks, except referrals. While the median scores were primarily low (i.e., 1, 2, and 3), the range of degree centrality scores in each network had high maximum values. For example, at least one singular organization participated with 86 different organizations on *referrals*. In addition, while organizations *coordinated cases* with an average of seven other organizations, the maximum value was 58. In other words, at least one organization reported coordinating cases with 58 different organizations. The lowest maximum value was in the evaluation network (28).

Table 9

Summary of Average Degree Centrality, Per Activity

Type of Activity	**Mean**	**Median**	**Std. Deviation**	**Variance**	**Min**	**Max**
Referrals	19.53	13	18.71	350.12	0	86
Awareness/Education	7.02	3	11.85	140.35	0	78
Case Coordination	6.82	3	10.11	102.21	0	58
Advocacy	4.80	1	9.65	93.12	0	68

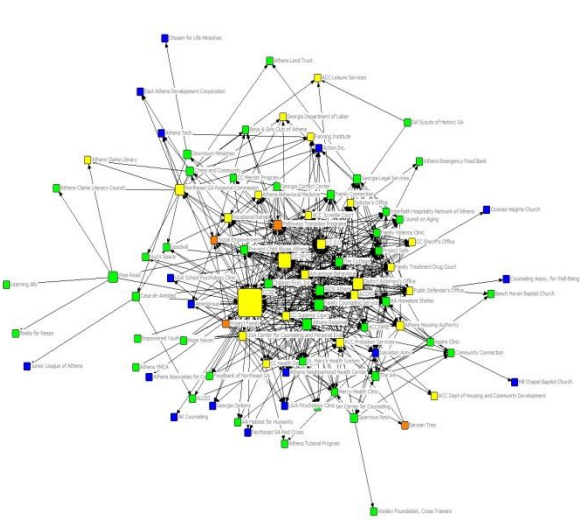
[8] The average degree centrality presented is the average out-degree centrality score. Despite being theoretically undirected activities, ties were not always reciprocated.

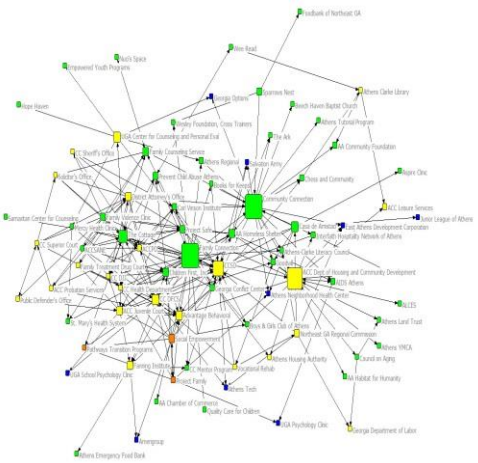
Type of Activity	Mean	Median	Std. Deviation	Variance	Min	Max
Joint Program Service Delivery	4.80	2	6.89	47.49	0	49
Shared Resources Service Delivery	4.71	2	6.71	44.99	0	43
Shared Training	3.92	1	6.38	40.71	0	37
Shared Resources Prevention	3.37	1	7.32	53.64	0	49
Joint Program Prevention	3.26	1	5.93	35.12	0	45
Evaluation	2.75	1	4.74	22.42	0	28
Fundraising	2.01	0	5.74	32.89	0	48

Subgroups. A final component of analysis for RQ1 included a brief examination of subgroups. By size alone, data revealed a certain degree of interdependence regarding fundamental direct client services, such as *case coordination*, *joint programs for service delivery*, and *shared resources for service delivery*. Yet, similar levels of interdependence in *evaluating* outcomes of this collective work, or *fundraising* for collective work were not indicated. To explore this further, the *case coordination* network and *evaluation* network were chosen for comparison. This choice relied on the assumption that if organizations coordinate cases, they likely have a mutual interest in related outcomes. The substructures of each network were considered in the form of sole symmetric ties which are reciprocated relationships that are not an edge in a triad and simmelian ties which are ties found among three fully and reciprocally interconnected organizations. In Figure 4, the full network for *case coordination* and *evaluation* are presented, followed by their sole symmetric and simmelian ties together (i.e., all reciprocated relationships) and then simmelian ties only for comparison.

Case Coordination Network

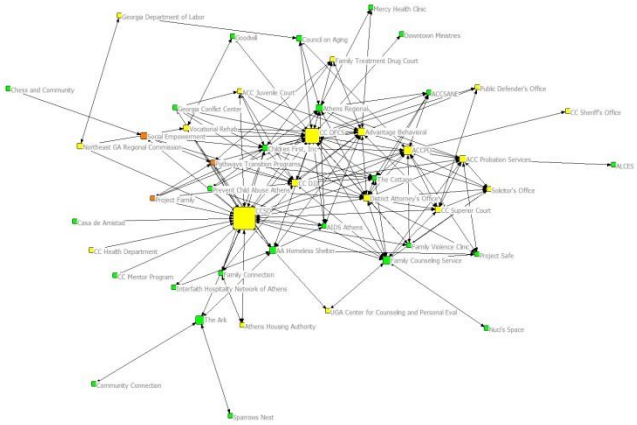
Evaluation Network

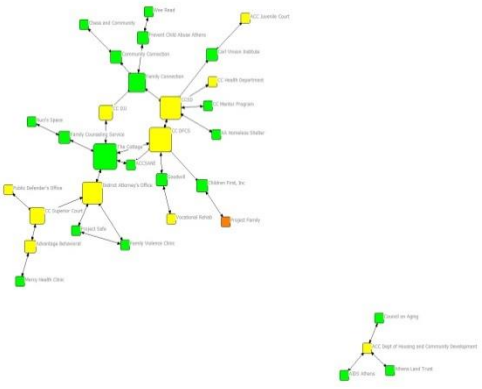




Whole Network (pre-reconstruction)

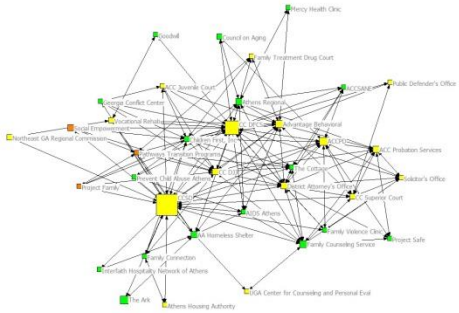
Whole Network (pre-reconstruction)

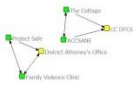




Simmelian and Sole Symmetric Ties

Simmelian and Sole Symmetric Ties





Simmelian Ties (50 Fully Interconnected Cliques)

Simmelian Ties (2 Fully Interconnected Cliques)

Figure 4. Substructure comparison of case coordination and evaluation activity.

Note. Nodes are color-coded per sector-type (yellow = public; green = non-profit; orange = for-profit) and sized by betweenness centrality scores since each task involves the transfer of information. A spring-embedded algorithm was applied.

As is visually evident in Figure 4, when the networks are filtered to their sole symmetric and simmelian components, the evaluation network reduces dramatically. Even more dramatic is the comparison at the level of simmelian ties, in which fully interconnected triads are much more extensive in the *case coordination* network which had 50 subgroups of three or more fully interconnected organizations compared to the evaluation network with only two subgroups of three or more fully interconnected organizations.

Examined together, results for RQ1 tell a story of how organizations work collectively to serve children and families, including the degree to which organizations participate around specific tasks and their cohesion. The structural properties among tasks differed greatly. For example, a few notable findings included the dominance of the referral network, significant differences among densities, and minimal substructure in the evaluation network. These and other findings will be discussed in detail in Chapter 5.

RQ 2: How does Structure Differ and/or Overlap between Prevention and Service Delivery Tasks?

RQ 2a. Part one of the second research question asks what structural distinctions were evident between prevention and service delivery. Recall that the service delivery network as originally conceived was separated for analysis as two networks – one with referrals and one without referrals. Again, *referrals* were separated during this stage due to the immense scale of referral activity observed, relative to other activities. Without this separation, *referrals* may have overshadowed the remaining service delivery tasks and resulted in missed implications. The *prevention network* (PN), *service delivery network* (SDN), and *service delivery network without*

referrals (SDNwr) are displayed in Figure 5 for comparison (refer to Chapter 3 for descriptions of the composition of each). The nodes in each sociogram are not sized or labeled, but kept uniform to reveal overall structural differences. A spring-embedded algorithm was applied to place "those with smallest path lengths to one another closest in the graph" as a way to improve upon a random configuration (Hanneman & Riddle, 2005, p. 4).

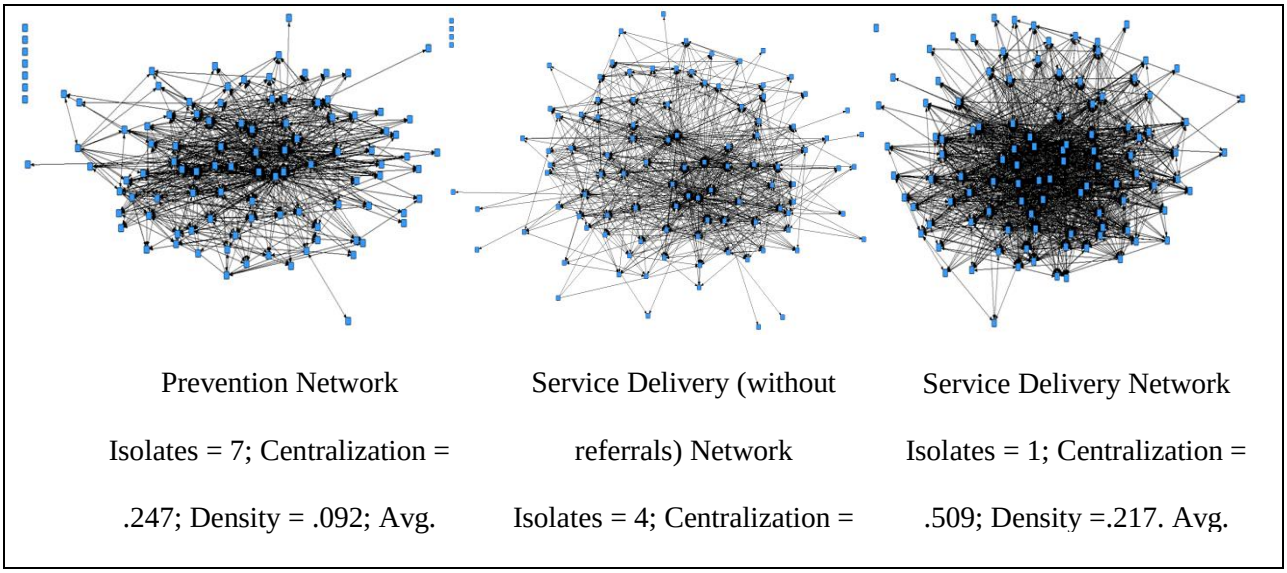


Figure 5. Structure of prevention, service delivery without referrals, and service delivery networks.

Active nodes and density. Each network had few isolates, indicating that organizations were not working in silos of either prevention or service delivery, but were instead involved in both. Specifically, the PN and SDNwr each included five categories of activity and the extent of interaction was similarly matched. The SDNwr had only a slightly higher density (0.11) than the PN (0.09). When referral activity was included, the density of the full SDN more than doubled, wherein 21% of all possible ties were observed to exist.

Centralization. Despite the PN and SDNwr being similar in size and density, additional measures of cohesion revealed differences. Again, density does not describe how ties are distributed. While the density scores of the PN and SDNwr were similar, both service delivery networks (i.e., *with* and *without* referrals) were highly centralized (.509 and .464 respectively) compared to the PN (.247). As visually evident in Figure 5, service delivery activity, with and without referrals, is sparse on the periphery, while prevention activity is dispersed more evenly throughout. It is expected then that the network for prevention and networks for service delivery, though having similar actors and being of similar size, may function very differently per their structure.

Reciprocity. Another notable distinction was found in the reciprocity rates between activities for service delivery compared to prevention. Reciprocity scores were similarly low across prevention activities and only slightly higher among service delivery activities. These differences were small, but their consistency reveals higher mutual recognition between organizations of relationships specific to service delivery and less mutual recognition of relationships specific to prevention. The highest reciprocity was found in the *case coordination* network (30%); the lowest in the *joint advocacy* network (11%). All reciprocity scores are listed in Table 10 for review.

Table 10

Reciprocity Rates, per Activity

Activity Category	**Activity**	**Reciprocity %**
Service Delivery	Case Coordination	30
	Shared Training	20

Activity Category	Activity	Reciprocity %
	Joint Programs Service Delivery	18
	Shared Resources Service Delivery	16
	Evaluation Activities	14
Prevention	Joint Programs Prevention	13
	Education/Awareness	13
	Shared Resources Prevention	12
	Fundraising	12
	Joint Advocacy	11

Note. Scores were calculated with network data pre-reconstruction to not over inflate the percentage.

Similarities and contrasts. Qualitative data were also examined and allowed for a fuller understanding of prevention and service delivery, in ways that would have been missed with network data alone. Figure 6 summarizes these findings and details the four contrasting themes identified between service delivery and prevention that emerged in the qualitative data, as well as the element of similarity described. Qualitative data were not analyzed with the expectation of separating *referrals* for consideration and themes are thus not presented specific to this distinction, but rather speak to the entirety of service delivery and entirety of prevention. Codes from *Atlas. ti* were kept untouched in this presentation of findings and are represented in Figure 6 to reflect the direct expressions of participants (Corbin & Strauss, 2008). As described in more detail in Chapter 3, the full body of qualitative data was analyzed together to derive these findings unless otherwise stated. Distinctions among qualitative data – either from the semi-structured interview or the in-person survey completion – are identified in the presentation of

findings when the distinction is relevant to how meaning was derived. Quotes from key informants follow Figure 6 to support the development of each theme.

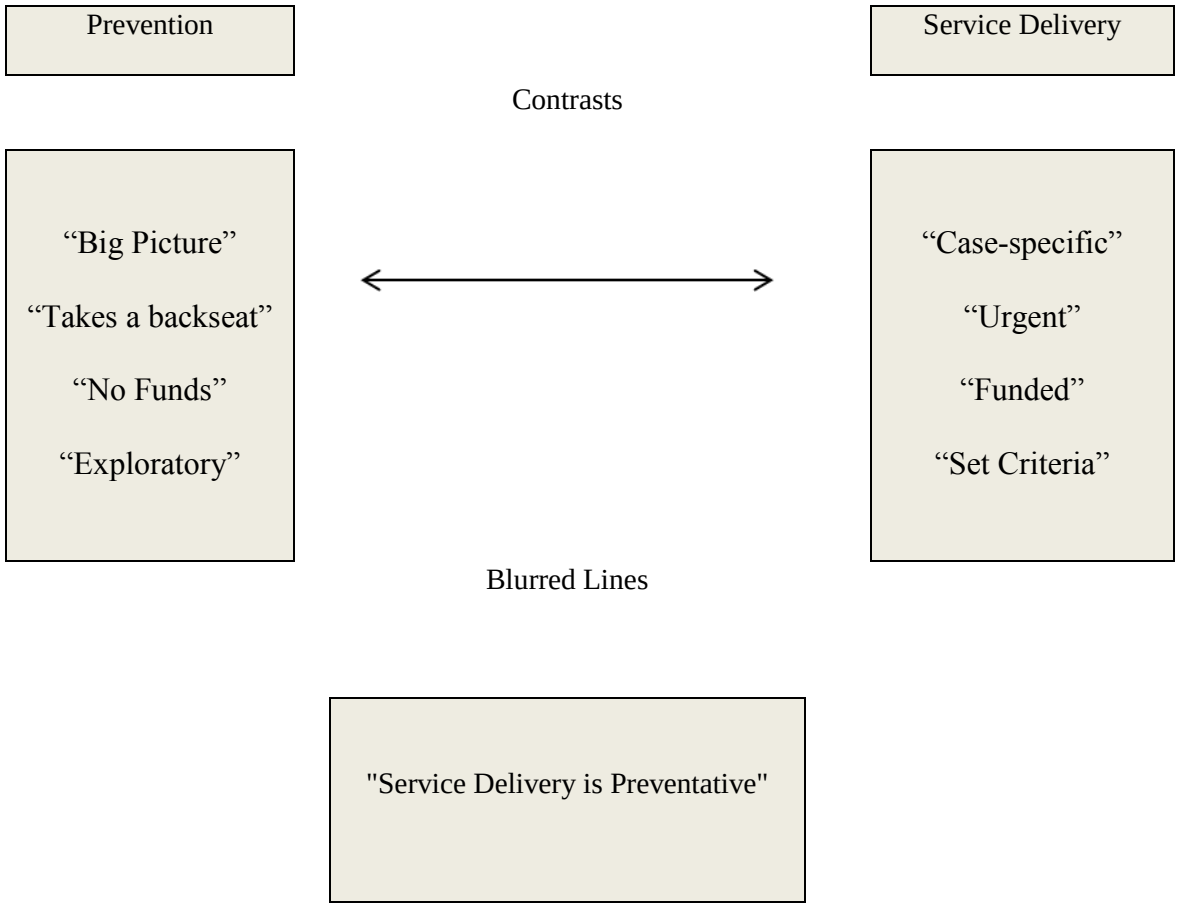


Figure 6. Prevention and service delivery contrasts and similarities from qualitative data.

Contrasts. The first of four overarching contrasts – the **"Big Picture vs. Case-specific"** contrast – conveys a difference in scope between prevention and service delivery.

> *Service delivery is always going to be-case specific. And, it's going to be a cloud. It's going to be all about case coordination, really - and collaborating and the joint services that you're offering. Yeah, umm, and with prevention, it's more, it's not case specific, it's*

> *not necessarily urgent, it's not driven by direct client's services; it's driven more by the big picture. And how we can - what else can we be doing other than providing the direct services to try and solve the problems.* (P11)

Case-specific prevention efforts were also notably observed in the data, yet key informants regularly referenced "community" when discussing prevention compared to the individual client/family orientation of service delivery, using language such as "community-at-large". This did not occur in reverse. In other words, service delivery was not described in 'community-wide' terms, rather only in case-specific applications.

A second observed contrast – the "**Takes a backseat vs. Urgent"** contrast – revealed a difference in how prevention and service delivery are prioritized and enacted in practice.

> *Prevention always seems to take a backseat to service delivery. Umm, and that's kind of the emergency response sort of mode we always seem to be in.* (P16)

More specifically, while key informants communicated that there is value in prevention efforts, they described surrendering to a crisis-orientation, per their time and resources.

> *I would love to spare [time for prevention], everyday there are half a dozen initiatives, ideas, meetings, trainings that I think that would be a great idea, that would help outcomes for kids and families and I just simply have no time to put that in motion. Our work is a lot of - you know- putting out fires.* (P42)

Similar descriptions were echoed in prevention efforts at the client-level, as well.

> *Typically, it is very crisis-driven, you know. And, the whole prevention piece does take a backseat. A simple example is if you and I have a shared client and we have a hint that there might be some stuff going on, the best strategy is for you and I to call a meeting together with that client and say, "we hear some rumbling - some things going on- how*

could we address this?" Typically you and I are too busy to do that, so we wait till there is an absolute crisis. (P26)

Within the "**Takes a backseat vs. Urgent"** contrast, and similar to the "big picture" distinction of the first contrast, the following key informant articulated an immediate versus long-term orientation, indicating that professionals find themselves between a 'rock-and-a-hard-place' trying to balance the urgency of service delivery and the potential significance of prevention efforts.

If I'm the county DFCS director [this key informant was not] *and I've got kids in danger then I have to do something about that before I do something about recruiting any foster homes or a prevention activity, even though I might recognize that if I did the other* [the prevention activity] *it might keep 5 kids from being in a [foster care] situation.* (P43)

The lack of time and resources described by key informants foreshadowed a third contrast – the **"No funds vs. Funded"** contrast. Consistently, key informants described limitations in their overall capacity to work on prevention efforts compared to service delivery efforts, as illustrated by the following two quotes:

We don't get funds for prevention. I mean we do- but it's not enough. (P49)

It feels like to me that the community spends a great deal more effort to deliver social services than prevention activities. And that's fine because that's where funding is. I mean you don't get – no one pays you to do one ad campaign. (P16)

Along these lines, key informants specifically referenced that infrastructure exists for service delivery funding, yet not for prevention.

You know, I think in the service delivery it's, you know, it – the practical parts of funding and all those things are always there. (P38)

A lot of it is resources. Because public funding and private funding tends to go toward crisis, you know. The child is being abused, you got to do something about that child. (P43)

A subcategory of this contrast pointed to a difference in financial resources resulting from perceptions of community donors, labeled as "**Hard sell vs. Pulls at Heartstrings."**

You know, because there's just a long tradition in the United States of ah those in a better financial standing reaching out and serving other people. And it – it - it can be very, very confusing when you try to convince people that the long-term, more difficult approach of ah helping to build a community from within is better than giving things away, because it brings a lot of satisfaction to those who are giving. (P12)

If you're the agency that's serving children who have been abused or injured, hungry or whatever and you're doing the direct service then it's that pulls at the heartstrings of the donor in a much more subliminal way. (P43)

While frequency counts of codes were not methodically included in analysis, as "a count conveys that all codes should be given equal emphasis and it disregards that the passages coded may actually represent contradictory views" (Creswell, 2007, p. 152), the fourth contrast – the "**Exploratory vs. Set Criteria"** contrast – was the most prevalent. This contrast speaks to a distinct difference in the implementation process of prevention versus service delivery activities. It is exemplified by the following two explanations by key informants when asked to reflect on differences between the realms of prevention and service delivery.

Service delivery in my mind is a little more, um, easier to define. So there's a program ---- perhaps there are services that are delivered as a result of that program - program has criteria and A equals B equals C equals D. (P28)

> *Services are more about, umm, the specifics of the case and they're, they're a little bit more limited in the sense that, or constrained in the sense that you have policies, contracts, MOUs*[9]*, you know - things to follow and they do too [other organizations] as far as their, uhh, their policies. And so, the preventative aspects are a little bit more exploratory where we can kind of talk about what we'd like to see, instead of just the constraints of what we have.* (P38)

This contrast extended to include descriptions of "less-defined vs. well-defined outcome measures" between arenas. For example, one key informant reflected:

> *For the service delivery, it's more spelled out. And you can be held accountable. For the prevention stuff it's not. Like it's just willy -- for us it's willy-nilly… So we're just kind of - with the prevention piece- we're kind of making it up as we go.* (P49)

Another key informant stated:

> *I think what is weird on the prevention side for us is we are so used to measurable outcomes; we are so used to there being well-defined ways that we do things. And prevention's a lot looser and it's, it's like how many people did you see, not really what sort of outcome did you have from that individual.* (P55)

Various explanations for this distinction were articulated, for example one key informant spoke to specific hurtles of measuring prevention, stating:

> *It's very difficult to prove a negative. How do you ever prove that something didn't happen because of what you did.* (P66)

Others described a higher degree of complexity of approaching prevention, for example:

> *I think service delivery is just -- it's more straightforward from where we come from because this is the service needed. This is what we can do, you know. As far as*

[9] MOU stands for memorandum of understanding whereby two or more parties make a formal agreement.

prevention, everyone has ideas about what's best, and you know, then each organization has different abilities to promote those different ideas. (P58)

Similarity. While clear distinctions between prevention and service delivery activities were conveyed, a contrasting theme emerged in which key informants expressed that service delivery and prevention are inseparable. This similarity is succinctly exemplified by the statement,

I have a tough time teasing out what, what's a preventative measure and what's a service. (P23)

Another key informant expressed:

Our program is geared toward [service delivery goal], or if you prefer, the prevention of [service delivery goal], and also poverty prevention, because we view what we do as having very long-term consequences toward preventing poverty. (P14)

This key informant went on to explain:

For us, service delivery and prevention is really kind of rolled into one; it's one in the same, because, and again, we come at it from a holistic stance. (P14)

Even when completing the survey instrument, key informants would sometimes mark the same interaction as both a service delivery activity (e.g., case coordination) and a prevention activity (e.g., advocacy) with explanatory comments, such as:

Communicating about these cases, that's what helps prevent the future cases from occurring. (P45).

Another clarified:

A lot of our tasks for service are looked at as prevention. (P56).

In one instance when the key informant(s) was asked to clarify their interpretation of multi-organizational case staffings as both *case coordination* under service delivery and *joint advocacy* under prevention, the key informant described:

> [Staffing cases is] *joint advocacy in regard to dealing with clients and what is in their best interests. And for the community [also] because the mdt [multidisciplinary team] for example…when we staff these particular cases there's always discussions about safety, prevention, how to make things better…and we also do a child fatality review that basically has the same set of partners….we look at why did it happen and ways of preventing.* (P61)

In this light, parsing out the outcomes that emerge when organizations interact is not dichotomized. Rather, interactions may simultaneously achieve case-specific goals and improve future responsiveness; they may alleviate an immediate need and prevent a future need. The dually marked interpretations may also help explain the similar densities between the PN and SDNwr, yet the extent that this occurred cannot be fully determined.

RQ2b. The second component of RQ2 concerns how the network for prevention activity interacts with the network for service delivery. Despite being similarly matched in participation, the position of organizations varied across the networks. A visual display of betweenness centrality scores highlights these differences. Specifically, the CCSD had a strikingly high betweenness centrality in the SDNwr, followed by Family Connection, CC DFCS, and the Athens Area Foodbank. CCSD and Family Connection maintained high betweenness centrality scores in the full SDN, CCSD again had the highest score; however, the District Attorney's Office and Community Connection emerged in the full SDN, indicating that they play a

prominent role in referral activity, yet less so in the delivery of services when referrals are removed.

In the PN, the Athens Area Community Foundation and the Chamber of Commerce had among the highest betweenness centrality scores, yet were located on the periphery in both service delivery networks. Family Connection had a notably high betweenness centrality score across all three networks. Figures 7a, 7b, and 7c display how the positions of organizations varied. The nodes in Figures 7a, 7b, and 7c are sized by betweenness centrality, with larger nodes representing larger betweenness centrality scores. The organizations are color-coded across each network for comparison.

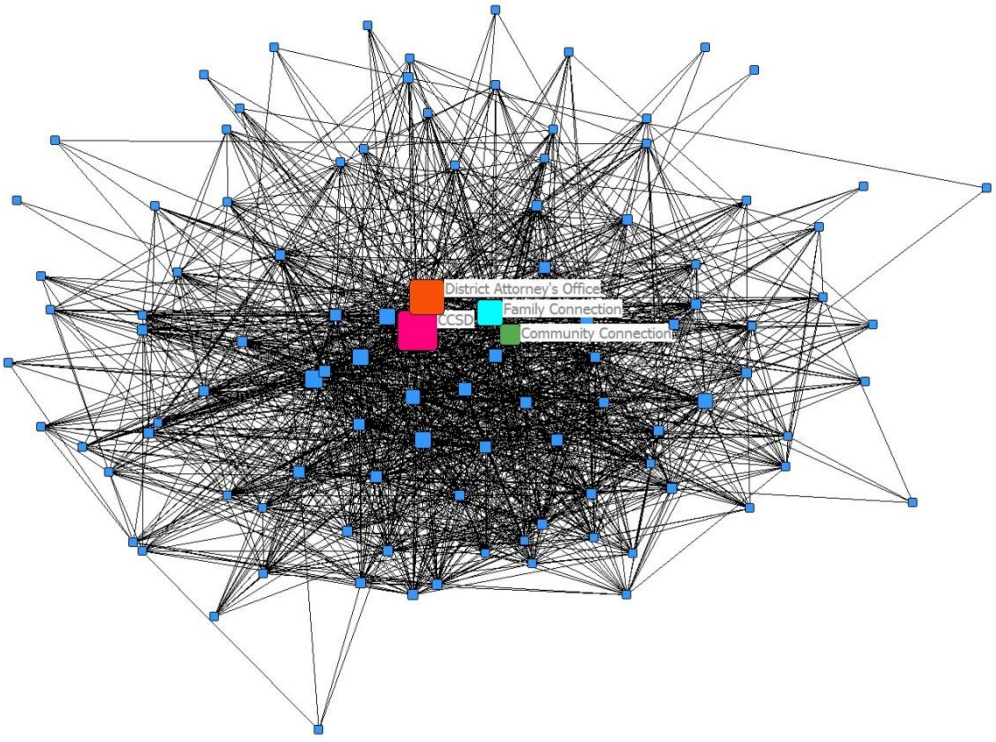


Figure 7a. Betweenness centrality comparison of organizations in the service delivery network

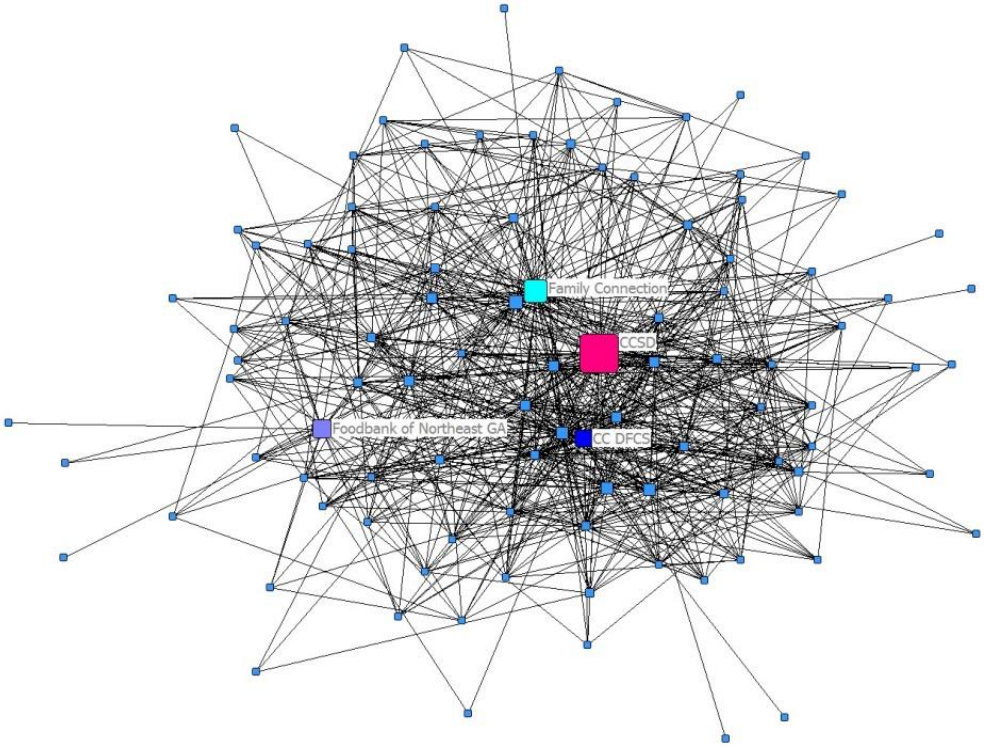


Figure 7b. Betweenness centrality comparison of organizations in the service delivery without referrals network

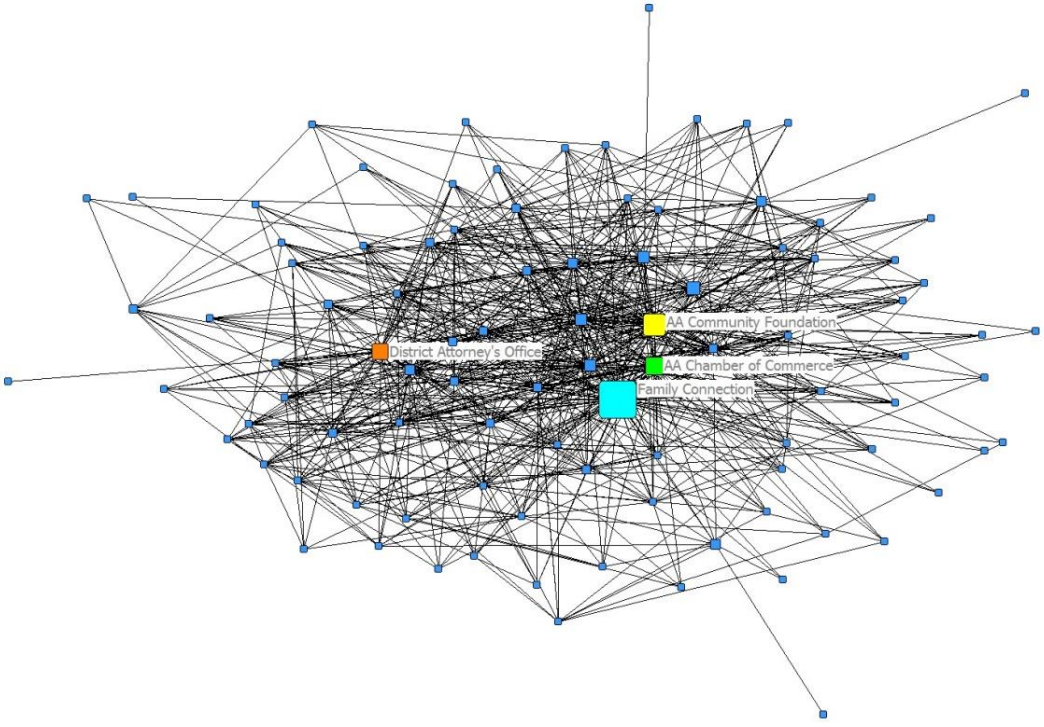


Figure 7c. Betweenness centrality co0mparison of organizations in the prevention network

Overall, the decentralized structure of the prevention network, reciprocity scores, and the "Exploratory vs. Set Criteria" contrast offered notable consistency in understanding RQ2. In other words, the structural similarities and distinctions between prevention and service delivery and the qualitative descriptions aligned in this analysis to support the findings. Data suggest that while organizations are active in prevention efforts, and often view direct services as preventative, prevention efforts are substantially less-defined, relationships around prevention are less-mutually recognized, and prevention relationships are occurring in a structure of more dispersed, rather than centralized control and/or messaging connections. The differences are compounded by the identification of different prominent actors across realms and have implications that will be discussed in Chapter 5.

RQ3: What Benefits and Challenges are Experienced When Interacting with Other Organizations in Child Maltreatment Prevention and Service Delivery?

Overall frequency. Table 11 presents the frequency with which key informants indicated 'yes' on the survey instrument that their organization experienced a particular benefit and/or challenge, differentiating between the benefits and challenges experienced when interacting on prevention versus service delivery activities. As a whole, it is evident that organizations experienced benefits at higher rates than challenges, and both benefits and challenges were usually experienced at higher rates during interaction around service delivery than prevention. Exceptions were the challenges of *lots of resources, hard to tell who has responsibility,* and *not enough credit*. These three challenges were experienced at slightly higher rates around prevention rather than service delivery. Note that the sample in the prevention column was lower due to the number of agencies that did not report interacting in any prevention capacity, making their response not applicable. Specifically, there were organizations that did not mark any

interaction in the prevention categories, and therefore only responded to challenges and benefits experienced during interaction on service delivery activities.

Table 11

Benefits and Challenges Experienced when Interacting on Service Delivery and Prevention Tasks

Benefits	**Prevention**		**Service Delivery**	
	n=54	**% Yes**	**n=76**	**% Yes**
Building New Relationships	49	91	72	95
Capacity to Serve Whole Community	48	89	70	92
Better use of Organization's Services	44	82	70	92
Encouragement	44	82	70	92
Acquisition of Knowledge	45	83	68	90
Serve Clients Better	45	83	67	88
Heightened Public Profile	44	82	65	86
Enhanced Community Influence	42	78	62	82
Acquisition of Skills	41	76	59	78
Acquisition of Funding	33	61	53	70
Ability to Reallocate Resources	30	56	52	68
Challenges	**Prevention**		**Service Delivery**	
	n=54	**% Yes**	**n=76**	**% Yes**
Lots of Time	37	69	57	75
Uncertainty of Services	26	48	48	63

Organizational Bureaucracy	27	50	45	59
Different Agency Goals	28	52	44	58
Different Professional Perspectives	26	48	42	55
Miscommunication	26	48	41	54
Frustration	22	41	33	43
Who to Call	19	35	31	41
Lots of Resources	24	44	30	40
Delay in Work Processes	18	33	30	40
Hard to Tell Who has Responsibility	23	43	30	40
Geographic Locations	11	20	21	28
Loss of Autonomy	10	19	15	20
Not Enough Credit	11	20	13	17

Note. Benefits: 5% (*n*=4) missing data for service delivery; 7.5% (*n*=6) missing data for prevention; 25% (*n*=20) not applicable (i.e., responding organizations did not indicate participating on prevention activities). Challenges: 5% (*n*=4) missing data for service delivery; 10% (*n*=8) missing data for prevention; 25% (*n*=20) not applicable (i.e., responding organizations did not indicate participating on prevention activities)

Clustering. Visual representations of the ways benefits and challenges were experienced by organizations are displayed in Figures 8 and 9. They were created from two mode matrixes, comprised of 80 participants, each choosing among 11 benefits and 15 challenges. Benefits and challenges were assigned a number representation between B1 and B11 and C1 and C15 for identification in a corresponding legend. The organizations are not identified by name, but are color-coded per their sector-type and represented as circles (i.e., yellow circles = public organizations, green = non-profit, and orange = for-profit). The benefits and challenges are represented as blue squares. Organizations that did not choose any benefits or challenges were

removed for plotting purposes. Visualizing the sociograms reveals the frequency of benefits and challenges experienced. Those located on the periphery have lower frequencies or degree centrality in this application). The visualizations also indicate how benefits and challenges are clustered or 'experienced' together.

Prevention. In the prevention category, two clusters were immediately evident. Specifically, benefits were largely experienced together and challenges were largely experienced together. As an exception, *lots of time* and *lots of resources* are located apart from other challenges and closer to the benefits, indicating that organizations that may not experience other challenges, still experience *time* and *resources* as barriers when interacting on prevention activities. *Acquisition of funding* and *reallocation of resources* are positioned slighted away from the other benefits, indicating their lesser frequency. In other words, while organizations may be experiencing the majority of benefits largely together, benefits related to funding are less prevalent. There were no visually apparent differences in how sectors experienced benefits and challenges; all sectors were dispersed among both.

Service delivery. Figure 9 plots the benefits and challenges experienced during *service delivery*, and immediately reveals differences compared to benefits and challenges experienced during prevention (represented in Figure 8a). Specifically, challenges in Figure 9 were not clustered, but instead were largely dispersed. While organizations experienced challenges during service delivery at primarily higher rates than prevention, organizations appear to have a more nuanced experience with challenges when providing services compared to prevention. In other words, organizations experience some but not all challenges, and the challenges that are experienced vary between organizations. *Lots of time* is found in the center of the sociogram, reinforcing its prominence across organizations and across both service delivery and prevention

tasks. However, *lots of resources* is located on the periphery, compared to its higher prominence in the prevention sociogram. Benefits continue to have a strong and central cluster, indicating that organizations recognize benefits when interacting on service delivery tasks, including the benefits of *access to funding* and an *ability to reallocate resources* that were less prevalent in prevention. The dispersion of challenges and higher clustering of different sectors identified in this analysis calls for further examination of the factors that contribute to organizations experiencing one challenge versus another and how they differ.

Table 12

Legend for Figures 8 and 9

	Benefits		**Challenges**
B1	Serve Organization's Clients Better	C1	Lot of Time
B2	Greater Capacity to Serve Community	C2	Lot of Resources
B3	Acquisition of Funding/Resources	C3	Loss of Control
B4	Acquisition of New Knowledge	C4	Different Agency Goals
B5	Acquisition of New Skills	C5	Geographic Locations
B6	Better use of Organization’s Services	C6	Not Enough Credit
B7	Building New Relationships	C7	Delay in Work Processes
B8	Heightened Public Profile	C8	Organizational Bureaucracy
B9	Enhanced Community Influence	C9	Who to Call
B10	Ability to Reallocate Resources	C1	Uncertainty
B11	Encouragement	C11	Different Professional Perspectives
		C12	Interagency Politics
		C13	Miscommunication
		C14	Responsibility for Tasks
		C15	Frustration

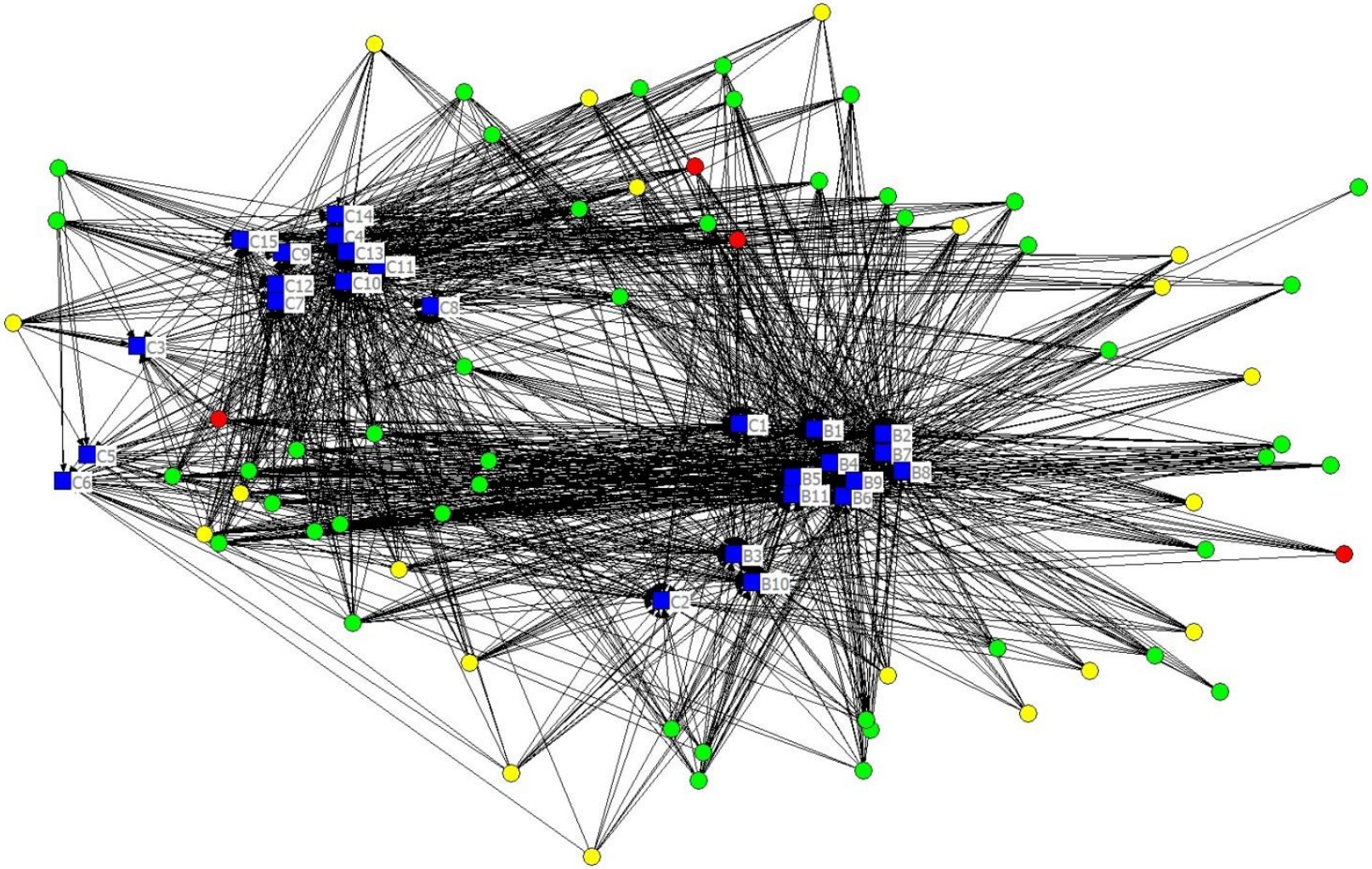


Figure 8a. Benefits and challenges experienced interacting on prevention tasks (1,503 ties).

Note. Circles represent organizations and are colored per sector-type (public = yellow; non-profit = green; for-profit = orange). Squares represent benefits and challenges.

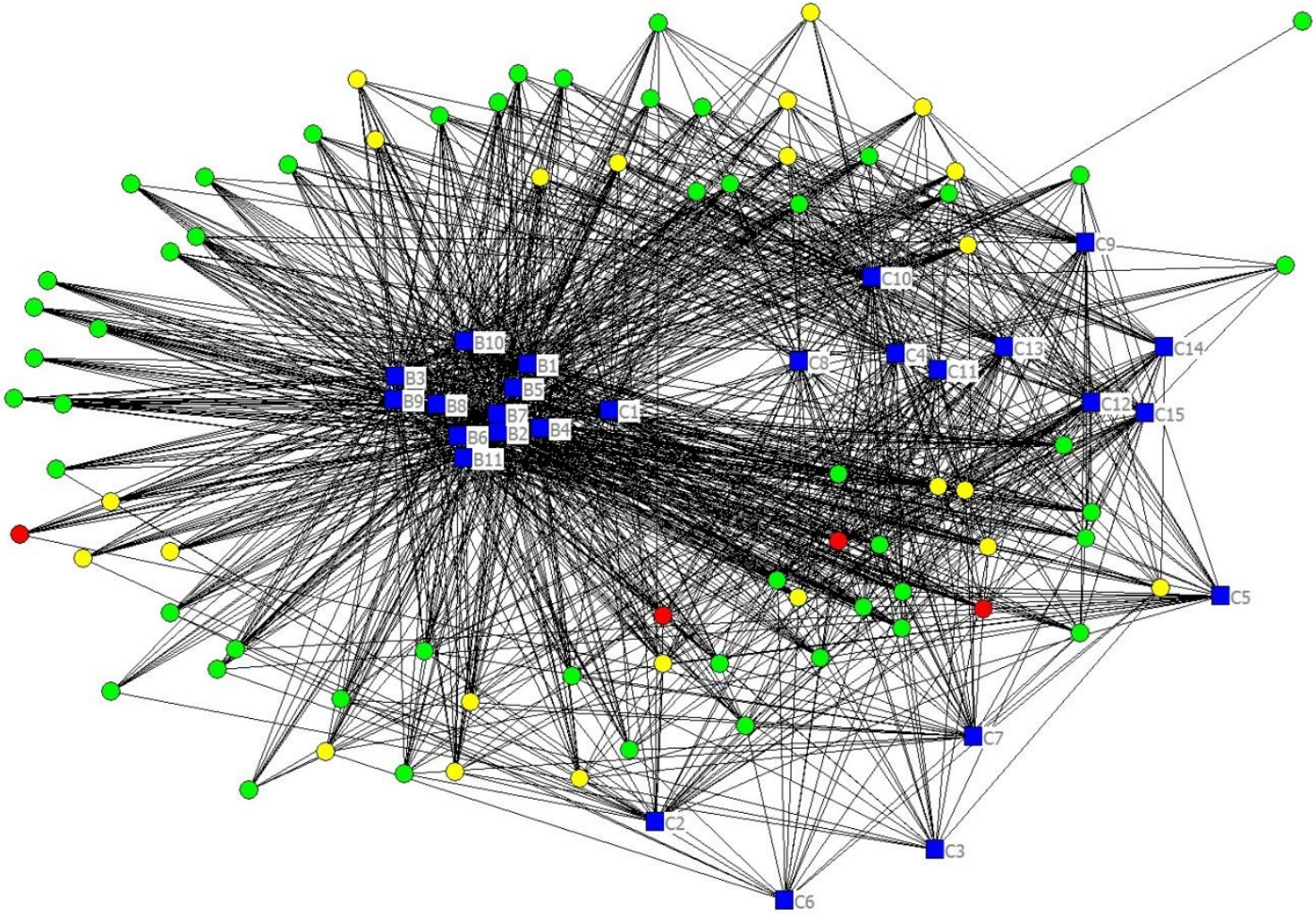


Figure 8b. Benefits and challenges experienced interacting on service delivery tasks (1,329 ties).

Note. Circles represent organizations and are colored per sector-type (public = yellow; non-profit = green; for-profit = orange). Squares represent benefits and challenges.

Emergent Information about Benefits and Challenges

Steps were taken to gain a fuller understanding of the benefits and challenges experienced by organizations beyond the pre-identified categories on the survey instrument. The entirety of qualitative data was analyzed to explore benefits and challenges in more depth. This included examining data collected through the verbal reflections and examples expressed by key informants when completing the survey, along with data from the full semi-structured interviews in which key informants were asked various questions related to their experience in the network (see Appendix D for the interview protocol explicating questions).

These data revealed a more comprehensive and detailed understanding of benefits and challenges experienced by organizations when interacting in the network than the survey instrument revealed alone. A presentation of these findings is divided below, starting with challenges to match the order in which analyses were conducted.

Challenges. Figure 9 displays the evolution that took place related to understanding challenges explored in this study. The full list of challenges identified on the survey instrument is presented in the far left column of Figure 9, followed by descriptions of how those challenges were evidenced in the qualitative data, then adding newly identified challenges that emerged as themes. The final box reflects the product of expanding, collapsing and excluding categories from the survey, as evidenced by the qualitative data, and adding emergent challenges into a final version that represents a more informed summary of challenges experienced in the network. The results presented here do not extend into an examination of the ways in which benefits or challenges fully interrelate or an interpretation of their place in relation to other points of data (e.g., contextual elements). Conveying the intricacies of each benefit and challenge is beyond the scope of this study. They were found to have depth in construction, functional properties, and

related implications that can be examined through further analyses, but their identification was achieved in this examination, as was the identification of overarching themes.

As noted in Chapter 3, qualitative analysis began with open coding guided by the labels *challenges* and *benefits*. Open coding was followed by a process of clustering to combine codes with common properties. After these clusters were identified in the qualitative data, they were compared and considered in relation to the survey list to result in the final compilation outlined in Figure 9.

During the process of clustering, a separate category labeled "instability" was initially included and then removed when a pattern became evident that suggested "instability" was a common thread existing across challenges. Quotes from the data are provided below to illustrate how this pattern manifested within each identified challenge, warranting its designation as an overarching theme.

Thread of instability. The terms *instability* and *change* will be used interchangeably in this discussion to reference experiences in the data that were marked by insecurity, unreliability, and/or variability from a constant. In other words, the theme of instability across challenges denotes shifting, rather than stable, continuing, and/or permanent experiences. The quotes below are organized per *challenge* to emphasize the presence of instability within each. Note that while instability was robustly discerned as a common thread during analyses, all the ways in which any given challenge was experienced did not necessarily link to instability; rather instability was found to be present within each challenge. Further, as instability was an emergent theme in this study, its nuances were not fully unearthed and therefore did not factor into the interpretation of these findings. For instance, it was beyond the scope of this analysis to differentiate between types of experiences of instability (e.g., global or small and/or sweeping or incremental). As

Preconceived List	Qualitative Data
Lots of Time Lots of Resources	Categories were described together in qualitative data, with language specific to being "underfunded", "understaffed", and the need for dedicated resources to participate in collaborative efforts - labeled holistically as "the cost of collaborating".
Loss of Autonomy	Minimal
Different Agency Goals	Diversely referenced (i.e., agency mission, scope, individual mandates, and different agendas)
Geographic Locations	Not Evident
Not Enough Credit	Minimal
Delay in Work Processes	Minimal alone, combined into category of *logistics*
Organizational Bureaucracy	Supported by Data
Who to Call Uncertainty of Services	*Who to Call* was connected in qualitative data with *uncertainty of services.* These categories were combined and renamed *familiarity*
Different Professional Perspectives	Supported by Data
Interagency Politics	Minimal
Miscommunication	Miscommunication and difficulty communicating were combined into an overall *communication* category
Hard to Tell Who has Responsibility	Extended to include *negotiating roles and resources*
Frustration	Found to exist within other challenges

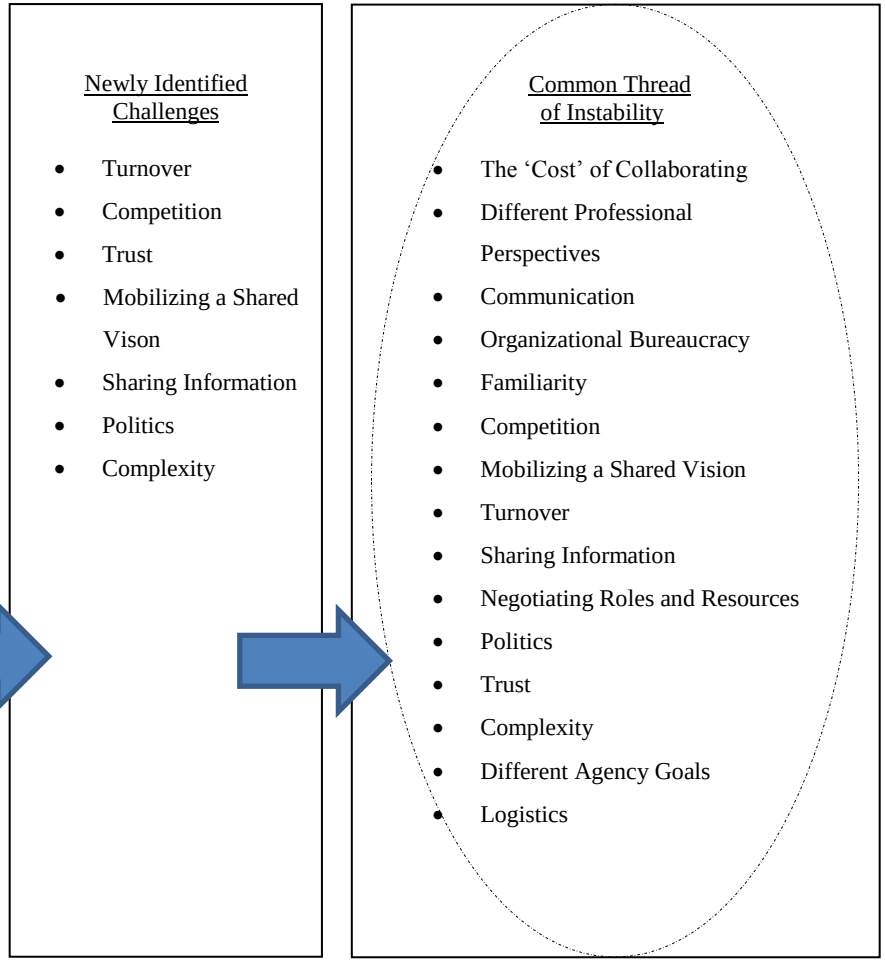


Figure 9. Challenges experienced.

small changes do not necessarily equate to small effects per complexity theory (Quinn, Woehle, &Tiemann, 2012), distinguishing the type or degree of instability may have limited importance; small changes in behavior can have great influence. However, differentiation may still offer insight into the processes and perceptions of instability.

Notably, the thread of instability directly aligns with the principles of complexity theory that guide this study; however, *instability* was not explicitly investigated. It emerged as an overarching theme from its robust presence in the data, evidenced by the following descriptions.

First, instability within the challenge of **"the 'cost' of collaborating"** was evident in multiple forms, including *insecurity* around funding streams. When asked about hurtles related to collaboration, one key informant conveyed:

> *I would say it's always scary every four years. We don't know if the cart's going to go up, because we have to re-apply for grants. So, we don't know if they are going to keep positions (P21).*

This key informant went on to describe how collaboration in the community is a strength of their grant applications saying, "we are fortunate…we can show a history of collaboration that doesn't exist in other communities", but the key informant reiterated:

> *When we reapply, you know, we could lose all of our [staff-type 1]... You know, they [a collaborating agency] could lose [staff-type 2]. I mean, it's tough. I mean that is a huge hurtle that still exists, even as much as we get along, you know….you take a couple [staff-type 1] out of an office, or you take two or three [staff-type 2] - cases don't get worked as well, you know. (P21)*

The key informant clarified that this perspective was shaped from direct experience with changes in funding, rather than a hypothetical expectation. This informant told the story of budget

restrictions around 2009, during an economic recession, and a resulting negative impact on case outcomes when reduced funding left multiple organizations with a reduced workforce.

Another key informant echoed the challenge of funding insecurity and attributed it directly to collaboration quality, saying:

> *Some agencies that have one primary funding source and maybe a couple of little bitty funding streams and they are always couple of months away from closing up shop. And, they tend to be the ones that don't collaborate well. They want to take instead of give, (*P13)

In an operationalized way, instability in "the 'cost' of collaborating" challenge was also referenced in the form of persistent funding reductions. For example:

> *So when I started working for [agency name] 98% of our funding came from state. I told you earlier 49% of our funding does now. Over the time I have been here we went through about a 10 year cycle and this is before the recession – this is [type of human services] not being as valued as other things. Even when money was good in the state we were getting cut. Every year the rates were going down, even though we were serving more people. So we went through 10 years of getting cut every year. We were struggling, we were having to cut staff and the [state-level department] was having to make some real strong changes...(P55).*

In a related way, the challenge of **"trust"** in collaborative relationships was also described as ebbing and flowing, rather than remaining stable. This is illustrated with the following two examples. The first is a continuation of the previous key informant describing reductions in funding. This informant later described the challenge of reduced trust as a repercussion of funding changes, stating:

> *When our core customer got narrowly defined to those with [specific needs] and we couldn't serve people … it was very frustrating to some of our partners in the community that were referring to us before, because now we are referring people saying, "yeah, we can't do anything."… It impacted the trust that some of those community partners had for us…" (P55)*

Another organization echoed "trust" as a challenge in the face of funding changes, explaining:

> *As the state funding stream didn't flow, what [our] organization could offer didn't flow. So, I think, when you're talking about some of the challenges of working with collaborators, I think part of it has to be, is sometimes, you have to re-establish, keep on establishing trust,[The key informant indicated that questions arise, such as:] "Are we going to invest with you… is it then going to go away?"* (P66)

Next, the challenge of **"turnover"** – when interacting across organizations - is inherently a process of change and was imbued with descriptions of instability. One key informant summarized simply:

> *It's hard…there are so many changes…you build a relationship and then someone moves or changes and then you're building all over again.* (P20)

Turnover was also experienced as a challenge due to instability in leadership positions, exemplified with the statement:

> *One [challenge] is that you have people who created literally 'this organization' in collaboration; who in many cases were leaders of agencies and feel strong ownership. And then they retire or get promoted or move and somebody new comes in and they might look at us and say, "that's nice," but they don't have the same ownership of it.* (P43)

Instability due to turnover was further recognized as a barrier for clients. Such as the reflection by one key informant:

> *She [a client] had to wait until they hired someone else for her case to get picked back up.*

Beyond the learning curve experienced by new staff, the challenge of **"familiarity"** was compounded by persistent change. For example, one organization described the challenge of staying familiar with changes in protocol, saying:

> *When [another organization's] protocol shifted to more preventative services and their definition of what constituted opening a case changed a few years ago…It just required a lot of education on our part, for our staff to understand why a case which made them [the client/family] move to ongoing services five or six years ago, no longer was or why a referral might get screened out that didn't use to be and vice versa.* (P36)

This challenge was further expressed in the form of keeping up-to-date with the larger shifts (e.g., organizations coming and going). Another key informant noted:

> *It's all in flux all the time and so there is this organization that came into existence last year, now they are gone. This one was here 20 years, now they are gone. This one just sprang out of nowhere ... There's so much change happening all the time!* (P65)

Instability within the challenge of **"different professional perspectives"** was expressed in statements of growth and evolution when perspectives are negotiated. For example, early in the interview with one key informant, it was noted that different professional perspectives can be a challenge with the description:

> *You have to think outside the box, you have to give some training, you got to go hang out with the social workers and the treatment providers, and the psychologists and all these*

people, because suddenly you are going 'oh my god, you are driving me crazy' in a debate - so you learn the other methods. (P37)

This key informant then explicated how negotiating professional perspectives is a process of change.

We go out looking for folks. We are looking for things. We are looking for other ideas. We are looking for other possible solutions that you know, you [another agency] may have been taught or maybe that is the way you [another organization] are wired to think being in social services - being in child services - that we haven't thought about. We are open to that, and we are constantly adjusting or adapting. I think that's huge, I think if we don't I think you go stagnant. (P37)

"Different agency goals" as a challenge was distinctive from different professional perspectives. For example, two organizations may share a common goal, but still approach it from different orientations given their professional perspective. In this regard, "different agency goals" encompassed the challenge of organizations combining organizational missions and finding mutual ground. The following description highlights the presence of instability in that process.

The [organization name] has come and done many site visits. We've gone to trainings; we've sat down and talked, and you know, we've kind of made modifications to our program. And for us, it was a major thing because we were changing how we delivered services, but we still wanted to retain those things we've done traditionally well. And so it was kind like we were retaining those things; our identity if you will; retaining our identity in those things we've done well, while at the same time, addressing the needs of [organization 1] and addressing the needs of [organization 2]. (P15)

The key informant went on to reiterate that this process was difficult in the early stages, and included a degree of questioning, such as:

> *Why are we partnering with them? What are they going to do? What are they bringing to the table? That was the head pounding part…*(P15).

Finally, the key informant depicted that an evolution in the relationship took place over time to align goals.

> *So now, we're at a place where we're – everyone's needs are getting met, but it wasn't a positive, join hands, saying "Kum Ba Yah" type [experience]… So I think now we're kind of all on the same page, but it has taken some – it's not just lip service, it definitely is some changes to how we deliver services. (P15)*

As foreshadowed above, when organizations interact, the challenge of **"negotiating roles [including responsibility] and resources (e.g., who's going to fund it)"** was described as a fluid, not stagnant dynamic. One key informant specifically articulated a need for fluidity when describing how the local Child Abuse and Neglect Protocol[10] is negotiated.

> *Well, things are always changing with each agency. I think with that there is a lack of understanding what the protocol should be and there are some people who want to make the protocol very specific and there are others who would rather keep it very general. And the more you try to make it specific, you will never get to a point when you can finalize it because it's all changing; it's all moving parts. I think it needs to be more of a wide-sweeping - "how do we agree to work together" - without the specific policy- level decisions inserted in the protocols, because each of our agency's policy decisions are*

[10] The Child Abuse and Neglect Protocol is an agreed upon county protocol detailing the roles and processes that will be performed by various agencies in response to child maltreatment cases.

ever-changing and moving. We need to have a county protocol that kind of agrees to work together in the midst of all those changes…(P42)

The experience of **"competition"** as a challenge was also specifically linked to change. In the following example, change was discussed relative to competition in the form of economic instability in the environment.

Well from [the organization's] standpoint the first thing you do is kind of shut down and put the walls up and deal with yourself. You do. So you just shut out everybody else because you got to make sure you maintain…especially when you start talking environment or recession. I mean that it's immediately just – you just close off, you know, because you don't want to – you might have access to what you have access to and again a lot of things go back to competition (P53)

Related to **"communication"** the following excerpt exemplifies the thread of instability, specifically describing how changes are communicated.

Interviewee: The state decided that they wanted to give families choice in their Medicaid providers; so they brought three to the state and [organization name] was one of them and they do not understand that's like case management - every family could use case management that we work with. Basically they see that as a really high intensity service. So they'll only let them have like X number of units for three months, but when you get kids who are in and out of foster care system, moving from house to house, they need more than three months of case management. Yeah, so it is awful.

Interviewer: *I wonder what drives that understanding*

Interviewee: *Their old medical model. And when the state contracted with them, they did not really explain the recovery model that the state is under, so it is just - it is a communication issue* (P55)

Similar examples of change in the category of **"organizational bureaucracy"** were described through the ways procedures and regulations have altered how organizations interact over time. For example, one key informant recounted:

The focus has changed. We had people that we could talk with, first name basis, who didn't, who weren't that concerned about confidentiality, but you know, when we are working with families, and we're in crisis, we'll be able to share stuff, and workers back in the day, we'd do that, and saw families benefiting, and then that just gradually went away. These are rules, this is how we do it, and then it's more automated, you got to call in, you got to give the information, people will get back with you, they may or may not. We just sort of walked away from that being personal, that you know we just don't have it anymore. (P31)

The challenge of **"information sharing"** did not always coexist with organizational bureaucracy, but they were often linked when describing instability in processes. For example the following quote references a bureaucratic shift that created changes in how information is shared.

About…three or four years ago when money shifted at a state level, [organization 1 and organization 2] used to be under the same umbrella. So it was very easy for us to share information in the database on customers. Then a law was passed and [organization 1] moved out from under [organization 2] and it's now under [organization 3]…so we

weren't able to share as much and we had to figure out a way to still get the business done, but in a different way. (P29)

Also evidenced in the quote above, the thread of instability was especially prevalent within the challenge of **"politics."** The same key informant as above explicated that there is difficulty related to political changes for interorganizational relationships.

Interviewee: *Politics just screws everything up. [chuckles]I'm sorry, politics just really messes with things. So, every few years, we sweat it out every November.*

Interviewer: *Is that something that you really have to deal with as an [individual] organization? Or is it when you're working with other organizations?*

Interviewee: *Yes [to the latter].It's because you spend a lot of time [building relationships]. We came so close four years ago to just being ripped apart from a great relationship. You know, if a new administration comes in, you know, whether it's a head of an agency, the head of a state, the head of whatever…whatever…whatever…all this stuff you worked so hard to do, if they break down that system then you got to spend time rebuilding another system. Maybe it's with the same people you trust, but then it's still - you still got to, you know, take those steps back to keep moving forward. (P29)*

Descriptions of instability within the challenge of politics were not restricted to elections, but also noted with annual shifts in funding and procedures.

And once we have that copy [annual policy], we'll, you know, kind of go through it and see like what's changed from the previous fiscal year. You know, there's funding change. There are policies [that are] changed. And, we identify things that we think are going to be issues going forward. You know. Like, this is going to be a problem. This isn't going

to work for our families. Maybe it works in some other region, but it doesn't work here. (P38)

Another organization echoed the experience of consistent shifts when reflecting on child maltreatment as a problem becoming better, worse, or about the same.

Interviewee (1)*: I want to say better, but the way we're going I want to say about the same…just because of all the new rules and regulations, the changes we feel are coming. It puts us back to not starting all over again, but we haven't moved up because we have all these new challenges facing us, so we're just standing still...*

Interviewer: *So when you say 'changes'.*

Interviewee (1): *Well laws…*

Interviewee (2): *The different laws and within our agency …*

Interviewee (1): *well not only just our agency, [another organization] too. So there will be some agency changes over the next year, and we're still undergoing changes from this last year...(P61)*

Related to the **"logistics"** of working across organizations, the following key informant described instability in the of day-to-day work tasks in a way that limited collaborative capacity.

During the day, patient crises are always coming up. And it's just very - it's hard to get away for a planned CEU event, let alone community meetings. (P54)

"Complexity" was referenced in the form of the size and scope of the network of organizations, but also in the depth and diversity of complex client needs. These needs were likewise noted to shift and change. For example, one key informant described:

> *We are seeing some increase in heroin use across the country, we haven't seen that in this community. It may come. So I think our service delivery is changing because we [larger community] are changing. (P26)*

Finally, instability was also evident when key informants discussed the challenge of **"mobilizing a shared vision."** Put simply by one key informant:

> *It waxes and wanes, as far as where people focus (P43)*

This instability was also expressed in the form of leadership when mobilizing a shared vision. One key informant described a past collective effort that dissipated with instability in leadership.

> *And then it all came together [an assessment process] and by the end [leader's name] and [the leader's] core group had moved on to other community concerns. You know, it's sometimes - I mean I love [leader's name], I think [the leader] is a great person, [the leader] is a close personal friend but, you know [the leader] was out there in front doing something and then I think [the leader] felt like [she] accomplished what [she] wanted to do and it was up to the community and the service groups to implement it. And really, it needed somebody to stay on that group and drive that implementation. And there just wasn't anybody to do it.* (P13)

In all, instability was a component – and frequently a driver – across all challenges identified in this analysis and it manifested in numerous ways. Organizations described experiencing insecurity, processes of loss, rebuilding, and continual adaptation. Additionally, the thread of instability rejects the notion of challenges themselves as constants. Instead, challenges evolve and must be continually attended and managed. Trust can be developed and then lost; familiarity with community resources can be achieved today and outdated tomorrow; financial resources in one fiscal year do not equate to long-term planning or implementation. Per these

findings, tackling challenges, then, cannot be achieved with a one-time fix, but must be matched with persistent and incremental recognition and response by stakeholders.

Benefits. Consistent with challenges, Figure 10 displays the evolution that took place when examining benefits, listing first the benefits identified on the survey instrument, how those benefits were evidenced in the qualitative data, and what newly identified benefits emerged as themes. The final box reflects the product of expanding, collapsing and excluding categories from the survey and adding emergent benefits into a final version to represent a more informed summary of the benefits experienced in the network.

The benefits identified can be conceived of as 'processes' in the network. For example, as a process mechanism, experiencing the benefit of "balanced professional perspectives" in relation to a case may reasonably influence how an organization approaches future cases, or may serve as an antecedent to building more extensive relationships, such as shared training or a joint program. However, benefits can also be conceived of as 'outcomes' of interaction. In this regard, groupings among benefits were evident during analysis at both the organization-level and network-level. All benefits were linked by the common thread of "serving clients and the community better" (See Figure 12). While organizations primarily spoke about client-level services when discussing benefits, references to community-wide interventions and overall community health were made to warrant a holistic representation of both.

The configuration of benefits at different levels (reflected in Figure 12 below) represents a multiple-stakeholder perspective, whereby the interests of organizations, the network, and the community/clients may be aligned or divergent. For example, any singular organization experiencing "heightened public profile" as a benefit at the organization-level does not equate to improved outcomes at the client and community-level. Likewise, "reduced competition" at the

Pre-identified Benefits	Qualitative Data
Building New Relationships	Found to exist as a component of other benefits (i.e., a mechanism of achieving another benefit)
Capacity to Serve Community	Found to exist across benefits as a common theme
Better use of Organization's Services	Renamed "Building Clientele". The primary qualitative descriptions explained that cross organizational relationships increase an organization's 'access' to client populations and expand the number of clients and other organizations that 'know about' an organization's services.
Encouragement	Supported by data
Acquisition of New Knowledge	Supported by data
Serve Clients Better	Found to exist across benefits as a common theme
Heightened Public Profile Enhanced Community Influence	These categories were combined under the label "Heightened Public Profile". It includes descriptions of being recognized as a "subject matter expert" and being asked to "sit at the table".
Acquisition of Skills	Minimal
Acquisition of Funding Ability to Reallocate Resources	These categories were combined, expanded, and relabeled as "stronger financial standing" to include descriptions of access to resources, being more attractive to funders, sharing resources, and stretching resources through collaboration.

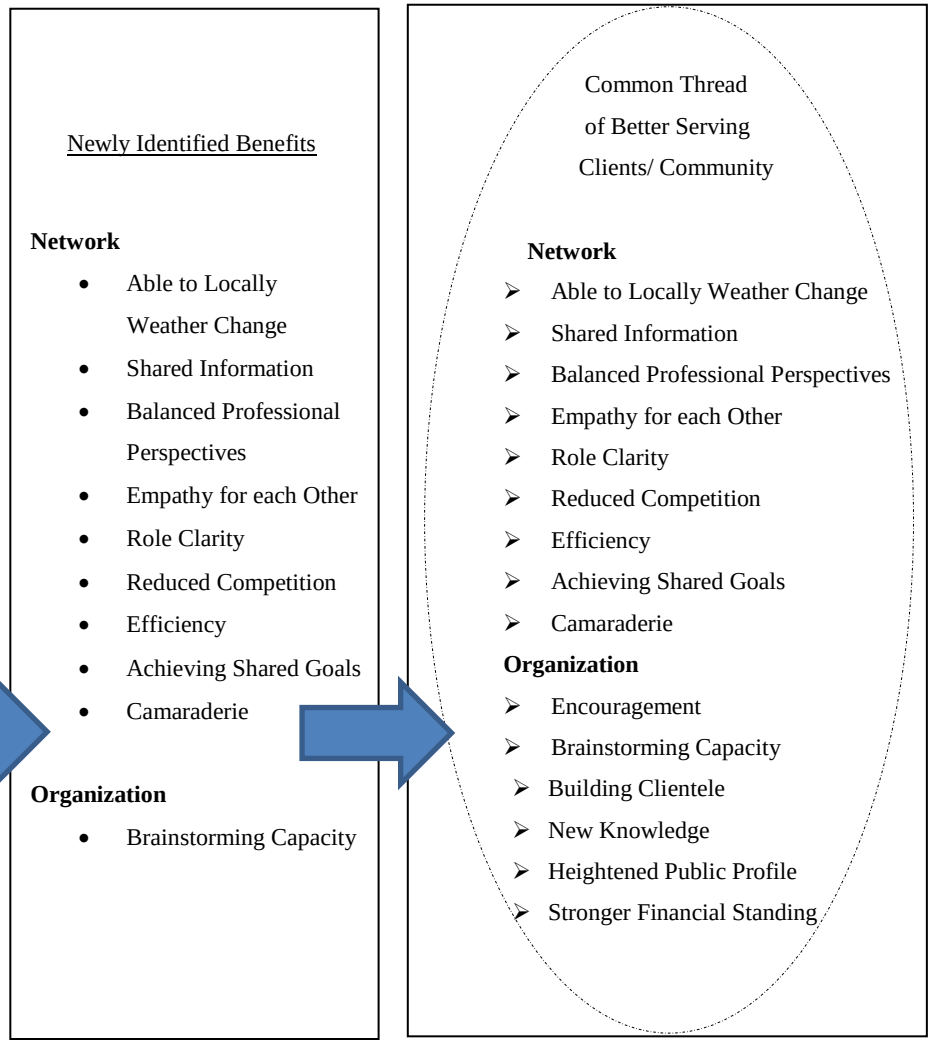


Figure 10. Benefits experienced.

network-level may not promote a singular organization's best advantage. In this regard, it would not suffice to understand *benefits* using only one level-of-analysis. This is consistent with ideas put forth by Provan & Milward (2001). Those authors recommended evaluating network effectiveness through multiple avenues, specifically proposing variables at the community-level, such as social capital or client performance, and the degree of service diversity as a measure of effectiveness at the network-level. This dissertation, as exploratory, was not structured to explicitly measure effectiveness. Moreover, the *benefits* on the survey were primarily conceived as benefits to organizations singularly, noted even by the phrasing of each listed benefit from an organizational perspective on the survey instrument (e.g., "ability to serve ***my*** organization's clients better"). As such, the identification of levels during analysis is a notable transformation.

To more fully explain the structure of Figure 12, the center circle lists benefits to individual organizations as participants in the network, the middle circle lists benefits experienced across the network, and the dotted outer circle signifies that both are contained within the overarching benefit of serving clients and the community better. It is important to note that a benefit grouped at the network-level does not preclude it from benefiting an individual organization or vice versa. For example, being "able to locally weather change" is likely beneficial both collectively and for the individual organizations involved. The arrows in Figure 12 are bidirectional to reflect this fluidity across the three-levels. However, distinguishing levels does add value. All of the network-level benefits emerged from the qualitative data and were not retrofitted to any pre-identified categories on the survey instrument. Their emergence demonstrates that organizations recognize benefits beyond their individual domains (i.e., themselves and their clients) and that the network itself is a functioning entity. Finally, identifying that *all* benefit categories carried the common thread of "serving clients and the

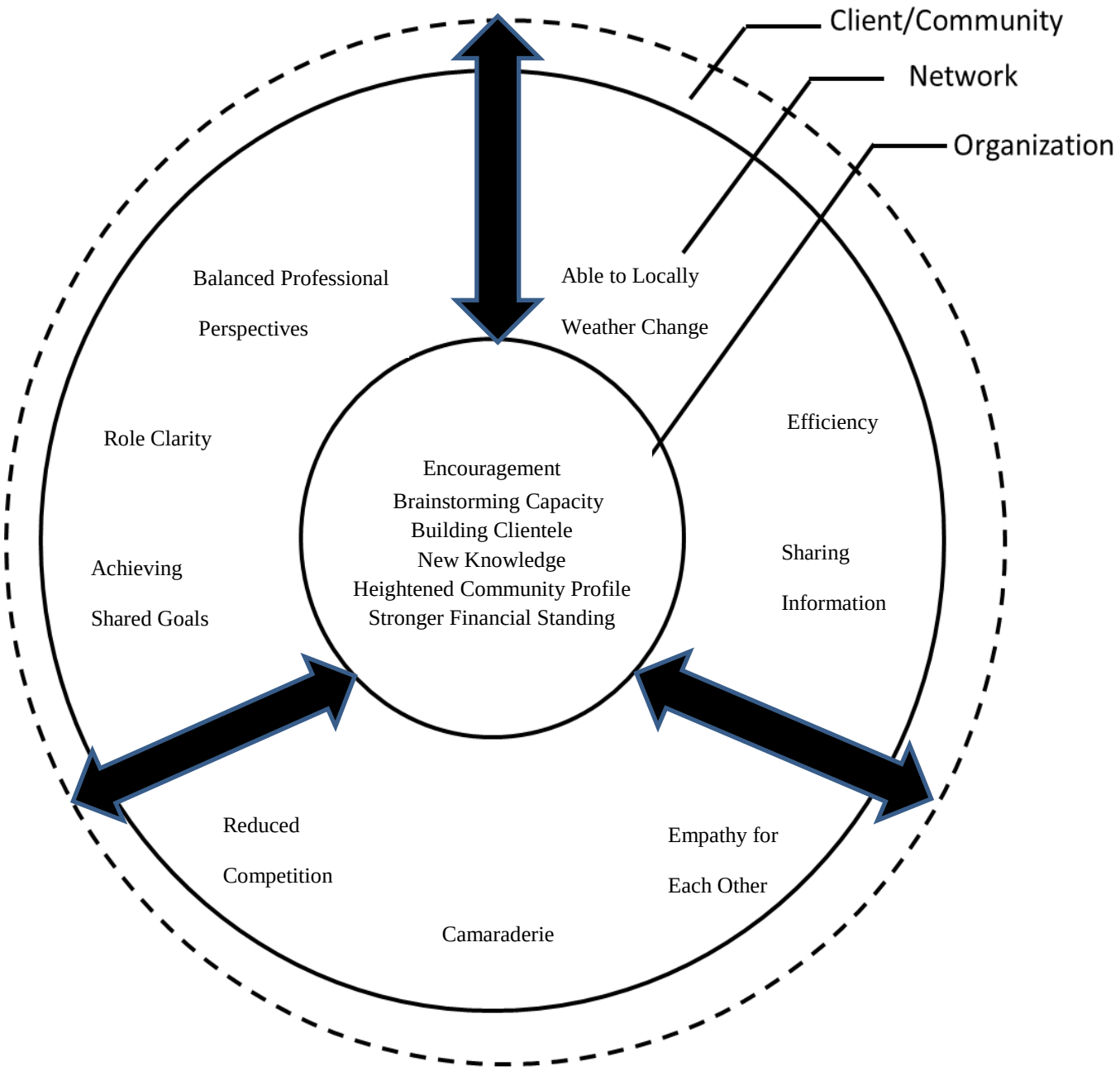


Figure 11. Levels of benefits.

community better" strongly suggests *better services* as both a motivation among organizations for engaging in collective work and, critically, a perception that their collaboration results in positive improvements.

While it is beyond the scope of this study, further analyses can detail the construction of each benefit, the relationships among benefits, and the relationships among benefits with other mechanisms in the network to more fully understand the ways they function across-levels and to more fully flesh out the conceptual model of benefits developed here.

Thread of Servicing Clients and the Community Better

The overarching thread of "serving clients and the community better" across both the network-level and organization-level is evidenced through the following descriptions. Beginning at the organization-level, organizations described the benefit of "**encouragement**" when interacting to serve children and families, illustrated through statements such as:

> *If I am having a bad day or if they [staff from another organization] are having a bad day, it's the relational piece that's going to sit there and help sustain it [the work] - that, "hey, you know we got this…", you know, like "let's refocus on why we are really here and let's focus on the family." (P9)*

The more tangible benefit at the organization-level of "**stronger financial standing**" was referenced in a variety of ways that connect to better client services. As an example, one key informant shared how their services to families were maintained [through the help of another organization] in the face of financial instability.

> Interviewee*: We lost around [amount] of funding, so you know – I mean easily a quarter of all of our grant funding, maybe a little more [due to political changes]…You know we were fortunate we had some money in the bank and we all agreed that we were going to*

continue to offer services even if it meant we had to fundraise to do it… We knew that kids weren't going to stop being put in [foster] care and more importantly we knew that the judge wasn't going to suddenly start offering unsupervised visitation...

Interviewer*: Did you all have any community support in doing that? When you went through that time, how did different organizations help you?*

Interviewee*: Yeah, actually we went to [another organization]. The most important thing that happened was - we went to [named organization] and said we have lost our grant funding… And they went to bat for us! They went to the state, they said we needed emergency contracts … [they said] "we have a service provider who's lost their grant funding; these are the services they offer and we will be in trouble if these people stop offering these services." (P16)*

Even the benefit of "**Heightened Public Profile**" – arguably a more internal advantage - was described in connection to the how clients are served. For example, when asked to reflect on the benefits from working across other organizations, one organization identified:

Part of it's PR [Public Relations], we've been here 40 years; everybody knows who we are; But in the last four or five years we've had much more presence in the community and lot of it is because of these collaborations with other agencies and people just sort of figure out who we are and what we do and what our role is in the community, so that's been, that's one big piece. This actually directly impacts the clients, but helps us as well. (P55)

Moving to the network-level, the following description exemplifies the "**able to locally weather change**" benefit in relation to serving clients.

Usually we communicate with each other and try to anticipate what the barriers will be like. With the centralized intake change [for child abuse/neglect reports], we were talking about that. [Named organization] was calling me and saying we think this is going to happen, we're hearing from our state folks, long before we ever heard from our [own] state folks. I mean sometimes we laugh because it's like, you know, three months after we set in place our whole informal and formal protocol, the [state departments] kind of sent out those memos of how you guys should all work together. It's like 'really' - we've been doing that for three months. We got it, you don't need to tell us "people from Atlanta" how to help keep our kids safe given your policy changes; we've already figured that out; we could have, you know, written the memo. So sometimes, you know, I think we just do what needs to be done, we communicate with each other and anticipate changes. (P42)

The benefit of "**shared information**" was described in ways that reduce the burden on clients in moments of crisis, such as sharing information related to forensic interviews.

We can then share some information with [organization 1], [organization 2] and [organization 3] and that family might not have to constantly repeat the same story over and over again. Or if [organization 2] asks a question that we haven't asked them [the family], they can give us that information and us not have to continuously traumatize the child or the family over what happened. (P9)

More broadly, organizations expressed that sharing information is necessary to maintain a pulse on the community and respond timely. For example, one organization described the value of relationships, saying:

They [another organization] have a really good sense of what's going on in the community and, I mean, eight months ago they said "You're about to see an increase in

people losing their homes, about to see increase in kids being taken up [placed in foster care]."… And they were right, we've [Athens-Clarke County] seen a 40% increase in kids in care in the past 10 months.

In these collective processes, the challenge of different professional perspectives was conversely expressed as a benefit for clients in the form of "**balanced professional perspectives**". When relating a story of multiple organizations discussing the next steps for a client, one key informant detailed how a proposal being discussed was challenged by a different professional at the table, describing:

You know, we all just like kinda paused and…uh…and reconsidered. I think that's the beauty of doing that kind of collaboration. (P51)

The benefit of "balanced professional perspectives" was echoed by the sentiment expressed by one organization when recounting their words to another organization.

You all need us to disagree with you sometimes. Because if we're on the same page all the time, it loses all value. (P16)

Expressions further acknowledged that diverse participation among professionals is a benefit by way of reflecting the diversity of client needs.

The key players are much wider spread here [than other communities], more inclusive of everyone…For instance, when we came together to write the grant for the [identified need], you know, we had representatives from the housing part…we had people from the police department, we had, you know, the school superintendent and they were all just a more diverse and truer representation of what families need. (P44)

Likewise, key informants described how interacting across organizations helped them to "**achieve shared goals**", illustrated by the following example describing how organizations rely on one another to holistically serve clients.

> *A lot of our clients also have domestic violence issues. Umm, we're not trying to provide DV advocacy or confidential shelter or any of those things, but we work really closely with [named organization] when we've got clients with DV issues to make sure that they're receiving those services. And that becomes part of their case plan; it becomes part of everything that we do. (P11)*

In these collective processes **"role clarity"** was identified as a benefit derived from interacting, for example:

> *We just hash it all out. And figure out, "Okay who's doing what; What can we do better; How can we help each other?" (P29)*

In a similar way – often discussed in conjunction with "roles" – the network-wide benefit of **"reduced competition"** emerged as a category. One key informant described this benefit in a client-interfacing capacity.

> *It's probably one of the things that makes us really good at what we do. We're not trying to do everything. We're trying to specialize in what we do and allow other agencies to specialize on what they do and let clients access those specialized services. We refer clients to each other's [services] (P11)*

Another organization noted this benefit more broadly, likewise linking it to serving clients better:

> *I kind of joke about Athens - you can't swing a stick and not hit a nonprofit - there are so many of us in town and if we compete with each other our clients are going to suffer, but if we can figure out way to collaborate and work together and not duplicate services so*

that more money is going to administrative costs than it is to the direct service of the clients, then we're better off for our clients, but it also rings well to those people who want to support us, they like to see us … working all together. (P55)

Quite the opposite of competition, key informants also articulated a sense of camaraderie that helped them to better serve clients. For example, one key informant stated:

I think it helps staff morale when you've got good relationships in the community. You may be having an awful day, but you can look forward to comrades, people who understand, people to bond with, to support you. There are a lot of unpleasant things at work and there are a lot of pleasant things in knowing that other people understand what you're going through and - having that bond with people - I think really helps you do a better job (P63).

In addition, relationships across the network were described to result in faster and more proactive services to clients (i.e., the "**efficiency**" benefit). This was illustrated by one key informant describing the co-location of services at one organization versus four separate destinations.

And so having these collaborations has provided one place for them [clients] to be able to come. (P34).

In another way, interacting in the network was described to promote "efficiency" through relationships.

The real guts of the relationship comes from the hallway collaboration in that building [another colocation facility] and whenever I'm taking people around that building, when we get to the break room, I say, "That is the most important room in this building." Hands down without question… because that's where they get to know each other…so

that's what allows you to contact someone even they are not working and get something done. (P39)

The above descriptions do not detail examples from every identified benefit, but attempt to provide evidence of how the common thread of "serving clients and the community better" manifested throughout, reinforced by the devoid presence of perceptions that interactions worsen client services. The data presented at this stage of analysis establish an expectation of positive outcomes per interorganizational interaction, and reinforce – as consistent with past scholarship (Provan & Milward, 2001) – that the benefits and performance of networks should be measured from a multiple stakeholder perspective, including levels specific to clients/community, the network itself, and organizations individually.

Chapter Summary

This chapter presented findings of the ways organizations interact in the prevention of child maltreatment and service delivery activities across 11 tasks. It then compared the structural properties of prevention versus service delivery activities and drew on direct quotes from key informants to illustrate contrasts and similarities across these realms. Finally, the challenges and benefits experienced by organizations participating in the network were examined, and the benefits experienced by the network – as its own entity – emerged. The next chapter discusses these findings and the implications for practice and policy, theory, and future research.

CHAPTER 5

DISCUSSION

This chapter discusses the results of this study and presents relevant implications for practice/policy, social work education, theory, and future research. The chapter begins with a summary of the study's implementation and an overview of its strengths and limitations. A discussion of findings follows, organized per the study's three guiding research questions, and the chapter concludes with a summary and synthesis of implications. The research questions that anchor this section, again, are:

RQ1. What is the structure of interorganizational relations involved in the prevention of child maltreatment and service delivery?

RQ2. How does structure differ and/or overlap between prevention and service delivery tasks?

RQ3. What benefits and challenges are experienced when interacting with other organizations in child maltreatment prevention and service delivery?

Summary of Study

In response to persistent concerns about poor integrative success, the aims of this inquiry were to a) enhance the understanding of child welfare efforts as they exist across organizations, and b) promote a holistic and interdisciplinary response to child maltreatment.

This research applied a mixed-methods design to examine the interconnection of organizations in a single county around service delivery and prevention activities. The activities analyzed in analysis included referrals, case coordination, joint programs for service delivery,

shared resources for service delivery, shared training, evaluation, fundraising, joint advocacy, education/awareness, joint programs for prevention, and shared resources for prevention. Each activity was examined as a separate network to understand the task-specific ways organizations interact. As a result of emergent understanding of the data, activities were then combined into two service delivery networks, one with and one without referrals, and a prevention network for comparison. Finally, the benefits and challenges of network interaction were identified and examined for common threads.

SNA and qualitative methods were applied to yield the results, and the study is grounded in a conceptual framework combining complexity theory with principles of SNA. The conceptual framework provided a foundation to interpret data, and guided the development of questions and hypotheses for future research. As a whole, this study demonstrated the use of mixed-methods, inclusive of network analysis and guided by complexity theory, to generate knowledge informing how community-wide stakeholders work collectively in child maltreatment.

Strengths and Limitations of the Study

Incorporating the structure of organizational relationships into research on child welfare practice offers an important lens for understanding the field. Based on a comprehensive review of the literature it appears that this may be among the only studies to date that map a network of child welfare services, and as such, this study provides a foundation for continued systematic research in this area. However, the potential of this line of inquiry also comes with limitations. Specific to this study, cross-sectional data limit the degree of insight into causality and/or the observation of how networks develop and adapt over time. In addition, despite being widely used in network studies, reliance on key informants raises the question of validity of self-reports and represents a restricted viewpoint. The use of multiple key informants and review of survey

responses by multiple staff in a few large organizations helped to offset this limitation some, however individual responses within an organization are known to differ, such as differences demonstrated between administrators and frontline staff (Smith & Magro-Wilson, 2007). To limit this variability, administrative-level response was sought across organizations, yet findings should be interpreted with caution, as it is possible the collected data underrepresent the connections that exist, and only reflect those connections known to the key informant(s). In addition, despite diligent efforts during boundary specification, and despite the large response rate, given the nature of the very concept of a 'whole' network it is unlikely to ever know with certainty that it is completely captured, and therefore interpretation of results should be informed by this limitation.

Several strategies were employed to counter limitations. First, multiple sources of data and methods were included in analysis. Second, committee members checked interpretations and raised questions to offer a different perspective during analysis. Finally, despite being a context-specific inquiry, this study strived to achieve analytic generalization through a constant process of comparing data with theory and the literature to consider rival explanations (Yin, 2009). Further, while this study is constrained by limited generalizability, generalizable methods would not offer the fullness of understanding desired, or the attentiveness to complexity and context that are strengths of this study's design. Interventions by and among organizations distinctly evolve and perform per the complex context wherein they are applied, and research attending to the localized experience offers deeper insight into these processes. Another notable strength is the breadth of representation underlying this study's qualitative findings. Input from key informants across diverse sectors and professional disciplines was used to generate the results, and likewise offer an expansive representation of benefits and challenges experienced across

human service organizations, rather than strictly limited to a certain service area. Findings, then, are expected to have applicability in various systems of care.

Discussion of Key Findings

The following discussion of the study's key findings is organized per the three research questions to improve ease of readability. However, by virtue of the interconnected and context-aware focus of this study, data are also linked and discussed across the three questions to enhance the synthesis of their interpretation. Implications and directions for future research are articulated for consideration throughout, but a final section highlights implications for overarching findings to present their practical and theoretical relevance.

RQI: What is the Structure of Interorganizational Relations Involved in the Prevention of Child Maltreatment and Service Delivery Networks?

Results for RQ1 tell a story of how organizations work together at a county-level to support children and families. Findings center on the identification of network participants and the systematic measurement of the ways in which they interact.

First, the process of boundary specification and measurement of interactions among organizations resulted in an empirically constructed picture of intersector network participation. Per the observed network composition, one implication is the need for attention to the role of public policy in non-profit dominated environments. Given that legitimacy and accountability have traditionally been attributed to public organizations (Rainey, 2009), the results of this study distinctly emphasize a necessity to understand how the governance of public service provision is negotiated among diverse sectors, wherein public institutions are a minority. Provan and Kenis (2008) denoted a similar need. They and this evidence suggest that exploring network

governance is essential outside of traditional hierarchies to better understand the landscape of collaborative services that now exist.

Beyond sector, the process of boundary specification in this study also informed the basic question of roles, boundaries, and responsibilities for child protection between and among contributing fields. Given that the sample was not predetermined, its breadth (n =105) was particularly informative. Decisions of inclusion were made per the judgement of community organizations themselves in an attempt to organically capture the reality of community-wide participation. Specifically, organizations were asked what organizations "do" you work with, rather than what organizations are you "supposed" to or "assumed" to work with. In doing so, the resulting sample revealed both expected representation by fields known per the child welfare and related policy literature, but also a much broader variety of participation. Since schemata and local fitness landscapes, such as a pressure from funding authorities or the histrocity of administrative relationships likely contribute to how the composition of network participation comes to exist, it will be important to examine how this breadth and its composition vary in other communities. Yet, as measured, it signifies a few notable considerations.

First, the breadth of participation is especially meaningful given that this study measured how organizations are connected in *behavioral* ways, not simply that they are aware of one another. Thus, the identified sample supports a conception of child welfare practice as a *multidisciplinary intervention process*. The behavioral component of measurement applied in this study demonstrates that organizations play an active role with one another around a variety of applied tasks; they are not bystanders in the network. Further, while child welfare is certainly acknowledged to involve multiple organizations/professions, this study makes a distinct contribution to the field's understanding of multidisciplinary participation by systematically

quantifying the breadth and degree of that interdependence. Kadushin (2012) likens this process to understanding traffic from the perspective of a helicopter versus the perspective of a lone driver looking out their window. Data construct a picture of connectivity in a way that is otherwise too difficult to fully comprehend, and provide empirical evidence of multidisciplinary and organizational interdependence that is otherwise largely assumed rather than demonstrated to exist. Alone, this result offers a new frame of reference that informs the infrastructure of 'child welfare'. It warrants critical consideration for how current infrastructure aligns with the measured degree of interdependence, such as how accountability is dispersed, how funding streams are designed, and the depth of cross-organizational education and training necessitated.

Interpreting structural properties. Having defined the breadth of participation, findings related to structural properties across tasks detail how the identified organizations interact. Prominent results are discussed below specific to the different measures of cohesion analyzed in this study.

Size. As the most basic structural property, the *size* of task-specific networks offers insight into the degree of community-capacity that exists, and how it may be better developed to support children and families. Scholars denote that activities such as communication and shared resources among organizations define a community's capacity to respond to societal needs and, likewise, organize to meet future needs (Leischow, et al., 2008; Provan et al., 2004). Considered further, *size*, itself, is arguably a means to quantify 'complexity', such that "the range of logically possible social structures increases (or, by one definition, "complexity" increases) exponentially with size" (Hanneman & Riddle, 2005, p. 7). Based on this reasoning, activities with the higher number of active organizations in this study are manifesting in an increased state of complexity

relative to their counterparts, reinforcing the significance of identifying size as a core component of understanding network function.

Notably, the 105 organizations identified as network members were indeed active in the network, and they participated in multiple ways. Specifically, no activity was conducted by a dramatically reduced set of organizations and results demonstrated extensive multiplex interdependence. From an individual organization's perspective, this means that they navigate multiple activity types. For instance, engaging in referrals, shared training, and case coordination combined is reasonably more intensive than engaging in referrals alone. Findings in this study therefore support the pursuit of questions related to how multiplex participation develops and its related consequences.

Density. While the number of participating organizations was high across tasks, the extent of that participation varied and was considerably limited in some aspects (per density scores).Thus, again, exploring factors related to an organization's formation of multiplex relationships can help to explain this variability and inform how to approach the design of future relationships. As measured, the examination of density scores in this analysis demonstrated the degree to which organizations collectively engage to serve children and families across specific tasks and resulted in numerous key findings and implications.

First, referrals were overwhelmingly identified as the primary way in which organizations interact, signifying that organizations intensely rely on the resources and services of other community organizations to meet the needs of clients. The dominance of referrals was a striking finding and illustrates that the infrastructure facilitating referrals is a distinctive core and community-wide component of serving children and families. Likewise, its dominant scale signifies that infrastructure for referrals and efforts to alleviate related challenges (e.g., "sharing

information" and "familiarity") should be priorities to improve network functioning. As is, the cohesion of services seems vulnerable considering the rate of referrals relative to other means of communication and interaction, offering a potential explanation for the frequently articulated idea that clients 'fall through the cracks.'

Second and related, the extensive recognition among organizations around referrals points to an immediate potential for network development. It identifies ways in which the network can build on relationships that are already in place, but are not fully maximized. In other words, referral relationships indicate shared clients or at least mutual contact with clients and may then serve as a platform for organizations to connect in additional means of collaboration.

Third, the scope of the remaining tasks outside of referral activity revealed considerably less cohesion and varied significantly. For instance, the difference in density between case coordination and numerous other activities suggests that organizations have coordinative conversations about service delivery, but are not equally supporting each other in more tangible capacities, such as sharing resources, or formally measuring the outcomes of their joint efforts. Such measured deviations across tasks offer community stakeholders information to consider as they strive to build network relationships in ways that best support community goals.

Fourth, one interpretation of the differences in density among activities is that the arguably more-formalized processes – shared training, joint programs, and shared resources – are less prevalent. Comparatively, processes that are reasonably accomplished with less procedural infrastructure have a higher occurrence. This understanding provides translational opportunities for organizations to leverage the strengths of the network's capacity to potentially build innovative and practical approaches to meeting community needs.

Average Degree Centrality. Adding to the understanding of cohesion, average degree centrality scores raise specific awareness for how organizations manage levels of engagement in the network, and offer valuable insight for administrators and policy-makers in their planning and decision-making. In this regard, the full range of values observed in this study are important to highlight, as organizations with maximum values in certain activities likely have to manage higher incurred transaction costs. For example, maintaining familiarity with the eligibility requirements and contact information for the max number of referral relationships (n = 86) is considerable in scope. Likewise, coordinating cases with 58 organizations is an expansive process of information sharing. Such high max values call for policies and dedicated funding to facilitate the immense degree of coordinated response among certain organizations to meet the multifaceted needs of children and families. This recommendation is bolstered by the qualitative finding that "the 'cost' of collaborating" is a prominent challenge experienced in the network and is a foremost concern given that research is fraught with data that demonstrate the negative consequences of poor case coordination (Ayasse, Aonahue, & Berrick, 2007; Rabin, 2011).

The range of degree centrality scores also help to quantify a potential burden for case managers working in organizations responsible for balancing expansive interconnection (i.e., those with max values). How these particular organizations experience turnover is one area for future research, especially as turnover is a critical topic in child welfare scholarship and often focuses on the functioning internal to an organization. It is differentially evidenced in this study as a *network-wide* challenge with effects extending beyond the singular institution of occurrence, exponentially expanding its potential scope and influence. For immediate consideration in practice, orienting new staff in an organization that has high degrees of interconnection is

expected to involve a higher learning curve and longer "catching-up" period, thus further threatening the continuity of cases affected during staff transitions.

Centralization. Having discussed the extent of interconnecting ties, centralization scores add insight for interpreting data by identifying the structural pattern among ties. More centralized networks are reasoned to have higher dependence on one or a few central organizations in terms of the policies, funding, and other decisions made by that/those organizations. Vice versa, in a less-centralized network, the quality of services across the community is reasoned to be less-vulnerable to the health and success of a single organization or a handful of organizations. In this light, the connectivity measured in this study helps to explain why challenges often acknowledged in the literature such as "turnover" and "organizational bureaucracy" (Kim & Kao, 2014; Lewandowski, 2003), were evident in the data. It is clear that events in one organization are not isolated but are felt throughout the network.

In this study, the referral and case coordination networks were the most centralized, suggesting that these tasks are comparatively more dependent on more central organizations, and that the procedures and decision-making among central organizations in each of these tasks ripple through the community. The lower centralization score in the shared training network is likewise notable. Research suggests that relationships between organizations contribute to the dissemination of evidence-based practice (Douglas et. al, 2013) and that centralized network structures are more efficient in this capacity (Valente et al, 2007). Data in this study were not explored in a way to identify how dissemination functions explicitly at this research site, yet the decentralized structure of the shared training network calls for closer examination to identify where gaps in communication exist, and to pinpoint where the transfer of knowledge around policies and evidence-based practice needs to be bolstered. The measured case coordination

relationships indicate that shared knowledge among organizations is warranted, and suggest increasing the relatively smaller density and less-centralized structure of the shared training network in ways to more closely align with case coordination efforts.

Subgroups. The final measure of cohesion examined in this study focused on subgroups between the *case coordination* and the *joint evaluation* networks. The identification of cohesive substructures is a common point of interest for network analysts. Krackhardt (1998) proposed the use of simmelian ties in this regard, extending Granovetter's (1973) strength of weak ties theory to focus on triads instead of dyads. Triads are noted to involve different interactions than dyads. For example, participants in a triad have less individuality and power in comparison to a dyadic relationship. In addition, the presence of a third party may moderate conflict (Simmel, 1983). As such, Krackhardt concluded that "the key to understanding the quality of a tie between two actors can be reduced to asking whether it is part of a strong triad or not" (Krackhardt, 1998, p. 24).

While a full examination of substructure across tasks was beyond the scope of this study, an important outcome was the identification of minimal subgroups in the evaluation network (subgroups=two), in comparison to the case coordination network (subgroups=50). This distinction not only demonstrates that substructures do not routinely form per the size of the network, but the identified deficiency in collective evaluation efforts relative to the shared clients is an informative observation. Given that evidence from this study supports that interventions in one organization are potentially shaped by other organizations, per referral and case coordination participation for instance, the lack of joint structure around evaluation is a high stakes area for targeted development to match the existing strength of case coordination relationships and bolster evidence-based practice.

RQ2. How does Structure Differ and/or Overlap between Prevention and Service Delivery Tasks?

While the categories of *prevention* and *service delivery* may have distinctive components conceptually, data in this study revealed that their separation is in some ways artificial in practice. Notably, the density of the PN and SDNwr were similarly matched rather than one dominating the landscape of interorganizational activity. Instead, it was referrals alone that dominated the landscape. Qualitative data offered more depth of understanding in which distinctive contrasts were evident between prevention and service delivery, inclusive of referrals, yet a theme of inseparability in which key informants described service delivery as preventive and labeled them "one in the same" was also evident. This notable finding lends support to the conception of preventative intervention, and suggests that decisions and behaviors among organizations are not conceived in singular ways.

Despite the similar densities, findings of different prominent actors in each network and different structural patterns have practical implications. First, the identification that different prominent organizations, per realm, distinguish prevention from service delivery in a way that density scores did not reveal, offers tangible points of information for the community to consider. For example, communication between the most organizations in the prevention network with the most prominent organizations in the service delivery networks – each with recognition of their positionality – is recommended for communicating needs and aligning efforts. Currently, Family Connection is highly central (i.e., one of the top three) in each network and is therefore expected to have the broadest grasp of community efforts across the 11 activities measured in this study. Armed with this evidence, stakeholders are better informed to make strategic decisions in the community.

The difference in structure between prevention and service delivery is also an important finding. The comparatively centralized service delivery network strongly contrasted the decentralized prevention network. This is a structural difference that emerged specifically out of the complexity-informed, network perspective here, and helps to explain the qualitative contrast "Exploratory vs. Set Criteria", in which prevention was noted to be less-defined. Higher centralization of both service delivery networks suggests that they function in a state of more centralized controls and may be more suitable for efficient communication and decision-making (Valente et al., 2007). The calculated reciprocity rates for each activity also align with this expectation; specifically, there was slightly higher mutual agreement for service delivery ties than prevention ties.

The reciprocity rates were notably low overall, although, low reciprocity is not an unusual finding considering other research on human services (Provan et al., 2003; Proval et al., 2010). Still, high uncertainty of relationships was evident across activities. One explanation to consider for the slightly lower reciprocity specific to prevention activities is definitional weakness on the survey. Although, via this explanation, activities that are more intangible (e.g., joint advocacy) versus more tangible (e.g., shared resources) should have higher disagreement. Instead, similar reciprocity rates across prevention activities were observed, and support that low rates may not relate to the clarity of the definition, but that the relationships themselves may be more ambiguous. In other words, the lower reciprocity rates may reflect that organizations have loose or less-formalized connections regarding prevention, an explanation that is consistent with the finding that the prevention network is less-centralized, as well as the 'Exploratory vs. Set Criteria' contrast observed in the qualitative data.

Given the described lack of resources for prevention in the "Not Funded vs. Funded" contrast, building collaborative efforts may be especially critical in the prevention network. This could contribute to creatively stretching resources around efforts that would not be achievable without wide contribution. As is, data communicated that external infrastructure is not in place to financially support prevention efforts in the same way as service delivery, and the comparatively small size and minimal density of the *fundraising* (density = 1.9%) network seems unlikely to counteract lacking resources. The challenge of "the 'cost' of collaborating" also aligns with the difficulty of moving community efforts past a crisis-orientation evidenced by the "Backseat vs. Urgent" contrast. In light of the high costs that the U.S. incurs with incidents of child maltreatment (Fang et al., 2012), recommendations for shaping the network's prevention connectivity and funding for collaborative prevention relationships are particularly salient to assuage the barriers prevention efforts face. Informed by SNA, organizations can make strategic choices to engage in more financially supportive relationships – shared resources or fundraising – to achieve goals that the infrastructure of any one institution may not support.

RQ3. What Benefits and Challenges are Experienced When Interacting with Other Organizations in Child Maltreatment Prevention and Service Delivery?

Turning to the final research question, identifying the benefits and challenges experienced in the network informs how to structure relationships in ways to promote benefits, while also reducing challenges. In this light, benefits and challenges are processes of 'feedback' per complexity theory that shape the choices and behaviors of network members, and potential adaptation of the network as a whole. For example, the challenge of "the 'cost' of collaborating" may influence an organization's choice to participate in partnerships, and certainly the degree to which it participates. Understanding, then, how benefits and challenges are experienced can be

used by administrators, policy-makers, funders, and other stakeholders in efforts to maximize a network's success, perhaps even contributing to how that 'success' is defined given the observed layering of benefits evident in these data. The following discussion highlights the findings specific to RQ3 to this end.

Challenges experienced in the network. The most prevalent challenge experienced among organizations, according to the survey data, was "time". The qualitative data yielded a broader version of this challenge, "the 'cost' of collaborating". Time, funding, and resources are likewise evident as challenges in the interorganizational literature, as noted by O'Toole's (1986) description of the limited effectiveness for unfunded, "tack on mandates" and examples in child welfare such as case planning meetings not being billable for service providers (Green, Rockhill, & Burrus, 2008). SNA applications help to further explain the prominence of "the 'cost' of collaborating" as a challenge. For example, the range of degree centrality scores in this study revealed the high number of relationships some organizations maintain and offer a tangible point of data for funding bodies and policy-makers to consider when making decisions for how to establish and finance collaborative expectations.

Together, SNA findings and the prominence of "the 'cost' of collaborating" challenge lends strong support to the need for *dedicated* resources to fund and staff collaborative efforts. Community organizations expressed an overwhelming investment in collaboration through the benefits they described, indicating little need to further incentivize, but they also expressed being insufficiently staffed and funded to achieve the level of collective engagement that they envision. Instead, the capacity they achieve was self-described as limited – requiring sacrifice in other areas – and lacking committed follow through when dedicated resources were not available to push initiatives forward.

Notably, while ‘time’ was the most universally identified challenge per the survey, and was prevalent in both categories of prevention and service delivery, results indicate that challenges other than ‘time’ were differentially experienced among organizations on service delivery tasks. Strategies to mitigate challenges, other than ‘costs’, may therefore be best addressed through initiatives that are tailored to subsets of organizations, rather than blanketed. For example, “hard to tell who has responsibility for tasks” and “who to call” were both indicated as challenges by 40% of organizations. However, they were widely separated when mapped in Figure 9 indicating that they are not experienced by the same 40% of organizations. While there is likely some overlap, one explanation is that organizations struggling to negotiate roles and responsibilities may already know ‘who to call’. As such, initiatives to mitigate the challenge of ‘who to call’ are certainly warranted to reduce uncertainty among 40% of the network members, yet tailoring such initiatives to the subpopulation of organizations experiencing this challenge may be a more efficient allocation of resources than maintaining a community-wide effort, particularly when resources are scant. Notably, the challenges specific to prevention were largely clustered when data were analyzed and seemed to be experienced more similarly across organizations. They therefore may be reasonably mitigated through community-wide strategies.

Challenges are local and evolve. When considered in relation to past research, results of this study support that challenges in one contextual location do not mirror those in other locations and, more specifically, they evolve over time; they are not fixed. For example, previous examinations of collaborative relationships involving child welfare identified ‘trust’ to be one of the greatest interorganizational barriers (Green, Rockhill, & Burrus, 2008). A striking finding of this study was that while ‘trust’ was communicated as a current challenge in this sample, it was

not the most prominent or even among the most prominent of challenges identified. Some references to ‘mistrust’ were even framed in a historical context, such as descriptions of relationships during the early stages of collaboration. It is apparent, then, that an evolution of relationships has taken place whereby trust among organizations has developed overtime, thus resulting in its lesser dominance in this sample than literature would suggest.

This observation indicates that challenges may be experienced differently at different stages of network development, as would be expected in a CAS wherein feedback processes shape new decisions of engagement and new behaviors, and contribute to adaptation. Lending further support, ‘trust’ was alternatively evident as an achieved benefit. Indeed, there were clear relationships between numerous challenges and benefits, seemingly along a continuum. For example, “different professional perspectives” and “balanced professional perspectives”, “competition” and “reduced competition”, “sharing information” and “shared information”, “different agency goals” and “achieving shared goals”. This, itself, is a demonstration of adaption in the network. What is challenging about interacting in the network seems to potentially be the very thing that is the desired benefit. As such, many of the benefits of collaboration are not being achieved without adaptation that is informed specifically by overcoming challenges.

To further underline the importance of understanding challenges locally, a few others that emerged in this study notably deviated from the literature. ‘Inadequate resources’ which included time and staff, has been identified as a minimal barrier between child protection and mental health staff in other settings (Darlington et al., 2004), but was prevalent in this sample. Scholars have also suggested that environmental uncertainty may act as an attractor that incentivizes organizations to limit interaction in an attempt to tighten control of their environment (Meyer,

1993). A similar reaction was described per the challenge of "competition" in this sample. However predominantly, organizations indicated that relationships in the network were a benefit that helped them to navigate the political, policy and funding uncertainty in the environment, and that they sought communication with each other to develop solutions rather than limit interaction – the "able to locally weather change" benefit.

Further, challenges that were evident in the health-related literature, such as *geographic locations*, *loss of autonomy*, and *not enough credit* (Harris et al., 2012), were minimally evident in this study. Given these discrepancies, further examination of each challenge along with the ways in which challenges interact is needed to allow for greater integration with past research and to offer more explanatory insight. Findings from this study also suggest that in order to build a deeper and more pragmatic understanding of challenges, research should be designed to capture the complex interrelationship between challenges and benefits specifically. Overall, the identification of challenges in this study was extensive (15) and underscores many routes for future research.

The thread of instability. The identification of 'instability' as a common thread across challenges was a prominent finding of this study and has a variety of implications, including concern for the implementation of overarching policy without local flexibility. Specifically, the presence and extent of instability across network dynamics supports that a network does not return to a preexisting state and rather experiences continual change as complexity theory posits. It, likewise, suggests the need for built-in means for adaptation. Policy and practice that anticipates, and in ways embraces instability, may better equip organizations to navigate their networked environment. One key informant acutely summarized this finding, as referenced in Chapter 4.

> *Each of our agency's policy decisions are ever-changing and moving. We need to have a county protocol that kind of agrees to work together in the midst of all those changes*…(P42)

Considered further, given that benefits are deviations from a previous state (e.g., *heightened* financial standing or *developed* trust*),* findings in this study suggest that 'change' itself is not the hurdle. Rather, it is the nature of the change that matters and how change is perceived, anticipated, and managed. This is consistent with 'instability' not being supported as a standalone challenge, but rather found within challenges – an important distinction with different implications. Certainly, attempting to eliminate change differs from designing a network that is flexible, anticipates change, and is filled with a workforce skilled in managing change. Such an approach is a more pragmatic goal, per the findings in this study, than seeking to maintain equilibrium, and is similar to the notion discussed earlier of seeking balance between rigid governance structures and those that facilitate the persistent change present in collaborative service delivery networks.

Notably, Provan and Milward's seminal (1995) comparison of four mental health networks also concluded with findings related to instability. They interpreted the network in their sample "undergoing rapid and substantial change" to be least effective and the one characterized by 'stable' leadership and relatively high funding to be most effective. Reflecting on their conclusion in conjunction with the observations in this study and a complexity theory lens, the concept of 'stability' may be more precisely understood in terms of the exact mechanisms through which an instance of 'stability' or instance of 'instability' is linked to network effectiveness. The positives of stable community leadership are arguably not dictated by 'stability' alone. For example, "stable" leadership could easily result in diverse scenarios, such as

a community thriving under the benefits of positive personal relationships or struggling to work around a history of toxic interaction. As such, examining the explicit context and mechanisms through which change and/or instability is experienced is recommended with regard for its continuous nature. This deviates from research investigating change from a perspective of punctuated equilibrium whereby stable states are interrupted by rapid upheaval and then return (Jones & Baumgartner, 2012). Findings in this study instead suggest that change should be conceived as a constant and demonstrate the utility of both complexity theory and the application of SNA as means to reveal and explain the dynamic interconnection in which change manifests.

Benefits experienced in the network. Given the limited evidence linking performance outcomes with coordinative interventions in child welfare (see Glisson & Hemmelgarn (1998) for an important exception), questions of benefits remain largely unanswered, and the grand questions of 'if' and 'how' collaboration is effective still exist. The findings in this study suggest that organizations recognize a positive impact on clients and the community, specifically as a result of their interaction with other organizations. In particular, the benefits listed on the survey instrument were selected by a large majority of participants, indicating that organizations have positive experiences interacting in the realms of both prevention and service delivery.

These findings make a significant contribution given that the research on collaboration in child welfare reviewed for this study largely focused on challenges, less on benefits. This study serves to inform both and indicates that they themselves are linked in dynamic processes that shape the network's structure and function. Further, the results found in this sample were divergent from other human service network studies that have included similar measures of benefits, and therefore reinforce the need for further examination specific to child welfare contexts. For example, 'acquisition of additional funding or other resources' was the primary

benefit selected among organizations working on cancer research, inclusive of service delivery and treatment organizations (88.9%) (Harris et al., 2012). However, financial benefits were the least selected among this study's sample.

A further contribution made by this study is the identification of a model of benefit levels as illustrated in Figure 12 on page 134. In the construction of this figure, 1) relationships between organizations were linked to improved client and community services, 2) the benefits at the organizational-level in a child welfare context were clarified, and 3) network-level benefits were newly identified and distinguished as a separate layer. Fundamentally, the identification of different levels of benefits demonstrates the flaws of any single measure of performance for network outcomes. The emergence of network-level benefits from the qualitative data establishes the network as a distinct functioning entity – rather than coexisting component parts. As such, interaction in a network can result in benefits at both the participating organizational-level and the network-level, each informing how clients and the community are better served. These levels are separate and can likewise diverge. As conceived, an organizational-level performance measure should not be assumed to indicate the health of the network or vice versa. Applying the model reflected in Figure 12 in future research can more precisely explore the ways benefits function across-levels and be further developed.

Summary of Discussion

Taken together and in the broadest terms the results of this study center around *interdependence* and *change*. Data revealed child welfare to be an interdependent and multidisciplinary intervention process that undergoes continual change. In this application, the word intervention is meant to reflect that organizations engage in behavioral, intervening, ways. The network's boundary, size, referral and case coordination densities, overlapping participation

between prevention and service delivery, manifestation of "organizational bureaucracy" and "turnover" as challenges across the network, and network-level benefits all contribute to the characterization of child welfare practice as strongly interdependent. Continuous change was consistently evidenced by instability within challenges; the apparent evolution of challenges at different stages of network development, per continual feedback (i.e., trust can be gained and then lost); and the process of adaptation occurring between challenges and benefits. A few notable implications are summarized in the next section to highlight these overarching conclusions.

Highlighted Implications and Future Research

This study's explicit purpose of examining interorganizational relationships was designed to ultimately inform holistic and multidisciplinary responses to child maltreatment. The specific combination of network data and qualitative data offer the opportunity for the "most sophisticated" (Cross et al., 2009, p. 325), understanding of how service delivery occurs in a given context. In this study, data represented the behavioral links between organizations and detailed the experiences of organizations working collectively to support the following overarching implications related to interdependence and continual change.

Policy and Practice Implications

Among other evidence of interdependence, the degree of referral activity speaks to the multi-faceted needs of families, and is evidence that interventions by one organization are impacted – if not reliant – on the success of interventions in another organization. As such, parsing out exactly what it is about interventions that work or fail cannot be achieved in singular program evaluations. Data, instead, demonstrate that context-specific research designs are needed to more fully explore the complexity of interdependent interventions.

Likewise, policy-makers should perhaps hesitate to hold any one entity accountable for performance measures without recognition for the degree of interdependence as evidenced by this study. This is an especially pertinent implication in light of the current performance-based environment in child welfare, inclusive of financial incentives and financial penalties in connection to performance outcomes (McBeath, Briggs, & Aisenberg, 2009). It also deviates from prevalent practices of accountability in child welfare, such as Stevens and Hassett's (2007) observation that "the linear approach to risk and its consequence lead policy makers and organizations to encourage *cause and blame* explanations for harm to children" (p. 134).

Related to both interdependence and continual change, there is a clear need to build infrastructure for collaboration that is flexible. Rigid funding streams are not likely to accommodate the diverse possibilities of need that arise, or the continuous changes that occur in a networked environment. Further, rigid funding is not likely to accommodate the diverse potential of collaborative response. Indeed, if funding and governance structure is inflexible it may limit the freedom for organizations to interact, learn from, experiment and locally evaluate their collective effects. The presence of instability within challenges thus enhances the concern for the fit of traditional governance structures with complexly interwoven practice settings.

The negative orientation to instability described by key informants and challenges such as "role clarity" strongly warn against promoting full organic freedom, but findings hint at the need to identify balance between flexibility and rigidity. It may be that this balance is achieved through process mechanisms, rather than overall structure. For instance, while mechanisms were not explicitly identified in this study, reflection on the qualitative analyses strongly indicates that *open and frequent communication* is one such mechanism to explore in future research. Overall, the current evidence of interdependence suggests as did Bogason and Toonen (1998), that

"people working in government and administration will have to think of organization as an external, not internal activity" (p. 205). In this sample, 83% of organizations reported that administration spent less than 50% of their time working across organizations, compared to working on internal management, indicating that managing network interdependence is not currently prevalent and would require a shift to achieve.

Continuous change also promotes the need for policy to keep pace with how challenges evolve. It is evident that stakeholders cannot assume that because a challenge has been alleviated, it will remain so. Per these findings, tackling challenges must be matched with persistent and incremental recognition and response by stakeholders. Likewise, results demonstrate the need for careful attention to how changes are implemented and communicated – especially changes emanating from highly centralized organizations. SNA is particularly valuable in identifying the more central organizations and the more centralized tasks, to which such attention would be particularly needed.

Lastly, the measured interdependence in this study offers a strong rationale for integrating interprofessional learning mechanisms in social work education. Social work education, particularly Title IV-E or child welfare track curriculum, that features interprofessional components (e.g., practicums that include short rotations in targeted central organizations) would help to prepare the child welfare workforce for utilizing diverse community organizations as an extension, or integration, with internal interventions. The goal not strictly being recognition of interdependent processes, but reasonably to foster such mutual benefits as *balanced professional perspectives*, *increased empathy*, and *camaraderie* among professionals. Findings also illustrate that preventative intervention is practiced in the field and reinforce that

curricula around advocacy, fundraising, and community development is fundamental for social workers entering direct-practice roles, not reserved for macro practice concentrations.

Theoretical Implications

Overall, the results of this study provide support for the use of complexity theory and SNA in context-specific research applications, and recommend its implementation in other settings. The fit of complexity theory for informing the field of social work has been noted by scholars (Hudson, 2000; Trevillion, 2000; Wolf-Banigin, 2009), yet its applied value remains largely untapped. This dissertation offers one example of the theory's concreate utility. It demonstrates SNA as a pragmatic method for applying complexity theory, and combines SNA with qualitative methods that together offer robust tools for making sense of the complicated practice and policy implementation systems that are paramount in the social work profession.

In future applications researchers are encouraged to embrace context and weave it into research designs to extract rich and comprehensive understandings of structure, function, and effectiveness. Repeated and iterative applications of such designs will cumulatively have bearing on understanding the "why" and "how" questions related to what takes place in complexly interwoven service processes. Such a body of research can help to inform how we design policy and practice interventions for child welfare and other human service systems. It is important to note that researchers embarking on the combination of SNA and complexity may find the process itself to take on properties that are profoundly complex and dynamic. The implementation of this dissertation as an exploratory effort encountered emergent shifts, such as unexpected data collection, and required numerous choices throughout to analyze and interrelate data. As such, researchers are cautioned that this approach requires a certain degree of ontological and epistemological comfort with uncertainty, and willingness to follow shifting

threads of research as they may emerge. Corollary to this however is the potential to develop rich and deep understanding of the very complex person-in-environment circumstances of central interest to social workers.

References to theoretical implications have been made throughout this chapter denoting how evidence in this study aligns with the posited principles of complexity theory and SNA. The following two implications however are added as considerations for honing the conceptual framework developed for this inquiry. First, this study's conceptual framework designated organizational schemata singularly, yet the identification of network-level benefits and the mutually experienced challenges evident in the data raise consideration for how schemata may converge across the network. Second, the layering of benefits in these results likewise suggests that there are network-level influences on the fitness landscape, as well as network-level adaption. Further refining the understanding of schemata, the fitness landscape, and adaptation at the network-level are critical areas for future research, and can potentially enhance the application of theory to inform research, policy, and practice.

Directions for Future Research

This section discusses the implications of this study for informing future research that examines child welfare and other human-service delivery systems with guidance from complexity theory and a network-wide perspective.

The first recommendation is to more deeply examine referral interactions, including what schemata and fitness landscape mechanisms may have contributed to the scale of referral activity observed in this study, and how this scale compares to the presence and pattern of referrals in other communities. A closer examination of the mechanisms used to navigate challenges and achieve benefits is also warranted, including a conceptualization of benefits and challenges as

mutually-informing and potentially related to network adaptation, as observed in this study. Further analysis can investigate within what context and by what means benefits and challenges come to exist and more closely examine their interconnection. Attention to "the 'cost' of collaborating" in future analysis, particularly in relation to the various benefits, can help to unearth strategies to manage the evident substantial 'costs' and still achieve desired advantages.

Additionally, as efforts for joint evaluation were found to be lacking in this investigation, enhancing knowledge regarding the structure and success of existing joint evaluations may be particularly instructive for practice. For example, exploring the antecedents for such relationships and what makes the implementation of joint evaluation particularly difficult or successful can help to drive evidence-based practice. The current degree of joint evaluation activity contrasts with the external political and funding environment that promotes evidence-based practices in child welfare, inclusive of a performance focus (see McBeath, Briggs, & Aisenberg, 2009 for a review of this trend). What, then, incentivizes and facilitates joint evaluation are critical considerations for future research. This study also supports that multiple performance measures across organization, network, and community/client-levels are justified and could be included in the design of such evaluative work and future network research designs.

Given the overarching evidence of continual change, future research should explicitly be attentive to processes of change and adaption, perhaps tracking adaptation or including 'adaptability' as a performance measure. According to the findings presented here, examining adaptability would be warranted not only at the organizational-level, but also at the network-wide-level, including considerations for the role network *structure* plays in a network's ability to adapt, and/or how the stages of a particular network's development and/or benefits and challenges in a network may lend support to or constrain its adaptation.

Such research on adaptation may have critical implications for how public policy is written and implemented. Rhodes and MacKechnie (2003) noted that “much of the current public administration theory and practice is still based on neoclassical economics in which the existence of equilibrium states is assumed and policy tools are developed accordingly" (p. 79). They, instead, recommend that “a CAS approach to public service systems would focus on the identification of strange attractors and their implications for public policy formation" (pg. 79). The findings of this study support the merits of such a shift and social work scholars have similarly promoted this view. Hudson (2000) critically reflected that “[general systems theory] has been co-opted by those whose primary interest is stabilizing individual dysfunction, rather than facilitating ongoing growth of individuals and communities” (p. 218). Findings from this study strengthen the rationale that social work should focus attention on continuous change, such as making questions of how to facilitate processes of positive feedback and its interpretation a priority in practice and future research.

Findings further support that future research should continue discriminating between tasks when measuring network relationships in human services; capturing the specifics of interaction allows for greater depth in a study’s applied value. In fact, key informants seemed to want more, rather than fewer options to categorize their relationships, and it is recommended that future research include an open-ended category to identify links that would be otherwise unrepresented to improve accuracy. Other aspects of this study’s implementation process may be informative for future efforts, such as the success of in-person data collection appointments and the success of shifting methods of recruitment from an appointment request to the electronic survey option or vice versa.

Finally, this study sets the stage for longitudinal analyses examining child welfare practice as a networked environment. Tracking emergent behavior over time in the form of changes to network structure and processes can help to understand how networks come to exist, how they evolve, and thus how to shape their evolution. Results of this study can serve as a foundation and point of comparison for future research in other implementation settings.

Concluding Remarks

The results of this study demonstrate the importance of understanding interconnection within context-specific settings. They exhibit the utility of using complexity theory and SNA methods for examining structural relationships, processes, and outcomes in child welfare. Similar combinations of theory and methods can likewise attend to the interconnection among organizational interventions and policy implementation in a variety of large, on-the-ground human service systems of care. Together, incorporating complexity theory and SNA expands the conceptual and analytical tool kit of social workers facing ‘wicked’ problems, and can improve the ways communities and organizations are knitted together in support of vulnerable children and families.

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APPENDICES

APPENDIX A

Example Email Correspondence to Schedule Boundary Specification Appointments

Dear_____

I am a doctoral student in the School of Social Work at UGA. Right now, I am in the process of data collection for my dissertation and you have been repeatedly mentioned as a contact person I should reach out to.

I am using network analysis methods to map the organizational landscape of service delivery and prevention for child maltreatment in Athens-Clarke County. I would love to tell you about the project and would be happy to meet or give you a call if it's a better fit for your schedule. Do you have a 20-30 minute window in the next few days?

Dr. Shari Miller (semiller@uga.edu) and Dr. Bert Ellett (aellett@uga.edu) are the co-chairs of my doctoral committee and are working closely with me on this project. I sincerely hope it offers the Athens-Clarke County community useful information for network development and I look forward to talking with you soon.

Warm regards,

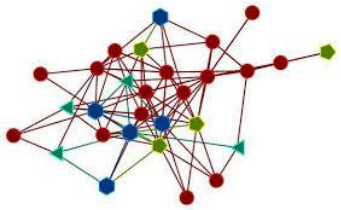
Marianna

Marianna Colvin, LGSW
PhD Candidate
School of Social Work
The University of Georgia
mobile: 205-616-8940
email: mlcolvin@uga.edu

APPENDIX B

Standard Recruitment Correspondence and Boundary Specification Instructions

The University of Georgia



Dear _____

As the Director/Coordinator with _____, you are invited to take part in a network analysis regarding activities to prevent child maltreatment and the delivery of services to children and families in Athens-Clarke County. Your organization has been mentioned by others as a collaborator on these issues and your input is greatly valued in the effort to more fully understand how agencies work together to serve and protect children and families.

This project will map the organizational landscape, similar to the visual example above, and results of this study will be provided to your organization to be used for planning, network development, grant writing, or in other ways to improve collaboration around child protection. A primary goal is to strengthen organizational practice and build community-capacity.

Only one respondent is needed from your organization and this can be any administrator who is most knowledgeable.

The study involves:

> Step 1: A brief response to the link below to make sure all relevant organizations are invited to participate.
> Step 2: The completion of a survey by you or another administrative representative from your organization (a single survey response).
> Step 3: Invitation to complete an interview to better understand your organization's experience participating in the network.

Your participation is completely voluntary. You will receive the survey in October and a follow-up email will be sent regarding a time to schedule an interview per your convenience.

> To complete Step 1, click on the link below to review the list of agencies that have already been identified. Next, add organizations per the criteria provided. This information is solely for the purpose of identifying relevant organizations to be invited to participate. It is a critical step in order to make sure that the network is inclusive and that organizations that are important to your organization are not overlooked.

Finally, do not hesitate to get in touch with any questions, including questions of clarification regarding potential network members. This study is the dissertation work of Marianna Colvin in the School of Social Work and is under the direction of Dr. Alberta Ellett (aellett@uga.edu) and Dr. Shari Miller (semiller@uga.edu). It is funded by the Graduate School Dean's Award. Marianna can be reached by Email: mlcolvin@uga.edu or Phone: (205) 616-8940. You are also welcome to contact either advisor at any time.

Thank you for your attention. It is sincerely hoped that this study offers the Athens-Clarke County community an opportunity to understand and enhance network collaboration around child protection.

Warm regards,

Marianna Colvin, LGSW
PhD Candidate, University of Georgia School of Social Work

Boundary Specification Instructions

This information will solely be used to help ensure that all network members are invited to participate when the survey is distributed.

Instructions
Please consider the organizations your agency interacts with on activities related to the prevention of child maltreatment and/or the provision of services to children and families who are also clients with the Department of Families and Children Services. Please add any organization(s), if not already listed, that meet this description and that your agency has interacted with **within the last 12 months**.

Activities may include one or more of the following: 1) Referrals sent, 2) Referrals received, 3) Case coordination, 4) Joint programs for service delivery, 5) Shared training, 6) Shared resources for service delivery, 7) Joint evaluation, 8)Fundraising, 9) Advocacy, 10) Education/awareness, 11) Joint programs for prevention, or 12) Shared resources for prevention.

Organizations that have been identified are listed below:

[List]

Please add additional organizations per the criteria above:

_____

_____

_____

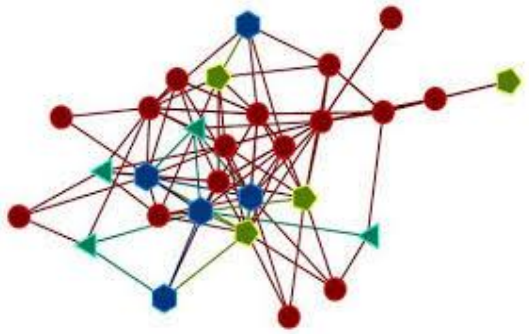
_____

_____

_____

APPENDIX C

Network Data-Collection Instrument



This survey is designed to better understand how organizations interact to prevent child maltreatment and in the provision of services to children and families who are also clients with the Department of Family and Children Services.

Directions: For each agency, there are a series of boxes regarding service delivery and prevention activities. Check **EACH** box that applies to the right of each agency's name - indicating that your organization has been linked in that specific way in the last 12 months with the agency listed. Leave any box that does not apply blank.

The following clarifications may help as you consider your responses.

- For example, your organization may provide housing services, and in doing so, serve clients who are also clients with the Department of Family and Children Services. In this case, questions should be answered regarding how your organization interacts with other organizations to serve clients.
- Mark activities related to service delivery and prevention separately. For example, your organization may have a joint program directed toward service delivery, but not a joint program directed toward child maltreatment prevention efforts.

Reference the following definitions when considering the ways your organization has interacted with other organizations in the last 12 months.

Service Delivery

Referrals received: Does your agency receive client referrals from the agency listed regarding families or children who are also clients with the Department of Family and Children Services?

Referrals sent: Does your agency send client referrals to the agency listed regarding families or children who are also clients with the Department of Family and Children Services (i.e., this includes making referrals when child maltreatment is suspected)?

Case coordination: Does your agency coordinate cases with the agency listed regarding families or children who are also clients with the Department of Family and Children Services?

Joint programs: Does your agency have any programs with the agency listed in which shared clients are served jointly through a formal collaborative effort?

Shared resources: Does your agency share resources with the agency listed such as funding, equipment or personnel, facilities, etc. when responding to or serving children and families who are also clients with the Department of Family and Children Services?

Shared training: Does your agency participate with the agency listed in shared training specific to responding to or serving children and families involved with the Department of Family and Children Services?

Evaluation Activities: Does your agency conduct joint evaluation activities with the agency listed regarding outcomes for families or children who are also clients with the Department of Family and Children Services?

Prevention

Fundraising: Does your agency participate with the agency listed on activities that raise funds to be used in the prevention of child maltreatment?

Advocacy: Does your agency work with the agency listed to influence government decisions/policies and/or civic engagement around collective goals of improving the safety and well-being of children.

Community Awareness/Education: Does your agency work with the agency listed to raise awareness and/or educate community members around issues of child safety and well-being.

Joint Programs: Does your agency have any formal collaborative programs with the agency listed to promote the prevention of child maltreatment?

Shared Resources: Does your agency share resources with the agency listed such as funding, equipment or personnel, facilities, etc. to promote the prevention of child maltreatment

1. What is the name of your organization: _____

2. Is your organization:
    1. Public
    2. Non-Profit
    3. For-Profit

3. How old is your organization?
    1. Less than 3 years
    2. 4 to 5 years
    3. 6 to 10 years
    4. 11 to 20 years
    5. More than 20 years

4. How long has the executive director of your organization been in the director position?
    1. Less than a year
    2. 1 to 3 years
    3. 4 to 5 years
    4. 6 to 10 years
    5. More than 10 years

    If you know the exact number of years, please list:_____

5. How many employees does your organization have?
    1. Less than 10 employees
    2. 11 to 25 employees
    3. 26 to 50 employees
    4. 51 to 150 employees
    5. More than 150 employees

    If you know the exact number of employees, please list: _____

6. How many volunteers does your organization maintain per year?
    1. Less than 10 volunteers
    2. 11 to 25 volunteers
    3. 26 to 50 volunteers
    4. 51 to 150 volunteers
    5. More than 150 volunteers

    If you know the exact number of volunteers, please list: _____

7. For each agency listed, there are a series of boxes regarding service delivery and prevention activities. Place a check in <u>each</u> box that applies to the right of each agency's name and leave any box that does not apply blank. Reference page 2 for the definition of each type of interaction.

At the end, please add any organizations you are involved with that are not listed but that you believe are valuable to your organization in helping address child maltreatment issues in the community.

	I. SERVICE DELIVERY Types of interaction in the last 12 months (For each agency, check **ALL** boxes that apply - indicating that your agency has been linked in that specific way with the agency listed)							II. PREVENTION Types of interaction in the last 12 months (For each agency, check **ALL** boxes that apply - indicating that your agency has been linked in that specific way with the agency listed)				
Organizations/ Agencies	**Referrals Received**	**Referrals Sent**	**Case Coordination**	**Joint Programs**	**Shared Resources**	**Shared Training**	**Evaluation Activities**	**Fund-raising**	**Joint Advocacy**	**Awareness/ Education**	**Joint Programs**	**Shared Resources**
Agency A (example)		✓	✓			✓				✓		
Action Inc.												
Adult and Non-Traditional Student Ed. Resources												
Advantage Behavioral Health Systems (includes Women's Services)												
AIDS Athens												
AK Counseling and Consultants												
Amerigroup												
Aspire Clinic												
Athens Area Chamber of Commerce												
Athens Area Community Foundation												
Athens Area Homeless Shelter												
Athens Associates for Counseling and Psychotherapy												
Athens Behavioral Medicine												

	SERVICE DELIVERY							PREVENTION				
Organizations/ Agencies	**Referrals Received**	**Referrals Sent**	**Case Coordination**	**Joint Programs**	**Shared Resources**	**Shared Training**	**Evaluation Activities**	**Fund-raising**	**Joint Advocacy**	**Awareness/ Education**	**Joint Programs**	**Shared Resources**
Athens Clarke County Library												
Athens Emergency Food Bank												
Athens Habitat for Humanity												
Athens Housing Authority												
Athens Land Trust												
Athens Latino Center for Education												
Athens Little Playhouse												
Athens Neighborhood Health Center												
Athens Peer Court												
Athens Regional Medical Center												
Athens Technical College												
Athens Tutorial Program												
Athens-Clarke County Dept of Housing and Community Development												
Athens-Clarke County Leisure Services												
Athens-Clarke County Police Department												
Athens-Clarke County Probation Services												

	SERVICE DELIVERY							PREVENTION				
Organizations/ Agencies	**Referrals Received**	**Referrals Sent**	**Case Coordination**	**Joint Programs**	**Shared Resources**	**Shared Training**	**Evaluation Activities**	**Fund-raising**	**Joint Advocacy**	**Awareness/ Education**	**Joint Programs**	**Shared Resources**
Athens-Clarke Literacy Council												
Banyan Tree												
Beech Haven Baptist Church												
Books for Keeps												
Boy Scouts of Northeast Georgia-Athens-Clarke County												
Boys and Girls Club of Athens												
Carl Vinson Institute of Government, UGA												
Casa de Amistad												
Chess and Community Conference, Inc												
Children First (includes CASA, Family Time, Safe Care, and SPARC)												
Children's Medical Services/ACCSANE												
Chosen for Life Ministries												
Clarke County Health Department -Teen Matters												
Clarke County Juvenile Court												
Clarke County Mentor Program												
Clarke County School District												

	SERVICE DELIVERY							PREVENTION				
Organizations/ Agencies	**Referrals Received**	**Referrals Sent**	**Case Coordination**	**Joint Programs**	**Shared Resources**	**Shared Training**	**Evaluation Activities**	**Fund-raising**	**Joint Advocacy**	**Awareness/ Education**	**Joint Programs**	**Shared Resources**
Clarke County Superior Court												
Community Connection of Northeast Georgia												
Council on Aging-Healthy Grandparents Program												
Counseling Assoc. for Well-Being												
Cultivating a Lifetime of Legacy, Inc												
Department of Family and Children Services - Family Independence												
Department of Family and Children Services - Social Services												
Department of Juvenile Justice												
District Attorney's Office												
Downtown Ministries												
Early Headstart/Headstart												
East Athens Development Corporation												
Ebenezer Baptist Church, West (Community Ministry Center)												
Empowered Youth												

	SERVICE DELIVERY							PREVENTION				
Organizations/ Agencies	**Referrals Received**	**Referrals Sent**	**Case Coordination**	**Joint Programs**	**Shared Resources**	**Shared Training**	**Evaluation Activities**	**Fund-raising**	**Joint Advocacy**	**Awareness/ Education**	**Joint Programs**	**Shared Resources**
Family Connection (Whatever it takes - neighborhood leaders)												
Family Counseling Service												
Family Treatment Drug Court												
Family Violence Clinic-UGA Law School												
Fanning Institute												
Foodbank of Northeast Georgia (includes Food 2 Kids Program)												
Friends of Advantage												
Georgia Conflict Center												
Georgia Department of Labor-Athens Career Center												
Georgia Legal Services- Athens Regional Office												
Georgia Options												
Girl Scouts of Historic Georgia												
Goodwill												
Hill Chapel Baptist Church												
Hope Haven												
Interfaith Hospitality Network of Athens												
Junior League of Athens												
Learning Ally												

	SERVICE DELIVERY							PREVENTION				
Organizations/ Agencies	**Referrals Received**	**Referrals Sent**	**Case Coordination**	**Joint Programs**	**Shared Resources**	**Shared Training**	**Evaluation Activities**	**Fund-raising**	**Joint Advocacy**	**Awareness/ Education**	**Joint Programs**	**Shared Resources**
Legal Aid and Defender Clinic												
Mercy Health Clinic												
New Covenant Church												
Northeast Georgia Red Cross												
Northeast Georgia Regional Commission-Workforce Investment Program												
Nuci's Space												
Oconee Heights Church												
Pathways Transition Programs												
Prevent Child Abuse Athens (includes Healthy Families)												
Project Family												
Project Safe												
Public Defender's Office												
Quality Care for Children												
Salvation Army												
Samaritan Counseling Center												
Sheriff's Office												
Shiloh Baptist Church												
Social Empowerment												
Solicitor's Office												
Sparrows Nest												

	SERVICE DELIVERY							PREVENTION				
Organizations/ Agencies	**Referrals Received**	**Referrals Sent**	**Case Coordination**	**Joint Programs**	**Shared Resources**	**Shared Training**	**Evaluation Activities**	**Fund-raising**	**Joint Advocacy**	**Awareness/ Education**	**Joint Programs**	**Shared Resources**
St. James United Methodist Church												
St. Mary's Health System												
The Ark												
The Cottage Sexual Assault Center and Child Advocacy Center												
Timothy Baptist Church												
UGA Center for Counseling and Personal Eval												
UGA Psychology Clinic												
UGA Reading Clinic												
UGA School Psychology Clinic												
Upward Bound												
Vocational Rehab												
Wee Read												
Wesley Foundation, Cross Trainers												
YMCA												
Other organizations: (please list and respond as above)												

Complete these questions by circling your response. Only respond to agencies that you indicated interacting with in the previous question.

	Is this relationship (1) **Contracted** - Your agency sends funds to or receives funds from the agency listed on a contractual basis. (2) **Otherwise formal** – Your agency is mandated by government policy to interact with this organization (3) **Informal**- Your agency interacts with this organization, but is not formally bound.	**Is this relationship** (1) less than 1 yr old (2) 1-3 yrs old (3) 4-5 yrs old (4) 6 to 10 yrs old (5) More than 10 yrs old	**On average, how frequently did your organization communicate with this agency regarding child maltreatment prevention or services to children and families?** 1= Yearly 2= Twice a year 3= Monthly 4= Weekly 5= Daily	**On average, how important is the communication with this agency?** 1= Un-important 2= Somewhat important 3= Important 4= Very important
Organizations/ Agencies	(please circle)	(please circle)	(please circle)	(please circle)
Action Inc.	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Adult and Non-Traditional Student Ed. Resources	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Advantage Behavioral Health Systems (includes Women's Services)	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
AIDS Athens	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
AK Counseling and Consultants	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Amerigroup	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Aspire Clinic	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Athens Area Chamber of Commerce	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Athens Area Community Foundation	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Athens Area Homeless Shelter	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Athens Associates for Counseling and Psychotherapy	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4

	Is this relationship (1) **Contracted** - Your agency sends funds to or receives funds from the agency listed on a contractual basis. (2) **Otherwise formal** – Your agency is mandated by government policy to interact with this organization (3) **Informal**- Your agency interacts with this organization, but is not formally bound.	**Is this relationship** (1) less than 1 yr old (2) 1-3 yrs old (3) 4-5 yrs old (4) 6 to 10 yrs old (5) More than 10 yrs old	**On average, how frequently did your organization communicate with this agency regarding child maltreatment prevention or services to children and families?** 1= Yearly 2= Twice a year 3= Monthly 4= Weekly 5= Daily	**On average, how important is the communication with this agency?** 1= Un-important 2= Somewhat important 3= Important 4= Very important
Athens Behavioral Medicine	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Athens Clarke County Library	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Athens Emergency Food Bank	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Athens Habitat for Humanity	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Athens Housing Authority	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Athens Land Trust	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Athens Latino Center for Education	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Athens Little Playhouse	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Athens Neighborhood Health Center	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Athens Peer Court	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Athens Regional Medical Center	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Athens Technical College	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Athens Tutorial Program	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Dept of Housing and Community Development	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Athens-Clarke County Leisure Services	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4

	Is this relationship (1) **Contracted** - Your agency sends funds to or receives funds from the agency listed on a contractual basis. (2) **Otherwise formal** – Your agency is mandated by government policy to interact with this organization (3) **Informal**- Your agency interacts with this organization, but is not formally bound.	**Is this relationship** (1) less than 1 yr old (2) 1-3 yrs old (3) 4-5 yrs old (4) 6 to 10 yrs old (5) More than 10 yrs old	**On average, how frequently did your organization communicate with this agency regarding child maltreatment prevention or services to children and families?** 1= Yearly 2= Twice a year 3= Monthly 4= Weekly 5= Daily	**On average, how important is the communication with this agency?** 1= Un-important 2= Somewhat important 3= Important 4= Very important
Athens-Clarke County Police Department	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Athens-Clarke County Probation Services	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Athens-Clarke Literacy Council	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Banyan Tree	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Beech Haven Baptist Church	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Books for Keeps	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Boy Scouts of Northeast Georgia-Athens-Clarke County	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Boys and Girls Club of Athens	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Carl Vinson Institute of Government, UGA	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Casa de Amistad	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Chess and Community Conference, Inc	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Children First (includes CASA, Family Time, Safe Care, and SPARC)	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Children's Medical Services/ACCSANE	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4

	Is this relationship (1) **Contracted** - Your agency sends funds to or receives funds from the agency listed on a contractual basis. (2) **Otherwise formal** – Your agency is mandated by government policy to interact with this organization (3) **Informal**- Your agency interacts with this organization, but is not formally bound.	**Is this relationship** (1) less than 1 yr old (2) 1-3 yrs old (3) 4-5 yrs old (4) 6 to 10 yrs old (5) More than 10 yrs old	**On average, how frequently did your organization communicate with this agency regarding child maltreatment prevention or services to children and families?** 1= Yearly 2= Twice a year 3= Monthly 4= Weekly 5= Daily	**On average, how important is the communication with this agency?** 1= Un-important 2= Somewhat important 3= Important 4= Very important
Chosen for Life Ministries	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Clarke County Health Department -Teen Matters	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Clarke County Juvenile Court	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Clarke County Mentor Program	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Clarke County School District	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Clarke County Superior Court	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Community Connection of Northeast Georgia	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Council on Aging-Healthy Grandparents Program	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Counseling Assoc. for Well-Being	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Cultivating a Lifetime of Legacy, Inc	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Department of Family and Children Services – Office of Family Independence	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4

	Is this relationship (1) **Contracted** - Your agency sends funds to or receives funds from the agency listed on a contractual basis. (2) **Otherwise formal** – Your agency is mandated by government policy to interact with this organization (3) **Informal**- Your agency interacts with this organization, but is not formally bound.	**Is this relationship** (1) less than 1 yr old (2) 1-3 yrs old (3) 4-5 yrs old (4) 6 to 10 yrs old (5) More than 10 yrs old	**On average, how frequently did your organization communicate with this agency regarding child maltreatment prevention or services to children and families?** 1= Yearly 2= Twice a year 3= Monthly 4= Weekly 5= Daily	**On average, how important is the communication with this agency?** 1= Un-important 2= Somewhat important 3= Important 4= Very important
Department of Family and Children Services - Social Services	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Department of Juvenile Justice	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
District Attorney's Office	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Downtown Ministries	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Early Headstart/Headstart	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
East Athens Development Corporation	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Ebenezer Baptist Church, West (Community Ministry Center)	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Empowered Youth (Gentlemen & Young Women on the Move)	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Family Connection (Whatever it takes - neighborhood leaders)	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Family Counseling Service	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Family Treatment Drug Court	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4

	Is this relationship (1) **Contracted** - Your agency sends funds to or receives funds from the agency listed on a contractual basis. (2) **Otherwise formal** – Your agency is mandated by government policy to interact with this organization (3) **Informal**- Your agency interacts with this organization, but is not formally bound.	**Is this relationship** (1) less than 1 yr old (2) 1-3 yrs old (3) 4-5 yrs old (4) 6 to 10 yrs old (5) More than 10 yrs old	**On average, how frequently did your organization communicate with this agency regarding child maltreatment prevention or services to children and families?** 1= Yearly 2= Twice a year 3= Monthly 4= Weekly 5= Daily	**On average, how important is the communication with this agency?** 1= Un-important 2= Somewhat important 3= Important 4= Very important
Family Violence Clinic-UGA Law School	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Fanning Institute	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Foodbank of Northeast Georgia (includes Food 2 Kids Program)	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Friends of Advantage	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Georgia Conflict Center	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Georgia Department of Labor-Athens Career Center	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Georgia Legal Services-Athens Regional Office	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Georgia Options	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Girl Scouts of Historic GA	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Goodwill	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Hill Chapel Baptist Church	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Hope Haven	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Interfaith Hospitality Network of Athens	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Junior League of Athens	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Learning Ally	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Legal Aid and Defender Clinic	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4

	Is this relationship (1) **Contracted** - Your agency sends funds to or receives funds from the agency listed on a contractual basis. (2) **Otherwise formal** – Your agency is mandated by government policy to interact with this organization (3) **Informal**- Your agency interacts with this organization, but is not formally bound.	**Is this relationship** (1) less than 1 yr old (2) 1-3 yrs old (3) 4-5 yrs old (4) 6 to 10 yrs old (5) More than 10 yrs old	**On average, how frequently did your organization communicate with this agency regarding child maltreatment prevention or services to children and families?** 1= Yearly 2= Twice a year 3= Monthly 4= Weekly 5= Daily	**On average, how important is the communication with this agency?** 1= Un-important 2= Somewhat important 3= Important 4= Very important
Mercy Health Clinic	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
New Covenant Church	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Northeast Georgia Red Cross	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Northeast Georgia Regional Commission-Workforce Investment Program	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Nuci's Space	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Oconee Heights Church	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Pathways Transition Programs	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Prevent Child Abuse Athens (includes Healthy Families)	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Project Family	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Project Safe	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Public Defender's Office	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Quality Care for Children	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Salvation Army	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Samaritan Counseling Center	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Sheriff's Office	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Shiloh Baptist Church	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Social Empowerment	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4

	Is this relationship (1) **Contracted** - Your agency sends funds to or receives funds from the agency listed on a contractual basis. (2) **Otherwise formal** – Your agency is mandated by government policy to interact with this organization (3) **Informal**- Your agency interacts with this organization, but is not formally bound.	**Is this relationship** (1) less than 1 yr old (2) 1-3 yrs old (3) 4-5 yrs old (4) 6 to 10 yrs old (5) More than 10 yrs old	**On average, how frequently did your organization communicate with this agency regarding child maltreatment prevention or services to children and families?** 1= Yearly 2= Twice a year 3= Monthly 4= Weekly 5= Daily	**On average, how important is the communication with this agency?** 1= Un-important 2= Somewhat important 3= Important 4= Very important
Solicitor's Office	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Sparrows Nest	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
St. James United Methodist Church	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
St. Mary's Health System	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
The Ark	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
The Cottage Sexual Assault Center and Child Advocacy Center	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Timothy Baptist Church	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
UGA Center for Counseling and Personal Eval	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
UGA Psychology Clinic	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
UGA Reading Clinic	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
UGA School Psychology Clinic	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Upward Bound	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Vocational Rehab	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Wee Read	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
Wesley Foundation, Cross Trainers	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4
YMCA	1 2 3	1 2 3 4 5	1 2 3 4 5	1 2 3 4

What are the **general benefits and challenges your organization experiences** when interacting with other agencies on child maltreatment prevention and/or in the provision of services to children and families? Please answer 'yes' or 'no' to each benefit and challenge listed below by placing a **check** in the appropriate box. Please answer both columns.

- If your organization **does not** interact on prevention activities (i.e., fundraising, advocacy, community education, joint programs, shared resources), please circle N/A and leave that column blank.
- If your organization **does not** interact on service delivery activities (referrals sent/received, case coordination, joint programs, shared resources, shared training, evaluation activities), please circle N/A and leave that column blank.

Benefits:	**Experienced with Service Delivery Activities**	**Experienced with Prevention Activities**
	N/A	**N/A**
a. Ability to serve my organization's clients better	❒ ❒ **Y N**	❒ ❒ **Y N**
b. Greater capacity to serve the community as a whole	❒ ❒ **Y N**	❒ ❒ **Y N**
c. Acquisition of additional funding or other resources	❒ ❒ **Y N**	❒ ❒ **Y N**
d. Acquisition of new knowledge	❒ ❒ **Y N**	❒ ❒ **Y N**
e. Acquisition of new skills in my organization	❒ ❒ **Y N**	❒ ❒ **Y N**
f. Better use of my organization's services	❒ ❒ **Y N**	❒ ❒ **Y N**
g. Building new relationships helpful to my agency	❒ ❒ **Y N**	❒ ❒ **Y N**
h. Heightened public profile of my organization	❒ ❒ **Y N**	❒ ❒ **Y N**
i. Enhanced influence in the community	❒ ❒ **Y N**	❒ ❒ **Y N**
j. Increased ability to reallocate resources	❒ ❒ **Y N**	❒ ❒ **Y N**
k. Encouragement to my organization	❒ ❒ **Y N**	❒ ❒ **Y N**
l. Other benefits (please list):	❒ ❒ **Y N**	❒ ❒ **Y N**
Challenges	**Experienced with Service Delivery Activities**	**Experienced with Prevention Activities**
a. Working with other organizations takes a lot of time	❒ ❒ **Y N**	❒ ❒ **Y N**
b. Working with other organizations takes a lot of resources	❒ ❒ **Y N**	❒ ❒ **Y N**
c.. Loss of control/autonomy over decisions	❒ ❒ **Y N**	❒ ❒ **Y N**
d. Having different agency goals	❒ ❒ **Y N**	❒ ❒ **Y N**
e. Difficulty due to geographic locations	❒ ❒ **Y N**	❒ ❒ **Y N**
f. Not enough credit given to my organization	❒ ❒ **Y N**	❒ ❒ **Y N**
g. Delay in my organization's ability to complete work processes	❒ ❒ **Y N**	❒ ❒ **Y N**
h. Navigating organizational bureaucracy (e.g., protocol or redtape gets in the way)	❒ ❒ **Y N**	❒ ❒ **Y N**
i. Unable to identify the appropriate collaborator (e.g., "who to call?)	❒ ❒ **Y N**	❒ ❒ **Y N**
j. Uncertainty of other organization's services, referral processes, and/or policies (e.g., "not sure what services are available or eligibility criteria)	❒ ❒ **Y N**	❒ ❒ **Y N**
k. Different professional perspectives among organizations	❒ ❒ **Y N**	❒ ❒ **Y N**
l. Interagency politics	❒ ❒ **Y N**	❒ ❒ **Y N**

m. Miscommunication among organizations	❒ ❒ Y N	❒ ❒ Y N
n. It is hard to tell which organization has responsibility for tasks	❒ ❒ Y N	❒ ❒ Y N
o. Frustration in dealing with partners	❒ ❒ Y N	❒ ❒ Y N
p. Other drawbacks (Please list):	❒ ❒ Y N	❒ ❒ Y N

Instructions: Please circle your response to the final questions.

10. Compared to one year ago, is the problem of child maltreatment in Athens-Clarke County:

    1. Much worse
    2. Worse
    3. About the same
    4. Better
    5. Much better

11. In a year from now, do you expect the problem of child maltreatment in Athens-Clarke County to be:

    1. Much worse
    2. Worse
    3. About the same
    4. Better
    5. Much better

12. How much do you agree or disagree with each of these statements about child protection efforts most of the time in Athens-Clarke County?

    1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree

a. Most organizations are involved in discussion, not just a few (please circle)	1 2 3 4
b. There is clear community leadership (please circle)	1 2 3 4
c. Collaborative efforts are able to move from talk to action (please circle)	1 2 3 4
d. The collaboration uses the abilities of all, not just a few (please circle)	1 2 3 4
e. Efforts have high visibility in the community (please circle)	1 2 3 4
f. Organizations in the collaboration trust each other (please circle)	1 2 3 4

13. Approximately, what proportion of time and resources does administration in your agency spend on activities across organizations compared to internal organization issues?

    1. Less than 10 percent
    2. 10 to 25 percent
    3. 25 to 50 percent
    4. 50 to 75 percent
    5. 75 to 90 percent
    6. More than 90 percent

14. What is your organization's role in addressing in child protection? Circle **ALL** that apply.
    1. Oversight
    2. Ensuring child safety
    3. Treatment to children and/or families
    4. Support Services to children and/or families
    5. Prevention
    6. Policy
    7. If other (please add as many roles that are applicable):_____

15. Which of the roles in the previous questions is your organization's primary role? Please list.

    _____

16. List up to four other organizations whose needs, goals, decisions, and/or expectations regarding child protection are generally taken into consideration by your agency.

    1. _____
    2. _____
    3. _____
    4. _____

Please provide an email or phone number for potential follow-up questions to help ensure accuracy.

Email:_____ **Phone:**_____

Thank you for taking the time to complete this survey

APPENDIX D

Semi-Structured Interview Protocol

****The questions asked in this interview are intended to provide a better understanding of each organization's experience in the network. Based on your familiarity, please respond from the perspective of your organization.

i. In what ways does your organization participate with other agencies on issues related to child maltreatment? (i.e., describe your organization's role in the network.)

ii. How did some of these relationships get started (i.e., what contributed to bringing your organization together with others to - share training or fundraise together [as applicable])?
    a. Describe the process of building this/these relationships.
        i. What was the most difficult hurtle?
        ii. From the perspective of your organization, what is the expected future of this/these relationship(s) (i.e., what makes the relationship(s) sustainable)?
        iii. What examples come to mind of when relationships/interactions have changed significantly?

iii. [If applicable] What differences have you observed between working on activities related to prevention compared to service delivery activities?

iv. Based on familiarity with _____name of organization_____, in what ways have you noticed interorganizational relationships to be important for child and family outcomes?

    a. (If) and how have interorganizational relationships helped to support your organization's ability to improve child and family outcomes?

v. From the perspective of your organization, what are this network's strengths?

vi. Describe the successes your organization [or the network] has achieved through collaborating with other agencies? What factors contributed to success [clarify how success is defined/perceived in this instance]?

vii. In what ways has your specific organization benefited from working with agencies in this network?

viii. Describe the challenges your organization has encountered when interacting with other agencies in the network?

a. Which of these is the most influential challenge or drawback your organization has experienced?
    i. most influential in relation to your organization's experience in the network
    ii. most influential in relation to outcomes for children and families

b. Based on your familiarity with this organization, what fuels this challenge/drawback (i.e., what are its origins/why it persists?).

ix. From the perspective of your organization, what changes would make the network stronger? More "effective"?

x. How long have you worked with your organization? Over the course of time, what changes have occurred in the ways organizations interact regarding child maltreatment? (prompt [if necessary]: maybe things shifted with the economic recession; media incidents; or political changes)
    a. What influenced how the network changed or responded?
    b. From the perspective of your organization, were these changes for better or worse?
    c. [If better] what made it better? [If worse] how could it be made better?

xi. [If agency conducts service delivery] How do clients experience services in the network as it is today?

APPENDIX E

Example Correspondence to Schedule a Data Collection Appointment

Dear_____:

I am a doctoral student in the School of Social Work at UGA. Right now, I am in the process of data collection for my dissertation and you have been repeatedly mentioned as a contact person I should reach out to.

I am using network analysis methods to map the ways organizations interact to serve children and families in Athens-Clarke County and the [name of organization] has been named by others as a collaborator. The project involves a survey and the invitation for a brief interview with someone from each organization identified, all of which can be done in one appointment! I am scheduling times in November and was wondering if you were available in the weeks of the 3rd - 14th. A few options are:

Monday the 3rd: 1:00 pm
Tuesday the 4th: anytime in the afternoon
Thursday the 13th: anytime in the afternoon

Feel free to suggest alternatives! I would love to tell you more about the project and would be happy to stop by or give you a call in the meantime to answer any questions.

Your input is greatly valued and I look forward to talking with you soon.

Marianna Colvin
PhD Candidate/Teaching Assistant
School of Social Work
The University of Georgia
mobile: 205-616-8940
email: mlcolvin@uga.edu

APPENDIX F

Electronic Survey Dissemination Correspondence and Reminder

Dear_____:

The network analysis survey for Athens-Clarke County is ready to complete.

_____ has been identified by other agencies as a collaborator on activities to serve children and families and/or prevent child maltreatment and your input is critical to more fully understand how agencies interact.

Input from each agency helps to accurately represent the network and information will be given directly back to organizations to be used for planning, network development, grant writing, or in other ways to understand and promote collaboration.

Participation is voluntary. You can **start, stop, and return** to the survey at your convenience. On average, it takes approximately 30 minutes to complete. For organizations with fewer relationships in the network, time for the survey will be substantially less, as there will be fewer organizations that will require response.

Only one response is needed per agency, making the time involved minimal per organization. **Note:** *please ensure that any respondent is at an administrative level, as perspectives may differ between administrative and frontline staff across agencies.*

A paper-based survey is also available. If you respond to this email, you can complete the survey during a 30 minute appointment to allow for questions and clarifications.

This project is the dissertation work of Marianna Colvin in the School of Social Work at the University of Georgia and is under the direction of Dr. Alberta Ellett and Dr. Shari Miller. It is sincerely hoped that this study offers the Athens-Clarke County community an opportunity to understand and enhance network collaboration. Thank you in advance for your participation and for the work you do daily in the Athens-Clarke County community.

As always, questions are welcomed! Do not hesitate to contact: Marianna Colvin, Email: mlcolvin@uga.edu; Phone: (205) 616-8940, or Dr. Alberta Ellett, Email: aellett@uga.edu, or Dr. Shari Miller, Email: semiller@uga.edu.

Warm regards,

Marianna Colvin, LGSW
PhD Candidate
School of Social Work
University of Georgia

Electronic Survey Reminder

Good morning,

As a cheery reminder, please take a few moments to complete the following survey to help understand community-wide interactions around serving children and families in Athens-Clarke County. Your organization has been individually named as a collaborator around these issues and participation from each agency is critical to achieve an accurate and useful representation of the network, even if you think that your organization's role is minimal. Without your input, the risk increases for misrepresenting or misunderstanding the network.

Your time will be reciprocated with detailed information given directly back to your organization for use in local

Despite parts that look lengthy, the survey consistently takes between 20-30 minutes to complete, and you can start, stop, and come back to it at your convenience!

Questions are welcomed! Many thanks in advance for your participation. It is absolutely voluntary and greatly appreciated.

Warm regards,

Marianna

Marianna Colvin, LGSW
PhD Candidate
School of Social Work
University of Georgia

APPENDIX G

Full List of Organizations Included in the Sample (*N*=105)

Action Inc.

Advantage Behavioral Health Systems (includes Women's Services)

AIDS Athens

AK Counseling and Consultants

Amerigroup

Aspire Clinic

Athens Area Chamber of Commerce

Athens Area Community Foundation

Athens Area Homeless Shelter

Athens Associates for Counseling and Psychotherapy

Athens Behavioral Medicine

Athens Clarke County Library

Athens Emergency Food Bank

Athens Habitat for Humanity

Athens Housing Authority

Athens Land Trust

Athens Latino Center for Education

Athens Little Playhouse

Athens Neighborhood Health Center

Athens Regional Medical Center

Athens Technical College

Athens Tutorial Program

Athens-Clarke County Dept of Housing and Community Development

Athens-Clarke County Leisure Services

Athens-Clarke County Police Department

Athens-Clarke County Probation Services

Athens-Clarke Literacy Council

Banyan Tree

Beech Haven Baptist Church

Books for Keeps

Boy Scouts of Northeast Georgia, Athens-Clarke County

Boys and Girls Club of Athens

Carl Vinson Institute of Government, UGA

Casa de Amistad

Chess and Community Conference, Inc

Children First (includes CASA, Family Time, Safe Care, and SPARC)

Children's Medical Services/ACCSANE

Chosen for Life Ministries

Clarke County Health Department (includes Teen Matters)

Clarke County Juvenile Court

Clarke County Mentor Program

Clarke County School District

Clarke County Superior Court

Community Connection of Northeast Georgia

Council on Aging-Healthy Grandparents Program

Counseling Assoc. for Well-Being

Cultivating a Lifetime of Legacy, Inc

Clarke County Department of Family and Children Services

Clarke County Department of Juvenile Justice

District Attorney's Office

Downtown Ministries

East Athens Development Corporation

Ebenezer Baptist Church, West (Community Ministry Center)

Empowered Youth Program

Family Connection (Whatever it takes - neighborhood leaders)

Family Counseling Service

Family Treatment Drug Court

Family Violence Clinic-UGA Law School

Fanning Institute

Foodbank of Northeast Georgia (includes Food 2 Kids Program)

Friends of Advantage

Georgia Conflict Center

Georgia Department of Labor-Athens Career Center

Georgia Legal Services- Athens Regional Office

Georgia Options

Girl Scouts of Historic Georgia

Goodwill

Hill Chapel Baptist Church

Hope Haven

Interfaith Hospitality Network of Athens

Junior League of Athens

Learning Ally

Mercy Health Clinic

New Covenant Church

Northeast Georgia Red Cross

Northeast Georgia Regional Commission-Workforce Investment Program

Nuci's Space

Oconee Heights Church

Pathways Transition Programs

Prevent Child Abuse Athens (includes Healthy Families)

Project Family

Project Safe

Public Defender's Office

Quality Care for Children

Salvation Army

Samaritan Counseling Center

Clarke County Sheriff's Office

Shiloh Baptist Church

Social Empowerment

Solicitor's Office

Sparrows Nest

St. James United Methodist Church

St. Mary’s Health System

The Ark

The Cottage Sexual Assault and Child Advocacy Center

Timothy Baptist Church

UGA Center for Counseling and Personal Eval

UGA Psychology Clinic

UGA Reading Clinic

UGA School Psychology Clinic

Upward Bound

Vocational Rehab

Wee Read

Wesley Foundation, Cross Trainers

YMCA

APPENDIX H

Table 13

Density Comparison among Activities

Type of Activity	**Avg. bootstrap difference**	**95% CI**	***p* value**
Referrals			
Education/Awareness	0.1189	0.0890, 0.1516	****
Case Coordination	0.1203	0.0967, 0.1478	****
Joint Advocacy	0.1396	0.1094, 0.1740	****
Joint Programs Service Delivery	0.1395	0.1119, 0.1714	****
Shared Resources Service Delivery	0.1405	0.1109, 0.1741	****
Shared Training	0.1481	0.1201, 0.1800	****
Shared Resources Prevention	0.1531	0.1206, 0.1902	****
Joint Programs Prevention	0.1544	0.1228, 0.1902	****
Evaluation Activities	0.1591	0.1295, 0.1933	****
Fundraising	0.1661	0.1322, 0.2048	****
Education/Awareness			
Case Coordination	0.0192	-0.0016, 0.0404	*
Joint Advocacy	0.0212	0.0107, 0.0320	****
Joint Programs Service Delivery	0.0213	0.0064, 0.0363	***
Shared Resources Service Delivery	0.0217	0.0060, 0.0384	***
Shared Training	0.0293	0.0142, 0.0453	****

Type of Activity	Avg. bootstrap difference	95% CI	*p* value
Shared Resources Prevention	0.0348	0.0207, 0.0494	****
Joint Programs Prevention	0.0358	0.0215, 0.0508	****
Evaluation Activities	0.0407	0.0246, 0.0575	****
Fundraising	-0.0476	-0.0640, -0.0323	****
Case Coordination			
Joint Advocacy	0.0192	-0.0016, 0.0405	*
Joint Programs Service Delivery	0.0191	0.0040, 0.0348	**
Shared Resources Service Delivery	0.0202	0.0030, 0.0375	**
Shared Training	0.0274	0.0122, 0.0435	***
Shared Resources Prevention	0.0328	0.0116, 0.0547	***
Joint Programs Prevention	0.0339	0.0148, 0.0537	***
Evaluation Activities	0.0387	0.0223, 0.0559	****
Fundraising	0.0456	0.0242, 0.0683	****
Joint Advocacy			
Joint Programs Service Delivery	-0.0001	-0.0119, 0.0119	NS
Shared Resources Service Delivery	0.0008	-0.0115, 0.0131	NS
Shared Training	0.0082	-0.0042, 0.0210	NS
Shared Resources Prevention	0.0137	0.0042, 0.0233	***
Joint Programs Prevention	0.0147	0.0047, 0.0249	***
Evaluation Activities	0.0197	0.0073, 0.0321	***
Fundraising	0.0264	0.0153, 0.0383	****

Type of Activity	Avg. bootstrap difference	95% CI	*p* value
Joint Programs Service Delivery			
Shared Resources Service Delivery	0.0006	-0.0072, 0.0089	NS
Shared Training	0.0081	0.0014, 0.0154	**
Shared Resources Prevention	0.0136	0.0011, 0.0264	**
Joint Programs Prevention	0.0146	0.0059, 0.0238	***
Evaluation Activities	0.0194	0.0112, 0.0282	****
Fundraising	0.0264	0.0127, 0.0410	****
Shared Resources Service Delivery			
Shared Training	0.0074	-0.0016, 0.0168	*
Shared Resources Prevention	0.0128	0.0017, 0.0241	**
Joint Programs Prevention	0.0139	0.0047, 0.0234	***
Evaluation Activities	0.0188	0.0099, 0.0278	****
Fundraising	0.0259	0.0130, 0.0391	****
Shared Training			
Shared Resources Prevention	0.0054	-0.0072, 0.0178	NS
Joint Programs Prevention	0.0065	-0.0030, 0.0158	NS
Evaluation Activities	0.0112	0.0043, 0.0182	***
Fundraising	0.0181	0.0050, 0.0319	***
Shared Resources Prevention			
Joint Programs Prevention	0.0010	-0.0147, 0.0169	NS
Evaluation Activities	0.0059	-0.0053, 0.0172	NS

Type of Activity	Avg. bootstrap difference	95% CI	*p* value
Fundraising	0.0129	0.0050, 0.0211	***
Joint Programs for Prevention			
Evaluation Activities	0.0048	-0.0035, 0.0132	NS
Fundraising	0.0117	0.0016, 0.0224	**
Evaluation Activities			
Fundraising	0.0070	-0.0043, 0.0186	NS

Note. CI = confidence interval

****$p < .001$ ***$p < .01$ ** $p < .05$ * $p < .10$