

CHIU, KORINNE, Ph.D. Concept Mapping for Planning and Evaluation of a Community-Based Initiative. (2012)  
Directed by Drs. Terry Ackerman and Holly Downs. 179 pp.

Community-based initiatives address community issues by providing a multi-agency approach to prevention and intervention services (Connell et al.,1995). When incorporating multiple agencies, it can be challenging to obtain multiple perspectives and gaining consensus on the priorities and direction for these initiatives. This study employed a participatory approach called concept mapping to build consensus amongst stakeholder groups in a victims' assistance program. This multiple-method technique provided visual representations of the findings assessing community initiative providers' perceptions of barriers to accessing victim's assistance services for children and families who experience or witness violence or trauma. Visualizations organized findings into interpretable groups of statements to label and provide actionable next steps for community initiative providers. Several results of interest emerged from this study. First, there are varying community and system facets that providers perceive to be barriers to children's and families' access to care; some are within the trauma provider system of care whereas other barriers are perpetuated within the community. In addition, stakeholders rated barriers based on their prevalence and capacity to change within the community. Average ratings varied by cluster, with distrust of the trauma-informed system of care as the most prevalent barrier and workforce development as the barrier noted as the easiest to change. Stakeholder group ratings for prevalence of all clusters were higher for program staff than from law enforcement officers and mental health providers whereas ratings for capacity to change were in greater agreement between

stakeholder groups overall. Moreover, program staff noted that the concept mapping process and visualizations provided them with a means to discuss actionable steps with community-based initiative providers of the victim's assistance program as a whole.

CONCEPT MAPPING FOR PLANNING AND EVALUATION  
OF A COMMUNITY-BASED INITIATIVE

by

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A Dissertation Submitted to  
the Faculty of The Graduate School at  
The University of North Carolina at Greensboro  
in Partial Fulfillment  
of the Requirements for the Degree  
Doctor of Philosophy

Greensboro  
2012

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## ACKNOWLEDGEMENTS

I am grateful to my committee, community partners, family, friends, and fellow students. My advisors, Drs. Holly Downs and Terry Ackerman provided me with guidance throughout my graduate school career. Dr. Holly Downs mentored me personally and professionally throughout graduate school as well as through the dissertation process. She opened doors for many opportunities to teach, learn, laugh, troubleshoot, and always challenged me to reach for higher goals. Dr. Terry Ackerman engaged my interest in the Educational Research Methodology program. He provided continual assistance with me taking a slightly different path, always made time to listen and advise me on how to pursue my aspirations. My appreciation goes out to Dr. Willse for assisting me with my analyses, entrusting me with opportunities for professional development, and providing academic and professional guidance. I give my thanks to Dr. Luecht for his encouragement, insight and perspective on research, and engagement in teaching and learning. I am thankful for Dr. Kelly Graves who has served as a personal and professional role model working in community-based participatory research. She demonstrated the importance of understanding context and community need throughout the projects and teams she led that I was lucky to be a part of. I am indebted to the G-CRI staff, mental health providers, and law enforcement officers who volunteered their time to participate in this study. Without them, this research would not have been possible.

My heartfelt gratitude goes out to my family for instilling the importance and passion for higher education. Their hard work, motivation, and encouragement

throughout my life is why I was able to become the first in my family to pursue a doctoral degree. My appreciation goes out to my partner, Ryan Best, for his support and understanding throughout graduate school and while we were writing dissertations side-by-side. He was always there to make me laugh, keep me hopeful, and remind me to enjoy the little things in life. I am thankful to my friends and colleagues for their endless support and strength they have given me throughout my academic career.

## TABLE OF CONTENTS

	Page
LIST OF TABLES .....	viii
LIST OF FIGURES .....	ix
CHAPTER	
I. INTRODUCTION .....	1
Statement of the Problem .....	2
Purpose of the Study .....	3
Research Questions .....	5
Need for the Study .....	8
Definition of Terms .....	10
Summary and Overview of Remaining Chapters .....	10
II. LITERATURE REVIEW .....	12
Victims' Assistance Programs and Community-Based Initiatives .....	13
Evaluation of Victim's Assistance Programs .....	14
Building Consensus in Community-Based Initiatives .....	20
Program Description .....	21
Use of Concept Mapping for Planning and Evaluation .....	26
Concept Mapping Methodology .....	29
III. METHODS .....	34
Preparation .....	34
Generation of Statements .....	36
Structuring of Statements .....	37
Representation of Statements .....	38
Creation of a Similarity Matrix .....	38
Multidimensional Scaling .....	40
Hierarchical Cluster Analysis .....	44
Representation and Visualization of Point and Cluster Data.....	45
Interpretation of Maps .....	48
Utilization of Maps .....	49

IV. RESULTS .....	50
Description of the Sample .....	50
Research Question 1 .....	53
Research Question 2 .....	82
Research Question 3 .....	86
Research Question 4 .....	89
V. DISCUSSION .....	93
Overview .....	93
Research Question 1 .....	94
Research Question 2 .....	102
Research Question 3 .....	104
Research Question 4 .....	107
Limitations .....	109
Implications for Practitioners .....	111
Implications for Evaluators .....	112
Future Research .....	113
Conclusions .....	114
REFERENCES .....	116
APPENDIX A. IRB NOTICE.....	124
APPENDIX B. HANDOUT PROVIDED TO G-CRI PROVIDERS.....	125
APPENDIX C. STATEMENT GENERATION PROTOCOL .....	127
APPENDIX D. PRELIMINARY BRAINSTORMING SESSION STATEMENTS GENERATED.....	128
APPENDIX E. EDITED LIST OF FINAL STATEMENTS .....	131
APPENDIX F. IN-PERSON AND ONLINE SORTING DIRECTIONS .....	135
APPENDIX G. R SYNTAX .....	138
APPENDIX H. SHEPARD DIAGRAM AND CLUSTER DENDOGRAM.....	148
APPENDIX I. INTERPRETATION AND REFLECTION SESSION SLIDES.....	150
APPENDIX J. STATEMENTS BY AVERAGE RATING AND CLUSTER .....	173

APPENDIX K. INTERPRETATION AND REFLECTION PROTOCOL.....179

## LIST OF TABLES

	Page
Table 1. Participants in Statement Generation Phase by Role.....	51
Table 2. Participants in Structuring of Statements Phase by Role and Mode of Completion.....	52
Table 3. Participants in Structuring of Statements Phase by Years of Experience.....	52
Table 4. Sample Statements Generated During Statement Generation Phase .....	54
Table 5. Comparison of MDS Models by Dimension .....	55
Table 6. Statements with the Highest and Lowest Mean Ratings for Prevalence of Barrier.....	58
Table 7. Statements with the Highest and Lowest Mean Ratings for Capacity to Change Barrier .....	59
Table 8. Average Cluster Ratings by Prevalence and Capacity to Change Barrier .....	66
Table 9. Average Prevalence Cluster Rating by Stakeholder Group.....	83
Table 10. Average Capacity to Change Cluster Rating by Stakeholder Group.....	83
Table 11. Pearson Product-Moment Correlations by Stakeholder Group .....	86
Table 12. Statements Related to Interagency Collaboration.....	88
Table 13. Proposed Actionable Recommendations by Cluster.....	92

## LIST OF FIGURES

	Page
Figure 1. Number of G-CRI Contacts by Month .....	24
Figure 2. Map of Greensboro Police Department Divisions.....	25
Figure 3. Example of a Hypothetical Sort and Similarity Matrix.....	40
Figure 4. Point Map for Two-Dimensional MDS.....	57
Figure 5. Point Rating Map for Prevalence of Barrier by Cluster Grouping.....	60
Figure 6. Point Rating Map for Capacity to Change Barrier by Cluster Grouping .....	61
Figure 7. Point Cluster Map for a Seven-Cluster Solution.....	63
Figure 8. Cluster Rating Map for Prevalence of Barrier.....	67
Figure 9. Cluster Rating Map for Capacity to Change Barrier .....	68
Figure 10. Pattern Match Visualization Comparing Prevalence and Capacity to Change Ratings by Cluster.....	70
Figure 11. Go-zone Map by Prevalence and Capacity to Change for Understanding of Trauma Cluster .....	73
Figure 12. Go-zone Map by Prevalence and Capacity to Change for Trust Cluster.....	75
Figure 13. Go-zone Map by Prevalence and Capacity to Change for Service Engagement and Coordination Cluster .....	76
Figure 14. Go-zone Map by Prevalence and Capacity to Change for Workforce Development Cluster .....	77
Figure 15. Go-zone Map by Prevalence and Capacity to Change for Access to Care Cluster .....	78
Figure 16. Go-zone Map by Prevalence and Capacity to Change for Perceptions of the Criminal Justice System Cluster .....	80

Figure 17. Go-zone Map by Prevalence and Capacity to Change for Faith-Community Partnerships Cluster .....81

Figure 18. Pattern Match Visualization by Stakeholder Group for Average Prevalence Ratings of Clusters .....84

Figure 19. Pattern Match Visualization by Stakeholder Group for Average Capacity to Change Ratings of Clusters .....85

## CHAPTER I

### INTRODUCTION

This chapter provides an introduction to comprehensive community-based initiatives, victims' assistance programs, and describes the roles that evaluation and consensus building currently play in these initiatives. The statement of the problem and significance of the current study provide justification for the need to understand the process of consensus building in community-based initiatives. The current study uses a multiple-method technique called concept mapping as a means of consensus building amongst community agencies of a community-based initiative that provides assistance to children and families who are victims of violence or trauma. An overview of the research questions addressed in this study is described and the need for the study is explained.

Comprehensive community-based initiatives are an increasingly common means to holistically address prevalent community issues. Community-based initiatives employ a multi-agency approach to improve the health and well-being of individuals within a community (Connell, Kubisch, Schorr, & Weiss, 1995). Initiatives that take this type of systemic approach to addressing community issues acknowledge that context (e.g., social norms and determinants) and community infrastructure are important to assess and consider to provide optimal services and assistance (Kreuter, Lezin, & Young, 2000).

Oftentimes, partnerships between multiple organizations are formed in efforts to provide holistic care for a geographically-bounded community (Connell et al., 1995).

Community agencies jointly collaborate to provide integrated care for a particular cause. This type of integrated approach addresses different needs that a client may have in a streamlined manner, thus providing easier access to resources and services. Services that are provided vary based on a community's need and the types of services that are currently offered within the community.

One domain that some community-based initiatives aim to address is coordinated community responses to exposure to violence or trauma assistance, which provides counseling, legal, and social services in an integrated manner to children and families who are victims of violence. Integrated services at the community level increase the likelihood that clients will obtain the services that they need. In addition, integrated services enable agencies within the community to be informed in the process and can determine how to best contribute resources and services to a particular client's care.

### **Statement of the Problem**

Literature on planning and evaluating community-based initiatives with a focus on victims' assistance programs was reviewed. Despite the high prevalence of exposure to violence, there is little information on the efficacy of victims' assistance intervention practices for children exposed to violence as these types of programs are relatively new (Chalk, 2000; Graham-Bermann, 2000). Research suggests that evaluating comprehensive community-based initiatives is a complex process due to the different stakeholder groups that are involved (Connell et al., 1995; Wandersman, Valois, de la Cruz, & Goodman, 1996). Individuals from different agencies may differ in their ideas on how to address community concerns based on their agencies' role in the community.

In addition, findings from the literature review suggest that stakeholder groups should come to a consensus on how to assess community needs as well as how to implement a community-based initiative that will best serve the community (Kreuter et al.,2000). However, there is limited research on the process of consensus building for planning, implementing, and evaluating a community-based initiative. This study uses a multiple-method technique called concept mapping in order to systematically build consensus for a community-based initiative.

### **Purpose of the Study**

The purpose of this study was threefold: (a) to provide a means for consensus building amongst stakeholder groups for a particular community-based initiative that focuses on providing assistance to children and families who are victims of violence or trauma; (b) to use a multiple-method technique called concept mapping to provide structure to stakeholder feedback regarding current barriers to accessing victims' assistance services for children in the community; and (c) to demonstrate the application of educational research methods within a community context. Using the lessons learned and gaps identified in the review of the literature regarding consensus building among stakeholders, concept mapping was used as a systematic approach to build consensus for a community-based initiative. The specific community-based initiative in this study and concept mapping methodology are briefly described below and are described in greater detail in Chapter II.

The Greensboro Child Response Initiative (G-CRI) is a prevention-based initiative that is a community partnership between law enforcement, peer advocates, and

mental health agencies focused on providing coordinated advocacy and community resource services to children and families who are exposed to violence or trauma. Services focus on the needs of children exposed to violence and their families to provide trauma-focused, early intervention and comprehensive follow-up services after a traumatic incident. Currently, two of the four divisions of the Greensboro Police Department have implemented and housed this community-based initiative.

Concept mapping is a methodological technique that can be used to aid in a planning and decision-making process. This process allows for consensus-building from all stakeholders at various stages in program processes and various levels of authority to be involved. Concept mapping as a methodology may increase group cohesion by allowing all stakeholder groups to make sense of the data and have a valued role as a “research collaborator” (Fawcett et al., 1996; Fawcett et al., in press; Trochim, 1989). These efforts may assist in building capacity for community-based initiatives and identify specific action areas to focus on. Collectively defining program goals and objectives will, in turn, build evaluation capacity for the initiative (Kaufman et al., 2006).

This dissertation uses a multiple-method technique called concept mapping to guide a consensus-building process for a victims’ assistance community-based initiative. Concept mapping provides a visual display of information collected from all stakeholder groups in order to facilitate discussion based on collective perspectives. The purpose of using concept mapping in planning and evaluation of this initiative was to understand how different stakeholders interpret community needs and access to resources as compared to how services are currently delivered. In this study, concept mapping was

used to assess which program- and system-level supports are perceived as barriers to accessing victims' assistance services in order to better assist children and families referred who experience or witness trauma. Findings from this research may enable program expansion and increase sustainability.

This study provides an example of the use of applied educational statistics by integrating methods to assist a community-based initiative in efforts to improve program functionality. The use of multidimensional scaling and cluster analysis provided stakeholders with visual, statistically-based, and stakeholder-created conceptualizations of community-based issues that are relevant to the community context.

### **Research Questions**

Research questions that guided the methods and analyses of this dissertation are provided below. Data collected in order to answer these questions are described and appropriate analyses are discussed in the methods section.

*Research Question #1: What do different stakeholders perceive as community- or systems-factors that affect individuals' access to services after witnessing violence or experiencing trauma? How are these factors conceptualized within the given context?*

The purpose of this question is to understand the current barriers that exist in accessing victims' assistance services in the Eastern and Southern regions of Greensboro. G-CRI has been operating in Eastern Greensboro for over five years and in Southern Greensboro for over six months. Given the experiences of law enforcement, mental health providers, and the G-CRI staff during this time, understanding the areas that program providers perceive to hinder children and family access to care would provide

concrete areas for improvement. Stakeholders who provide assistance for children and families who are victims of violence have different perspectives on the referral process, services provided to children and families, and the extent to which children and family's needs are being met. By facilitating discussion and compiling statements from providers and agency members who work with children and families who are victims of trauma on a daily basis, one can gain a better understanding of the system and process within which they work. In addition, understanding the challenges from individuals who strive to assist children and families at different steps in the process provides a framework for understanding the most important and/or challenging components of a victims' assistance program and how feasible these components are to implement or change.

Data collected and analyzed in order to address this question includes the statements generated from the focus prompt. In addition, the sort data collected from the participants were used to create point and cluster maps. These maps were presented to the group of stakeholders for interpretation and understanding of how these ideas were organized. Rating data were used to compare the relative occurrence and capacity for change of the barriers mentioned during statement generation. Rating information was also integrated into various visual displays of the findings.

*Research Question #2: Are stakeholder perceptions consistent with one another? What is the degree of similarity among stakeholder perceptions regarding barriers to accessing services?*

These research questions aim to assess the organizational structure of statements created using multidimensional scaling and cluster analysis. Cluster ratings were

compared by stakeholder group (law enforcement, mental health provider, and G-CRI staff) to determine if groups of statements were rated in a similar manner across groups who take part in G-CRI at different stages of the program (e.g., referring to peer advocate vs. providing mental health services). Similarities and differences in the prevalence of the barriers or the capacity to change current barriers to accessing services in the community by stakeholder group may provide insight to which barriers are perceived as more common or difficult to change based on the agency's role in the community.

*Research Question #3: How do the perceived barriers to accessing services align with effective practices that are currently being implemented in victims' assistance programs?*

Barriers noted in the concept maps regarding accessing victims' assistance services were compared to current effective practices of victims' assistance programs. Perceived barriers in G-CRI were organized in clusters and strategies for addressing these barriers were compared to effective practices. For example, if cultural competence was perceived as a barrier, G-CRI may want to incorporate some of the effective practices related to culturally-sensitive programming into the way their program is currently being implemented.

*Research Question #4: What are the perceptions of the stakeholders of the concept mapping process? How did the stakeholder groups view the process? What actions will be taken as a result of the findings?*

Due to the participatory approach of this community-based initiative, it is important to assess the perceptions of stakeholders who participated throughout the concept mapping process. Groups were asked to provide feedback on the overall process

as well as the utility of the resulting concept maps. In addition, G-CRI staff were asked how the concept mapping process will be integrated into future planning and evaluation efforts of the G-CRI program.

The interpretation stage of the concept mapping process was recorded and notes were taken during a debriefing meeting with a subgroup of stakeholders. Perceptions of the stakeholders were grouped into themes. Actionable steps noted by G-CRI staff were recorded and are discussed below.

### **Need for the Study**

Understanding barriers to community-based initiatives in a collective, organized manner may enable program staff to compare barriers to how the program is currently being implemented. This approach may enable program staff to see if changes can be implemented or if additional resources are required to make proposed program changes based on multiple agency perspectives. Barriers noted and organized into clusters could be used to formulate action plans for improvement based on their relative importance and capacity for change. Additional program goals and objectives could be created in order to address barriers and improve services provided. These goals and objectives can be revisited over time to ensure that goals are being met. Concept mapping could be conducted on a yearly basis in order to see if priorities have shifted or if the same barriers persist over time.

Moreover, it may be informative to understand if stakeholders perceive barriers differently at the individual or system level. Unanticipated barriers and challenges may need to be accounted for in program planning that otherwise may have been overlooked.

Additionally, some barriers presented may not be able to be changed or may be issues that are beyond the scope of the program (e.g., political or legal restrictions). This community-based initiative could partner with other organizations or inform the community of issues that are present in order to advocate for their community.

Findings from the concept mapping process could be integrated with program data currently being collected. For example, barriers described in concept mapping may target a particular incident type that is highly prevalent in the community (e.g., domestic violence). Program staff may denote this particular barrier as a priority to address because it affects many children and families in the area. Findings may indicate an increased need to collaborate with developing and existing services available in the community to better serve children and families (e.g., the development of a new domestic violence unit at a particular division of the Police Department). Similarly, if age- or culturally-appropriate programming was listed as a barrier, the evaluation team and program staff can revisit the demographics of their population in order to revise programming efforts (e.g., hire more translators).

The results obtained by the use of applied educational statistics to assist a community-based initiative in planning and evaluation enables increased representativeness and utility of the findings. Findings represent all stakeholder participants, not just stakeholders at the highest level.

Community-based interventions that are comprehensive in nature are one of the largest-growing program areas for family violence prevention and treatment (Chalk, 2000; Ward & Finkelhor, 2000). However, little is known about the resources needed to

implement community-based interventions and how to measure program outcomes. Concept mapping may provide a means for organizing ideas and perspectives throughout the community in order to better understand which effective practices to target. Clusters of ideas created during the concept mapping process may provide a starting point with which to prioritize the actions of a community-based initiative that targets the specific needs of the community.

### **Definition of Terms**

*Community-based initiative* – a multi-agency approach to improve the health and well-being of individuals within a community (Connell et al.,1995).

*Intimate partner violence (IPV)* – “physical, sexual, or psychological harm by a current or former partner or spouse” (Center for Disease Control [CDC], 2012).

*Victims’ assistance program* – programs that ensure victims’ awareness of their entitled rights and resources or services to cope with a criminal or violent incident (Federal Bureau of Investigation [FBI], 2012).

### **Summary and Overview of Remaining Chapters**

This study is presented in five chapters. The purpose of the first chapter is to introduce how community-based initiatives operate and provide a brief description of the role evaluation and consensus building currently plays in these initiatives. The second chapter provides an in-depth review of the literature on community-based initiatives, a description of the specific victims’ assistance program for context, and an explanation of the use of concept mapping methodology in building consensus for planning and evaluation. Concept mapping methodology and the way data were collected is described

in the third chapter of this study. The fourth chapter of this study presents the results and the fifth chapter includes a discussion of the results, implications for the community-based program based on the findings, limitations, and future directions for study.

## CHAPTER II

### LITERATURE REVIEW

This chapter provides a review of the literature on community-based victims' assistance programs and how program efficacy is evaluated. Gaps in the literature regarding how community-based initiatives reach consensus amongst stakeholder groups and multiple perspectives are described. Additionally, the program of focus for this study and concept mapping methodology as a technique for consensus building are presented and explained.

Over 10 million children witness or are victims of violence each year (Office of Juvenile Justice [OJJDP], 2009; Straus, 1994). Moreover, approximately twenty five percent of children experience at least one traumatic event within their lifetime and over half of all children experience adverse childhood experiences between the ages of birth to 18 years, demonstrating the widespread need to address the effects of such traumatic incidences (Costello, Erkanli, Fairbank, & Angold, 2002; Felitti et al., 1998). Consequences for children who experience or witness violence include increased susceptibility to poorer quality of life outcomes such as social, emotional, and cognitive deficits that may persist throughout their life (Feerick & Silverman, 2006). In addition, the a study conducted by the Center for Disease Control (CDC) called the Adverse Child Experiences (ACE) study found that children who experienced more adverse experiences

(abuse, neglect or household dysfunction) in childhood were at a greater risk for alcoholism, drug abuse, depression, heart disease, cancer, and other worsened health outcomes in adulthood (Felitti et al., 1998). Moreover, children who witness or experience violence at a young age are increasingly likely to perpetuate the cycle of violence, thus increasing their likelihood of involvement in the juvenile justice system (Greenwald, 2002).

### **Victims' Assistance Programs and Community-Based Initiatives**

One way that communities provide assistance on a system-wide level is through community-based initiatives or comprehensive community initiatives (CCIs). Some community-based initiatives focus on victims' assistance related to children and families who are victims of violence or trauma. Victims' assistance programs serve as a resource for children and families to access support and resources they may need after experiencing trauma. These programs serve as both intervention and prevention programs for children. Victims' assistance programs serve as intervention programs by providing support and resources to aid in acute treatment of traumatic symptoms by providing a safe place to stay, counseling services, and investigative assistance. In addition, victim's assistance programs serve a preventative role for children as a means to decrease repeated exposure to violence and trauma as well as to prevent future involvement in the juvenile justice system. Victim's assistance CCIs may also provide access to more integrated services, thus strengthening ties to community resources and ongoing care (Blau & Long, 1999; Harrington & Dubowitz, 1999; Sabol, Coulton, & Korbin, 2004).

## **Evaluation of Victim's Assistance Programs**

Despite the high prevalence of exposure to violence, there is little information on the efficacy of victims' assistance intervention practices for children exposed to violence (Graham-Bermann, 2000). Child victim assistance programs vary widely based on a variety of factors: community prevalence (e.g., greater prevalence of domestic violence or child abuse), funding available, community need (e.g., high-crime neighborhoods), services provided (e.g., diagnostic vs. treatment), funding source (e.g., local vs. federal), community context (e.g., culture, history, etc.) and the site administering the program (Chalk, 2000). Taking community context into account when deciding on which areas to implement a victims' assistance program is instrumental for program buy-in and program execution.

Community-based initiatives function within the community system the initiative is targeting (Kegler, Rigler, & Honeycutt, 2011). For this reason, both positive and negative community aspects should be taken into account when deciding how to design and implement a program. Programs may be received differently in different communities based on the way a program is implemented. Several contextual factors at the community level as well as characteristics of the community-based initiative should be considered prior to program implementation to determine an optimal fit for the community.

Community contextual factors to take into account include demographic characteristics and geography of the community. Demographic characteristics include economic factors such as access to transportation or resources, language barriers, age

distribution, racial or ethnic diversity, and lifestyle differences (e.g., religion, occupation, etc.) between community members (Kegler et al., 2011; Wandersman et. al, 1996).

Geographic characteristics may include region size or the spread of a potential client base across region (areas with more spread may be difficult to manage or implement a program).

Characteristics of community-based initiatives may also strengthen or hinder the implementation of a program based on a number of factors (Reininger, Dinh-Zarr, Sinicrope, & Martin, 1999; Wandersman et. al, 1996). Factors include agency history of collaboration, buy-in of key community leaders, and the community's history with programs (Kegler et al., 2011). Community agencies that have a strong history of collaboration and buy-in from key community leaders will have an easier time with planning and implementing a community-based initiative. Understanding the history of the community's issues in a particular domain and how issues were addressed may increase the relevancy of program ideas to the current community issues. Taking a community's history into account may assist with determining the scope of the initiative and how priority program areas will be decided upon. Previous community programs or initiatives may provide insight into effective practices for a particular community.

Although there is limited research and evaluation information on child outcomes of specific child victims' assistance programs, previous research notes key components that increase program effectiveness. These components of victims' assistance programs for children include comprehensive approaches that are developmentally-appropriate, intervene early, promote positive social-emotional development, take an interactive

approach, are based on theory, and are culturally-appropriate (Dusenbery, Falco, Lake, Brannigan, & Bosworth, 1997; Nation et al., 2003). However, when implementing victims' assistance programs, program efficacy is dependent on the community context within which the program is implemented. Many effective practices noted in the literature that are related to victims' assistance programs for children are derived from programs implemented at the school level. A review of the literature revealed few findings based on the efficacy of victims' assistance programs at the community level.

Programmatic challenges and approaches may differ when implementing a community-based initiative in a different setting. The setting and the context of a community-based initiative includes the community partners involved as well as where the program is housed. Research suggests that community initiative partners should represent different sectors of the community and should be responsible for different aspects of the initiative (e.g., law enforcement vs. counseling) (Connell et al.,1995). In addition, all participating community partners should receive representation for decision-making purposes to ensure buy-in and engagement from all parties involved.

Research regarding the monitoring and evaluation of community-based initiatives in general is limited and has been noted as a challenging and complex task (Kreuter et al.,2000). Some restrictions on research and reporting regarding monitoring and evaluation for community-based initiatives include a lack of funding, changes in program activities, and a wide range of outcomes to measure. These challenges are discussed below.

Funding limitations restrict the amount of planning for monitoring and evaluation purposes that takes place prior to the time that an initiative is put into place. Limitations in funding may result in delayed monitoring and evaluation activities that are not executed until after a program has begun (Connell et al.,1995). Delaying evaluation efforts may limit the amount of baseline data collected or reduce the perceived importance of the need for continuous data collection throughout the CCI process.

Community-based initiatives are continually changing due to changes within and between organizations and partnerships formed. These system-level changes may lead to changes in the way a CCI is implemented, thus increasing the complexity of monitoring and evaluation efforts due to inconsistent activities. Due to the network of community partners in a CCI, community partners may have different goals or outcomes in mind related to their particular domain for an initiative. Programmatic changes may lead to modifications in program execution or the overall purpose of services provided or delivered, making it difficult to monitor and evaluate program activities in a consistent manner.

Connell and colleagues (1995) note that unique characteristics and partnerships of each CCI may contain a multitude of outcomes to assess, resulting in horizontal and vertical complexities for an evaluation. Horizontal complexity refers to the number of program or initiative activities that transcend across systems or organizations, thus increasing the difficulty of what to measure. Although particular outcomes are important, the interrelationships of the systems and agencies play a role on the success of a CCI. Vertical complexity refers to the multilayered facet of CCIs; although change is sought at

the individual, family, and community levels, it may be difficult to evaluate the effects that a CCI has on each level. Horizontal and vertical complexities reveal some of the context-specific challenges of evaluating community-based initiatives.

There is limited research regarding program evaluation and community-based victim's assistance programs. Little information is accessible on individual- or system-level outcomes related to victim's assistance programs (Hart, 1995). Information that is currently available may include arrest information, but rarely contains information on individual outcomes (e.g., perceived level of safety or quality of life) after receiving services. In addition, less information is available on evaluations of particular victim's assistance programs or comparative studies.

One study discussed the planning and evaluation of a federally-funded family violence initiative through building evaluation capacity within the community (Kaufman et al., 2006). Capacity building for evaluation includes clear organization of program activities and strategies, stakeholder buy-in for the evaluation, the use of multiple data collection methods and rigorous methods, increasing program stakeholder capacity to monitor and assess performance, and the utilization of findings and information for program improvement. This particular community-based family violence initiative was developed due to the high incidence of children exposed to violence in their homes as well as insufficient system response to the current community concern.

The purpose of the community-based initiative was to reduce the incidence and effects of family violence on children ages 0-6 years by providing a continuum of care for children (Kaufman et al, 2006). With the assistance of an evaluation team, service

systems were assessed for strengths, gaps, and barriers from different stakeholders within the service systems. Information on service system gaps and barriers were used by the service systems to address issues to improve service provision. In addition, service providers and the evaluation team jointly created the outcome and process goals for the evaluation as well as the types of data that would be collected.

Through the joint development of the evaluation plan and evaluation measures, community partners were able to take ownership of monitoring efforts and increase collaboration amongst community partners. Community partners within the system of care agreed upon process and outcome indicators and were able to incorporate monitoring efforts into their daily work. In addition, interagency collaboration increased over time and was consistently measured (Kaufman et al, 2006). Stakeholders could concretely see that collaborative and reciprocal relationships increased over the course of the community-based initiative, reinforcing the need to network between partners. The empowerment of the community-based initiative as guided by the evaluation team led to the consistent use of standardized measures to assess programs and monitor children's and families' progress, the use of data collected to improve services and make programmatic decisions or changes, and an increased level of accountability to demonstrate program success. Although evaluation processes were provided in this article, little information was provided regarding how the initiative was jointly developed or how consensus was met for the evaluation goals (Kaufman et al, 2006).

## **Building Consensus in Community-Based Initiatives**

The comprehensive community initiative and evaluation literature note that collaboration and consensus-building amongst stakeholders is important for facilitating the planning, implementation, and evaluation stages of a CCI. However, the procedures used to obtain consensus are rarely discussed. One role for an evaluator of community-based initiatives noted in the literature is to bridge the gap between program implementation and evaluation by engaging different stakeholder groups to create a collaborative learning process (Connell et al., 1995).

One key reason that stakeholders from different community groups should be involved in the planning and implementation process is that community agencies approach traumatic and violent situations differently and have different roles. Approaches may differ by when an agency becomes involved with a client, the types of support they provide, or the demographic characteristics of their primary client (e.g., child vs. family). Examples of different agencies and their roles are provided below and the types of information or resources that these agencies have or are able to access are discussed.

Child welfare systems may have detailed information regarding the incident that led to the referral for services (Ko et al., 2008). However, child welfare systems may be lacking information regarding the child's trauma history or other behavioral issues that may be a result of previous traumatizations. Law enforcement officers may be the first responders on the scene of a traumatic incident and are often the first point of contact for children and families. Oftentimes, law enforcement officials do not receive training in trauma-informed care or psychological counseling that may be needed on the scene.

Gaining perspectives from each of these stakeholder groups is critical to understanding which services as well as the way services are delivered within an intended, integrated system of care.

The purpose of this dissertation is to provide a means for consensus building amongst stakeholder groups of a community-based initiative that focuses on providing assistance to children and families who are victims of violence or trauma in order to structure planning, monitoring, and evaluation efforts and build evaluation capacity. A multiple-method technique called concept mapping was used to provide structure to stakeholder feedback regarding current barriers to accessing victims' assistance services for children in the community. The program is described below.

### **Program Description**

The Greensboro Child Response Initiative (G-CRI) is a community-based initiative to address the mental health, juvenile justice, and substance abuse consequences of violence and trauma among children and families. Oftentimes, children who are witnesses or victims of violence do not receive the services they need to prevent or reduce mental health and/or substance abuse symptoms. This lack of support and services places children and families at risk of continuing through a cycle of violence and involvement in the juvenile justice system.

The G-CRI is a prevention-based initiative that is a police-provider partnership focused on providing coordinated advocacy and community resource services to children and families who witness violence or experience traumatic events in efforts to reduce the cycle of violence. Coordinated community services from law enforcement, mental health

providers, advocates, universities, informal supports, medical, child protection, and juvenile justice professionals focus on the needs of children exposed to violence and their families serve to meet four program goals:

1. Provide early intervention services to help children/families exposed to violence and trauma access the needed services;
2. Work with children and families to explain natural reactions to traumatic experiences, making them a key part of the treatment plan;
3. Provide family referrals to treatment agencies and other community resources to individually address children/family needs; and,
4. Strengthen the relationship between law enforcement and the community through integrated partnerships.

The G-CRI began in 2007 and the initiative's model is based on the Child Development and Community Policing model (CD-CP) that began in New Haven, Connecticut in 1991 as a partnership between the city, the police department, and Yale's Child Development Center to address the effects of chronic exposure to violence in children and families (National Center for Children Exposed to Violence [NCCEV], 2012). Interagency collaboration through peer advocacy is an important component for G-CRI's model. A peer advocate serves as a liaison between caregivers, law enforcement, mental health professionals, and community resource agencies. The peer advocate works closely with law enforcement officers to increase children's sense of physical safety and psychological security due to their exposure to violence and other crimes.

The peer advocate receives family case information from law enforcement officers or informal referrals and follows up with the family within 72 hours. Through this collaboration, peer advocates work with youth and families to increase their awareness and knowledge of the effects of trauma on children, provide referrals for evidence-based treatment for posttraumatic stress and other mental health symptoms, and provide peer advocacy and community resources in efforts to help address any barriers to accessing treatment.

Ten provider agencies are trained in trauma-focused mental health treatment and provide a variety of services, enabling service provision matched by the client's insurance status, age, and needs. In addition, law enforcement officers have been trained on how to react in response to violent and traumatic situations when a child is involved as well as the G-CRI referral process. The G-CRI staff, mental health providers, and law enforcement officers meet monthly to discuss recent issues and to provide in-service training. Since April 2012, G-CRI served 1,942 children and families in Guilford County (see Figure 1). The top five incident types (in April 2012) that children and families served by G-CRI have been exposed to include domestic violence (DV), child abuse/neglect/ endangerment, sex offenses/assault/rape, witness to violence, and assault.

Currently, G-CRI serves the Eastern and Southern Divisions of Guilford County and each Division has one peer advocate stationed at the respective Police Departments (see Figure 2). Eastern and Southern Divisions of Greensboro have higher incidences of violent and property crime than Central and Western Divisions, thus G-CRI was implemented in these two divisions of Greensboro first (Greensboro Police Department,

2011). The Greensboro Police Department (GPD) was awarded a grant to expand G-CRI into the Southern Division. This award included funding for an additional peer advocate in the Southern Division of Greensboro who began in January 2012.

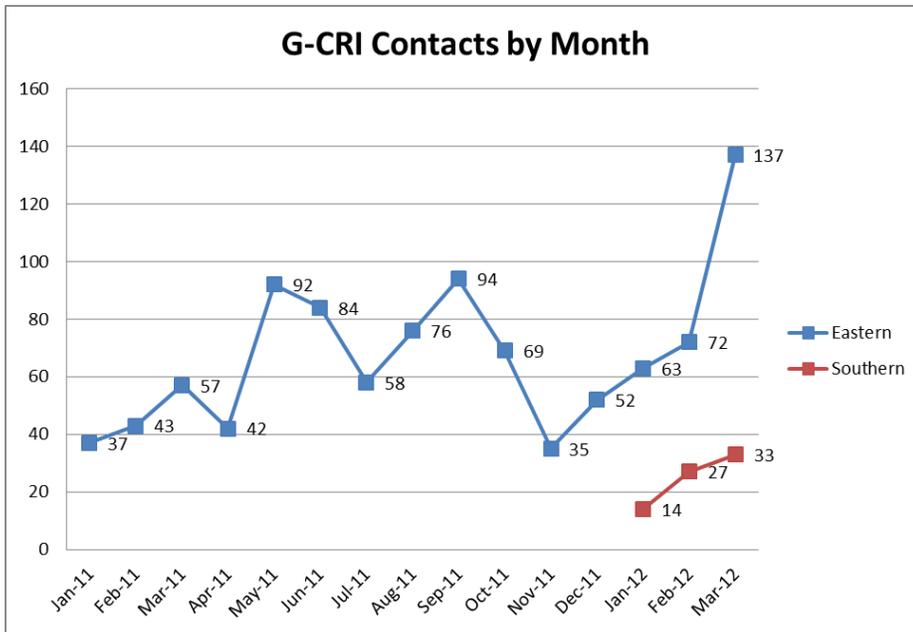
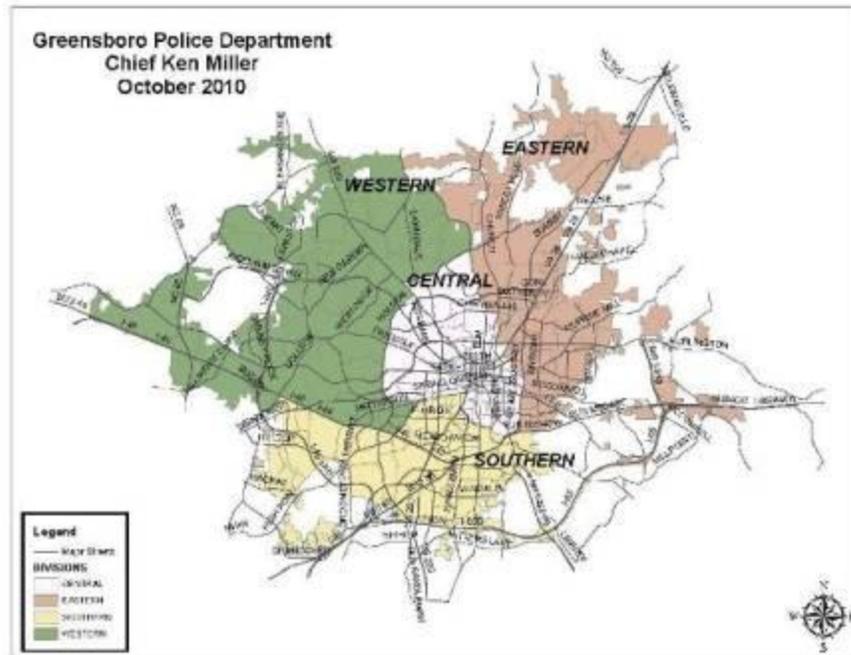


Figure 1. Number of G-CRI Contacts by Month.



*Figure 2. Map of Greensboro Police Department Divisions.*

This time of transition and expansion serves as an optimal point to discuss issues or challenges in current implementation practices. Using concept mapping may aid all parties involved in G-CRI to focus on particular barriers to providing services and on feasible areas of improvement in programming for both sites. Assessing stakeholder perceptions of which behaviors or actions may influence the outcomes of receiving services after a child witnesses or experiences violence in a visually-represented, structured format may provide insightful and actionable findings for the program.

Currently, information is collected and input into a database by peer advocates based on referrals from law enforcement officers. Information collected includes the incident type, victim demographics, region, referees' role in the incident, and the role of the individual who referred the client. This information is currently used to track trends in

incident types within and between divisions, to determine client demographics, to assess areas of greatest need for services within the community, and to track program progress. Although current referrals are tracked, there may be additional barriers to accessing services, thus underestimating the clients currently reached through the G-CRI program. Understanding current barriers to accessing services may provide insight on additional contextual metrics to track to ensure that G-CRI meets the community's need and demand for services.

### **Use of Concept Mapping for Planning and Evaluation**

Concept mapping is a structured approach that integrates qualitative and quantitative data in order to organize ideas of different groups of stakeholders in a common framework (Kane & Trochim, 2007). Each person who participates in concept mapping can contribute their own ideas and statements which are systematically integrated into a series of visual findings. Visual findings include cluster maps of participant-generated statements that are beneficial in demonstrating how stakeholder thoughts and perceptions are organized and related to one another. Additional visuals that result from concept mapping analyses enable stakeholders to plan based on program dimensions of interest; ideas generated are graphed on value plots based on two dimensions of interest (e.g., importance and feasibility). Visual representations of collective stakeholder perspectives allow for consensus building in planning and executing the next steps of a program and can be used to determine the degree of relevance or importance of ideas (Trochim, 1989).

A myriad of programs and projects have used concept mapping methodology for planning and evaluation. Projects span from the fields of public health, mental health, industrial/organizational psychology, business, medicine, agriculture, social work, and education (Kane & Trochim, 2007). Some uses for concept mapping in planning and evaluation include determining how funds should be allocated, defining organizational priorities, understanding a population's needs, and assessing community needs and outcomes (Trochim, 1989). Concept mapping is used at different organizational levels; within a particular agency and for community-based and statewide initiatives (Kane & Burt, 2011; Trochim, Milstein, Wood, Jackson, & Pressler, 2004).

An example of the use of concept mapping to understand neighborhood factors that affected the prevalence and severity of intimate partner violence (IPV) is described below (O'Campo et al., 2005). Women who were residents of a particular neighborhood were asked to generate a list of items that describe characteristics of neighborhoods that could relate in any way, good or bad, to women's experience with IPV. Fifty-one unique statements were generated, sorted, and rated on prevalence (strength of the relationship between the statement and IPV), severity (degree of statement severity), perpetration (relative to a man's perpetration of IPV), and cessation (level of support the statement has for the cessation of IPV).

Analysis of the sorted statements resulted in seven clusters: deterioration contributors, negative social attributes, violence attitudes and behaviors, stabilization factors, neighborhood monitoring, communication networks, and community enrichment

resources. The first three clusters were noted as promoters of IPV and the remaining four clusters were noted as protective factors of IPV.

Based on the ratings of the statements, in order to address IPV in the community, providing prevention and intervention resources was important for both IPV cessation and future perpetration. These findings are particularly useful for community-based initiatives. For example, if an IPV community initiative solely focused on intervention activities after IPV occurs, then this initiative would not address the needs of the entire community. In addition, community resources that were not previously mentioned (e.g., access to public health facilities and IPV shelters) were reported as most important for IPV cessation. Concept mapping provided a means for women in the community to express their needs as well as a structured way for community partners to address these needs.

The use of concept mapping for the planning and evaluation of a community-based initiative aligns with the overall evaluation approach. Community-based participatory research approach enables all stakeholders a voice in the decision-making process of an evaluation, from planning to interpreting results (Burke, 2005; Fawcett et al., 2003). Similarly, concept mapping provides various stakeholders the opportunity to generate, sort, and rate statements individually as well as enables stakeholders to see how all stakeholders' perceptions fit together visually on maps and plots based on the quantitative and qualitative data. This is particularly important when different agencies are involved in order for stakeholders to interpret the findings and take part in consensus building, or making sense of the collective findings across all stakeholders. Building

consensus amongst the peer advocate, law enforcement, provider agencies, and the evaluation team provides a foundation for planning that can be re-visited and revised on a consistent basis. In addition, community context is taken into account firsthand because stakeholders are familiar with the day-to-day experiences of children and families who are victims of violence in their area and are voicing their concerns.

### **Concept Mapping Methodology**

The concept mapping process is conducted in a series of six steps. These steps include (a) preparation, (b) generation of statements, (c) structuring of statements, (d) representation of statements in the form of a concept map, (e) interpretation of maps, and (f) utilization of maps (Kane & Trochim, 2007). Each step is described below. The concept mapping process is flexible and can occur over multiple sessions. These sessions can occur in person or virtually on the internet. In addition, participants can take part in all or only selected steps in the concept mapping process.

#### *Preparation*

Preparing to begin the concept mapping process begins with the selection of a facilitator. The facilitator guides the process, however, it is important to note that the content and interpretation of the findings are determined by the participants involved (Trochim, 1989). The facilitator works with stakeholder group(s) to decide on who will participate in the process. Concept mapping can involve as many or as few people as desired, however, between 10-20 participants may be a manageable amount while ensuring the representation of a variety of opinions that are relevant to the issue at hand (Kane & Trochim, 2007; Trochim, 1989).

After the stakeholder group is decided upon, the facilitator works with the group to decide on the focus prompt for the brainstorming session. This focus prompt is the statement from which participants generate their own statements/ideas to conduct the concept mapping analysis. The focus prompt should be clear, specific, and agreed upon by stakeholders. The facilitator should encourage the group to anticipate the types of statements that may be produced by a focus statement in order to ensure clarity of the statement and the types of responses that may stem from the focus prompt.

In addition to the focus prompt, G-CRI staff developed dimensions of focus for ratings that were performed during structuring step. It is important to consider the dimensions that statements will be rated on ahead of time in order to provide the most useful information to assist program planning and/or evaluation at the time the concept mapping process is conducted. Ratings may be based on factors such as importance, feasibility, impact, potential for action, or capacity to change (Kane & Burt, 2011). Participants are typically asked to rate the statements generated by the group on two dimensions.

#### *Generation of Statements*

One or multiple brainstorming sessions may be held to generate statements based on the focus prompt. Participants are encouraged to produce as many statements as possible in order to “represent the entire conceptual domain” for the prompt or issue of interest (Trochim, 1989). The facilitator’s role during this step is to encourage statement generation without judgment from other stakeholders involved, to record statements as they are produced, and to clarify unfamiliar terms. Statements are recorded as they are

produced in order to enable participants to see the statements that generated in real time or can be generated remotely and added to the complete list of statements. Kane and Trochim note that there is no limit to the number of statements that can be generated for concept mapping, however, they recommend paring statements down to 100 or less to ease participant burden (2007). Next, statements are edited for clarity and statements are reduced to eliminate redundancy.

### *Structuring of Statements*

Participants are asked to sort the finalized list of statements into piles that conceptually make sense to them. Statements can be sorted in person on cards and sorted into piles or can be sorted online. Restrictions on statement sorting include: each statement can only be sorted into one pile, each statement cannot be placed into its own pile (there can be some piles that only contain one statement), and all statements cannot be placed into a single pile (Kane & Trochim, 2007).

Results from the sorting portion of the structuring of statements step are combined across all stakeholder participants. Each person's sorted statements are translated into a similarity matrix (see Methods section). After statements are sorted, participants are asked to rate statements based on the dimensions agreed upon in the preparation step of the process. Demographic information was collected during this step in order to compare sorted and rated responses by stakeholder attributes.

### *Representation of Statements*

The statements that have been generated, sorted, and rated are now represented graphically in three main formats. First, statements are organized on a point map by

similarity distance. Statements that were sorted together more frequently by participants are represented closer together in two-dimensional space whereas statements that were not commonly sorted together are farther away (Davison, 1992; Kane & Trochim, 2007). Next, statements on the point map are organized into clusters, representing a common group of statements. Additionally, point maps and cluster maps can be combined with rating information for the group of statements in order to assess the organization of statements based on the dimension(s) of interest (e.g., prevalence).

### *Interpretation of Maps*

The facilitator reconvenes with the participant group in order to interpret the findings from the original statement list. The facilitator provides the complete statement list, a list of the statements as grouped by the cluster analysis, and the maps constructed in the previous step (point map, cluster map, point rating map, and cluster rating map). First, participants are asked by the facilitator to review the list of brainstormed statements and recall that they sorted and rated these statements. Next, participants are asked to review the subsets of statements grouped by the cluster analysis and provide a name or description for each cluster. The facilitator assists the G-CRI provider group to come to consensus on cluster names or other visualizations to aid in interpretation.

After tentative names have been suggested for each cluster, the facilitator presents the participants with the visual representation of statements on the maps created. The facilitator engages participants in discussion about how these maps represent stakeholder perceptions as well as the potential implications for program planning and evaluation.

### *Utilization of Maps*

Participants must decide on how they would like to use the concept maps for planning and evaluation. Maps may be used to organize program priorities, examine where additional resources are needed, or to create a framework for future program initiatives.

### *Alternative Techniques*

Just as concept mapping is conducted for program planning and evaluation, there are variations on how previous studies implemented their concept mapping process (Johnsen, Biegel, & Shafran, 2000). Variations at each step have been implemented at each stage and were selected to accommodate multiple stakeholder perspectives, limited time allocated for data collection, and the overall purpose of the study. Purposes include setting program priorities, creating and refining operational definitions of concepts, determining which aspects of a program should be evaluated, and to understand the next steps that could be derived from the process. Some alternative techniques include generating statements over multiple sessions, randomly selecting a subset of statements generated, alternative sorting procedures, and selecting a subset of participants for the interpretation phase of the concept maps (e.g., decision-makers).

## CHAPTER III

### METHODS

This chapter describes the procedures used to implement consensus building amongst G-CRI stakeholders to understand barriers to accessing services that G-CRI provides. A description of how concept mapping stages were implemented for this community-based initiative is provided. Structuring of data for analysis and programs used to conduct analyses are explained. Procedures used in the interpretation of concept maps and visualized findings are described.

The methods reflect the stages of the concept mapping process that occurred for the G-CRI program. Each step is outlined below. An IRB application was submitted to UNCG's Office of Research Compliance with protocols and consent forms for each stage of the concept mapping process. IRB notice stated that this project did not constitute human subjects research (see Appendix A).

#### **Preparation**

A meeting with the G-CRI staff was scheduled in order to determine who would participate in the brainstorming process as well as when the process would take place. In previous discussions with the G-CRI staff, staff stated their interest in perspectives from members of the G-CRI mental health provider network, law enforcement, and G-CRI staff members. These stakeholder groups are represented by approximately 20 to 30 people who attend the monthly G-CRI provider meetings. Although there is a broader

network of providers (e.g., one representative may attend from each mental health agency or from a division of the police department), each provider group is represented. The researcher and G-CRI staff mutually decided that the brainstorming session would take place at the end of a provider meeting, allowing for individuals to stay and provide feedback. In addition, a follow-up email was sent to the provider group in order to review and add unique statements via an online survey. This follow-up approach was taken in order for everyone to have an opportunity to contribute to a comprehensive list of statements.

Previous discussions with the G-CRI staff regarding the development of the focus statement related to barriers and/or access to resources. G-CRI staff were interested in understanding how to improve the services and outreach provided in the community, thus understanding barriers related to receiving victims' assistance may provide a systematic and organized means to improve services. The focus prompt provided to the stakeholders was: Generate statements that describe specific community or systems factors that are barriers to accessing services for children who witness violence or trauma.

Rating dimensions were discussed and agreed upon by G-CRI staff. Statements were rated on the prevalence of the barrier (e.g., how often this barrier occurs) and the capacity to change this barrier (e.g., feasibility to improve). Ratings were completed on 5-point scales. Regarding the prevalence scale, a value of 1 indicated that the barrier rarely occurs and a value of 5 indicated that the barrier occurs almost all of the time. Regarding the capacity to change dimension, a value of 1 indicated that this barrier is very difficult to address and a value of 5 indicated that this barrier is very easy to address.

## **Generation of Statements**

Participants were introduced to the concept mapping process and the purpose of this process related to G-CRI during a monthly provider meeting in January 2012. Each attendee at the provider meeting was given a handout explaining the purpose of concept mapping, how concept mapping is used, the types of information and visuals that concept mapping provided for similar community initiatives, and how concept mapping could be particularly useful for G-CRI (see Appendix B).

Statements were generated following a monthly provider meeting in February 2012. Statement generation took place at the end of the February 2012 monthly provider meeting for approximately 45 minutes. Directions were provided to each participant about how to participate in the brainstorming session (see Appendix C). The facilitator stood next to an easel and wrote statements as participants provided them and asked participants for clarification when necessary. Statements were also recorded for transcription and clarification purposes. The researcher transcribed and typed up the resulting statements from the brainstorming session. These statements were provided to G-CRI providers to review and add to via an online survey.

Stakeholders were asked to generate additional statements that were not yet addressed by the statements in the initial brainstorming session via an online survey. A survey link was sent to each provider via Qualtrics that included the preliminary list of edited statements from the live brainstorming session (Qualtrics Labs Inc., Provo, UT, 2009). Providers had the opportunity to provide additional statements online (see Appendix D for the preliminary list of statements generated). In order to ensure

participation from all stakeholder groups, participants were asked to provide information on their role with G-CRI (e.g., law enforcement, G-CRI staff, mental health provider). Additional statements generated online were added to the initial statement generation list (see Appendix E for the edited list of final statements).

### **Structuring of Statements**

Participants had the option of sorting the finalized list of numbered statements online or in-person. The sorting of statements online was conducted using Qualtrics (Qualtrics Labs Inc., Provo, UT, 2009). Participants were provided the original focus prompt and a list of statements and were asked to drag and drop statements into different boxes representing different categories to them (see Appendix F for directions and survey layout). In addition, participants were asked to provide a name for each of their sorted categories.

If participants preferred to rate statements in-person, a packet was provided. Each packet contained instructions for the sorting task, a set of 85 statement cards, the original focus prompt, 15 different-colored envelopes, a demographics sheet, and the ratings sheet (see Appendix F for directions and materials). Participants were asked to sort statements into piles that were similar to one another as perceived by the participant. Once statements were sorted, participants were asked to place each pile of statements into a different colored envelope and provide a name of their grouped statements on the front of the envelope. If participants required additional envelopes, they were encouraged to clip statements together or ask for additional envelopes.

Next, participants were asked to rate statements on the predetermined dimensions of the prevalence of the barrier and the capacity to change the barrier. In addition, participants were asked to provide demographic information such as organization type (e.g., law enforcement, mental health provider, G-CRI staff), geographic location (Eastern division vs. Southern division), and years of experience in their current position as well as experience with G-CRI.

### **Representation of Statements**

Data collected using concept mapping methodology were analyzed in three steps. These steps included creating a similarity matrix from the sort data, conducting multidimensional scaling of the similarity matrix to locate each statement on a two-dimensional map, and conducting a hierarchical cluster analysis of the two-dimensional coordinates to create clusters or groups of similarly-sorted statements.

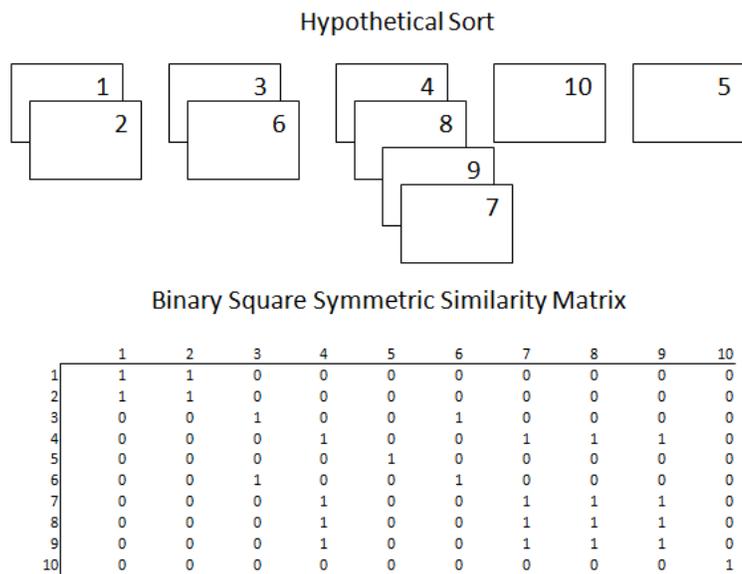
### **Creation of a Similarity Matrix**

After participants completed the sorting of all statements, a similarity matrix of responses was created for each participant. The similarity matrix describes which statements a given participant sorted in the same group. This matrix is a binary, symmetric matrix that contains as many rows and columns as the number of statements sorted (Kane & Trochim, 2007). The number of a row or column corresponds to the statement number. A similarity matrix was created for each participant and populated with 0's and 1's. There are 1's along the diagonal (because each statement is sorted in a pile at least with itself). If a statement was sorted in a pile with one or more statements, then both statements would receive 1's in those particular statement rows and columns.

A hypothetical example of a similarity matrix is illustrated below (see Figure 3). This example consists of 10 statements sorted by one participant, thus a 10 x 10 similarity matrix was created. The participant sorted statements numbered 1 and 2 into the same pile. In row 1, columns 1 and 2 contain a value of 1 and all other columns in this row contain a value of 0. Similarly, in row 2, columns 1 and 2 contain a value of 1 and all other column values are 0. This process is completed for each sort pile until the similarity matrix is filled with the appropriate values. Each participant who sorted the statements had their own similarity matrix. After each individual similarity matrix was created, all of the similarity matrices were summed to form the group matrix for multidimensional scaling and cluster analyses. Sums represent the count of how often statement pairs were sorted together by participants who took part in the structuring of statements phase.

Statement sort piles for each participant were created in Excel. These sorts were restructured in R to create participant similarity matrices using the `cltoSim()` function in the `mclust` package (Fritsch, 2009). These functions created binary similarity matrices for each participant based on his or her own sort data and were saved as individual matrices. Next, similarity matrices for all participants were summed. The number along the diagonal represented the total number of participants that took part in the sorting process. Higher numbers in the sorting process indicated that items were sorted together more often, thus are more closely related. The resulting similarity matrix across all participants was used to create a dissimilarity distance matrix. The similarity matrix was subtracted from the total number of participants in the sorting process to create the dissimilarity matrix.

The dissimilarity matrix is a symmetric matrix that represents the aggregated relative distances between all possible point pairs of statements as sorted by participants. Statements that are similar have less distance between them and statements that are dissimilar have greater distance values between one another. Within a dissimilarity matrix, the values along the diagonal are zero. The dissimilarity matrix was used to conduct multidimensional scaling analyses.



*Figure 3. Example of a Hypothetical Sort and Similarity Matrix.*

### Multidimensional Scaling

Multidimensional scaling (MDS) is a multivariate technique used to analyze the structure of objects using proximity information (Davison, 1992; Kruskal & Wish, 1978). Proximity information refers to the level of similarity or difference between two objects, in this case, statements. Information regarding the similarities between statements are

represented in a “geometric configuration of points” characterized by the relationship of proximities and relative distances in multidimensional space (Kruskal & Wish, 1978).

MDS allows one to represent the similarity or dissimilarity of one’s data visually between points in user-specified multidimensional space (Borg, 2005). One specifies the number of dimensions used to visually represent these data and can assess the comparative goodness of fit based on the number of dimensions used to represent these data.

MDS analyses conducted for concept mapping studies typically represent and interpret data in two dimensions (Kane & Trochim, 2007). Kruskal and Wish’s rule of thumb for selecting an optimal number of dimensions states

$I-1 \geq 4R$  where I refers to the number of statements and R refers to the number of dimensions (Kruskal & Wish, 1978). A dimensions-by-fit measure plot can be used to guide dimensionality selection (Kruskal & Wish, 1978). A final solution was decided upon based on interpretability, fit, and reproducibility (Davison, 1992).

Stress is an indicator of the “badness of fit” of data for a given set of dimensions; this indicator measures badness of fit because it assesses the discrepancies between proximities and their analogous distances (Borg, 2005). Stress-1 is calculated using the normed sum of squares of the errors (the differences between the estimated proximities for pairs of points and the relative distances) in order to account for scalars (Borg, 2005).

The equation

$$\text{Stress-1} = \sigma_1 = \sqrt{\frac{\sum [f(p_{ij}) - d_{ij}(\mathbf{X})]^2}{\sum d_{ij}^2(\mathbf{X})}}. \quad (1)$$

where  $f(p_{ij})$  is a function of the proximities for pairs of points,  $d_{ij}(\mathbf{X})$  is the relative distance between points, and  $d_{ij}^2(\mathbf{X})$  is a scaling value. Previous studies investigated stress values in concept mapping studies. Kane and Trochim (2007) noted that stress values fall within a 95% confidence interval of stress values between .21 and .37. In addition, 96% of stress values in a recent pooled analysis of concept mapping studies fell within the confidence interval previously reported (Rosas & Kane, 2012). The relationship between proximities and estimated distances can be compared visually by constructing a Shepard diagram. The pairs of points producing higher residuals can be determined from this plot.

Non-metric MDS was conducted on the G-CRI provider's dissimilarity matrix. This type of MDS is slightly less restrictive than Torgerson's metric group method and assumes that there is an ordinal relationship between the proximities of objects and only the rank order for a dimension is calculated (Davison, 1992; Kruskal & Wish, 1978).

Although rich information can be derived from MDS analyses, there are some limitations to this analytic procedure. MDS is an exploratory analysis that can be used to obtain meaning and structure from "theoretically amorphous data" (Borg, 2005). However, the structure of points and their relative distances may not be replicable. Depending on the sample used to provide data through the sorting procedure, findings may vary. It may be important to replicate the sorting procedures and MDS analyses

within the community or to collect data from a representative sample in order for the data to reflect community perspectives. This study is not focused on generalizing to other communities as community context varies and is important to note, but the MDS analyses should reflect community perceptions as all subsequent analyses are based on the dimensions and coordinates obtained from the MDS analysis. Representation from law enforcement, mental health providers, and G-CRI staff was obtained during the data structuring stage of the concept mapping process. The representation from all stakeholder groups involved in the implementation of this community-based initiative was obtained in order for the analyses to reflect multiple stakeholder perspectives. In addition, Kruskal and Wish note that interpreting the configuration of points is a key step in MDS analyses and one should actively involve participants in the interpretation, thus serving as a means of validating or confirming conceptualized community perspectives (1978).

Several packages in R were used to conduct the MDS analyses. There are two non-metric MDS functions available in R, `metaMDS()` and `isoMDS()`; `metaMDS()` is part of the `vegan` library and `isoMDS()` is part of the `MASS` library (Oksanen et al., 2012). Multiple analyses were run using two, three, and four dimensions to determine the best fitting model for interpretation. The `metaMDS()` function was used in order to obtain the dimensional points and create point maps of sorted statements (see Appendix G for R syntax). A Shepard Diagram was produced to compare input and output proximities of the best-fitting MDS model (see Appendix H). Point and point rating maps were also created using the x-y coordinates produced from the MDS analyses. The resulting coordinate point output was used to conduct a hierarchical cluster analysis. Hierarchical

cluster analyses were conducted in order to group similar statements together by proximity to enable interpretation of groups of statements.

### **Hierarchical Cluster Analysis**

Cluster analysis is an analytical technique that divides data into groups based on how objects are characterized in relation to one another. The goal of cluster analysis is to group data into clusters or groups that are naturally related among a cluster while separating clusters that are distinct from one another (Anderberg, 1973). For the purposes of this study, statements that are closely related would be clustered together and statements that are not as closely related are grouped in separate clusters.

Hierarchical cluster analysis was used for this study. This form of cluster analysis is an agglomerative method, building a tree or dendrogram of relationships between all of the statements created. Each statement is considered to be a branch and the root is the collection of all statements. Clusters that are nested together are more similar (Anderberg, 1973).

The concept mapping process uses the x-y coordinate matrix resulting from MDS to calculate a measure of similarity or proximity between each observation (Kane & Trochim, 2007). Next, observations were arranged in ascending order and each case, or statement, begins in its own cluster. Pairs of adjacent points are compared to find the statements with the closest distances. Closest distances are determined using the Ward Method; at each stage clusters are merged when clusters minimally increase the within group error sum of squares (Anderberg, 1973; Ward, 1963). After a merge, the distance

matrix is updated to reflect the new values for within group error sum of squares for each cluster. This process continues until all clusters merge into one common (root) group.

The “stats” package in R was used, particularly the hierarchical clustering function called `hclust()` (R Development Core Team, 2011). A dendrogram was produced to determine the number of suitable clusters for the interpretation phase (see Appendix H). Several cluster grouping options were assessed based on the interpretability of the statements. Initially, statements were divided into ten cluster groups. Statement groupings were assessed at each cluster merge (e.g., when clusters merged from 10 clusters to nine clusters, to determine if clusters represented distinct concept or if they could be merged). Once cluster interpretation did not benefit from a statement grouping merge, agglomerative clustering was stopped.

### **Representation and Visualization of Point and Cluster Data**

Findings obtained from the MDS and hierarchical cluster analyses were organized in a series of visual representations to present to G-CRI stakeholders. Visualizations consisted of a point map, a point cluster map, a point rating map, a cluster rating map, pattern matches, and go-zone displays. The information that is presented by and the creation of the visualizations are described below.

#### *The Point Map*

The x-y coordinates obtained from the two-dimensional MDS analysis model were plotted on a two-dimensional plot. Each set of x-y coordinates represents one of the 85 statements that participants were asked to sort into piles with similar statements. The two dimensions represent the axes of the MDS analysis. The point map enables

participants to see the spatial relationship between statements. Each statement is labeled with its statement number, allowing participants to learn about the relationship between statements by their proximity on the point map. The `plot()` and `calibrate()` functions in R were used to create the point map with statement labels (Graffelman, 2010; R Development Core Team, 2011).

### *The Cluster Map*

Clusters of similar statements obtained from the hierarchical cluster analysis were grouped and overlaid on the point map. Polygons surround groups of statements that are similar in proximity to one another than the statements in other cluster groups. This data visualization provides participants a view of groups of statements and the relationships of groups of statements to one another. The cluster map was created using the `chull()` and `polygon()` functions in R to create the convex hull of the points surrounding each grouping of statements and draw lines around the perimeter of points respectively (R Development Core Team, 2011).

### *Point Rating Maps*

Point rating maps visually combine proximity information about each statement with rating information of two dimensions, prevalence of and the capacity to change the given statement. This type of map provides a representation of each statement's average rating across participants who took part in the restructuring phase of the concept mapping process. Point rating maps were created using the `plot()` function in R (R Development Core Team, 2011). Ratings were incorporated into the point size such that larger points represent higher ratings of prevalence and capacity to change for each statement,

indicating that a barrier occurs very often and is easy to change respectively. Two different point maps were created to represent prevalence and capacity to change ratings separately.

### *Cluster Rating Maps*

Cluster rating maps were produced by obtaining the average ratings for each cluster based on prevalence and capacity to change statements ratings for clustered groupings of statements. Average ratings for each cluster are represented by cluster height on separate maps for prevalence and capacity to change dimensions across participants who took part in the restructuring phase of the concept mapping process. These maps enable participants to assess aggregated ratings for all statements within a cluster. The number of polygons that corresponded to an average rating were overlaid in layers to illustrate the rating level of each cluster. The cluster ratings maps were created using the `chull()` and `polygon()` functions in R to create the convex hull of the points surrounding each grouping of statements and draw lines around the perimeter of points, using the overlay of multiple polygons to reflect rating levels (R Development Core Team, 2011).

### *Pattern Match Displays*

Pattern match displays were created to compare between clusters on rating dimensions as well as across stakeholder groups. One pattern match display was created representing the total sample of participants who took part in the restructuring of statements phase of the concept mapping process. Participants were able to compare average cluster ratings for prevalence and capacity to change for the clusters to determine

similarities and differences in these dimensions. In addition, two pattern match displays provided average cluster ratings by stakeholder group (law enforcement, mental health providers, and G-CRI staff) for prevalence and capacity to change ratings separately. These visualizations allowed participants to compare and contrast ratings between stakeholder groups. Pattern matches were created in R using the `stripchart()` function (R Development Core Team, 2011).

### *Go-zone Displays*

Go-zone displays were created for each of the resulting clusters using the point ratings for each statement. These displays were divided into quadrants by the average ratings of prevalence (horizontal dimension) and capacity to change (vertical dimension). The most actionable statements are represented in the upper, right quadrant (occurring very often with a high capacity to change) whereas lower priority barriers are represented in the lower, left quadrant (rarely occurring with a low capacity to change). Statements in the upper, left quadrant are barriers that do not occur often with a high capacity to change, thus may be a lower priority. Statements in the lower, right quadrant represent barriers that are highly prevalent with a low capacity to change, indicating potentially challenging barriers to accessing services. Go-zone displays were created using the `plot()` function in R (R Development Core Team, 2011).

### **Interpretation of Maps**

The G-CRI staff and study researcher reconvened via teleconference in order to interpret the findings from the original statement list and data visualizations after the sorting and rating data were analyzed and visualizations were created. The facilitator

reminded participants about the concept mapping process and the purpose of the interpretation session. Participants were provided with the final statement list and a list of the statements as grouped by the cluster analysis prior to the teleconference in order to become acquainted with the findings. The point, cluster, and ratings maps were presented to G-CRI staff during the teleconference by sharing the researcher's computer screen via the internet (see Appendix I).

Staff were given time to review the cluster map. Next, participants were asked to review the clusters of statements and provide a name or description for each cluster (see Appendix J). The facilitator engaged participants in discussion about how these maps reflected stakeholder perceptions using a structured list of questions and staff were asked whether the organization of clusters represented the statement groupings well (see Appendix K). Discrepancies between staff perceptions and the concept maps were noted.

### **Utilization of Maps**

Stakeholders and the evaluation team engaged in dialogue about the graphical representations created and how they could be used to improve G-CRI's practices. Using the go-zone maps of the individual clusters, statements represented in the high prevalence and high capacity to change quadrants were reviewed. In addition, G-CRI staff brainstormed action items that G-CRI and the community could put into place to address some of the barriers listed. An action plan was discussed for reviewing findings with the entire G-CRI provider group in a clear and concise way to obtain feedback from all stakeholder groups.

## CHAPTER IV

### RESULTS

This chapter provides a description of the sample of participants engaged in the concept mapping process. Findings are presented in the order of the research questions and the stages of concept mapping. MDS and cluster analyses findings are presented and concept maps are illustrated. Interpretations of the concept maps by the G-CRI staff are presented and actionable steps are provided in themes.

#### **Description of the Sample**

Law enforcement officers, mental health providers, and the G-CRI staff associated with the community-based initiative were invited to participate in any one or all of the phases of the concept mapping process. Data for this study were collected in three rounds of data collection (generation of statements, structuring of statements, and interpretation of findings) over a seven-month period between February and August 2012. Due to the duration of data collection and the nature of each round of data collection, not all participants participated in each round. Samples of participants during each round of data collection are described below.

#### *Generation of Statements Phase*

Six participants were present for the in-person brainstorming session of statement generation phase. The initial brainstorming session resulted in 74 statements (see Appendix E). These initial statements were provided in a follow-up email to the G-CRI

provider network (n =35) and providers were asked to review and add to these statements online if there were any ideas missing. Twenty-three additional participants participated in the brainstorming session online, resulting in 29 total participants that represented mental health providers, law enforcement, and the G-CRI staff (see Table 1). Respondents represented approximately 80% of all G-CRI provider representatives. These additional participants reviewed the initial brainstorming statements generated and generated 19 additional statements for a total of 93 statements. The statement list was edited for clarity and consolidated by deleting duplicate statements. A final list of 85 statements was reviewed by G-CRI staff prior to the structuring of statements phase.

*Table 1.  
Participants in Statement Generation Phase by Role*

Role	Number Participated in Initial Brainstorming	Number Participated in Follow-up Brainstorming	Total
Mental Health Provider	4	3	7
Law Enforcement	0	11	11
G-CRI Staff	1	4	5
Did Not Indicate Role	0	5	5
Total	6	23	28

*Structuring of Statements Phase*

The final list of statements was used in the sorting and rating phase of the concept mapping process. Participants were provided the option of completing the sorting and rating of statements in-person or online. Nine participants completed the sorting and rating in-person and four participants completed this phase online. Data were incorporated into the analysis only if a participant completed both the sorting and rating

steps. Data collection resulted in a total of 13 participants completing the structuring of statements phase. Participants took between 30 minutes and 90 minutes to complete this stage of the concept mapping process. Representation from each stakeholder group was obtained. Five participants were law enforcement officers, five participants were G-CRI staff, and three participants were mental health providers (see Table 2). Law enforcement officers and peer advocates from both divisions of the Police Department participated in the structuring of statements phase. Participants had a variety of experience in their current roles as well as with the G-CRI (see Table 3). Participants held their current position for an average of five years with a range between less than one year and twenty years. In addition, participants had varied experience with the G-CRI program, from recently becoming involved to five years of experience. This range is representative of the duration of the G-CRI in Greensboro.

*Table 2.  
Participants in Structuring of Statements Phase by Role and Mode of Completion*

Role	In-Person	Online	Total
Mental Health Provider	2	1	3
Law Enforcement	5	0	5
G-CRI Staff	2	3	5
Total	9	4	13

*Table 3.  
Participants in Structuring of Statements Phase by Years of Experience*

	Mean	Median	Minimum	Maximum
Years Experience in Current Position	5.1	2.3	.3	20
Years Experience with G-CRI	1.4	1.0	0	5

### *Interpretation of Findings Phase*

A two-hour long teleconference was conducted with the G-CRI staff. All five staff members were present to discuss and interpret findings. Staff included the program director, two peer advocates, and two community outreach staff members.

#### **Research Question 1**

*Research Question #1: What do different stakeholders perceive as community- or systems-factors that affect individuals' access to services after witnessing violence or experiencing trauma? How are these factors conceptualized within the given context?*

The statements generated by stakeholders provided preliminary information for the research question above. Statements were sorted and rated in the structuring phase of the concept mapping process in order to understand how barriers are conceptualized by G-CRI stakeholders.

#### *Generation of Statements*

Participants were asked to respond to the following focus prompt: Generate statements that describe specific community or systems factors that are barriers to accessing services for children who witness violence or experience trauma. The statement list of 93 statements generated was edited for redundant statements and reviewed by the G-CRI staff in order to ensure that statements were clear and could be understood on their own. Revision and editing of statements resulted in 85 total statements that were used in the structuring of statements step discussed below. Table 4 provides a sample of statements generated during the statement generation phase (see Appendix E for a complete list of statements).

*Table 4.*  
*Sample Statements Generated During Statement Generation Phase*

Statement Number	Statement
1.	Families and individuals don't understand or minimize the impact or potential impact that trauma might have on development
2.	Parents are lacking some of the skills or nurturing to really prioritize their children's needs
3.	Parents don't have the emotional IQ/Emotional intelligence to prioritize the needs of their children
4.	Bad experiences with the system
5.	Bad experiences with law enforcement
6.	Long history with DSS
7.	Misconception of DSS (e.g., DSS is bad)
8.	Misconception of law enforcement (e.g., Law is bad)
9.	Misunderstanding of the benefits and help that can be provided by current systems in place

#### *Structuring of Statements*

Participants were asked to sort the 85 statements into piles where statements that were similar to one another would be in the same pile. The number of sorting piles that participants used ranged between 3 and 17, with an average of 10.8 piles per sorting participant. Participants' sorts were compiled into a group similarity matrix, with 13 total participants represented on the diagonal. The similarity matrix was converted into a dissimilarity matrix in order to conduct the MDS analyses.

Several MDS models were conducted with varying dimensions including two-, three-, and four- dimensional models. Stress levels were compared as well as the convergence of a solution (see Table 5). The two-dimensional solution was selected for interpretation due to the common use of two-dimensional solutions in the interpretation of concept mapping results as well as having an acceptable stress value (Kane &

Trochim, 2007). Although the three-dimensional model had a slightly lower stress value, the two-dimensional solution was chosen for ease of interpretability. The stress value for this study is slightly lower than the range provided by the 95% confidence interval reported in Kane and Trochim (2007) and Rosas and Kane (2012). The remaining analyses are based on the two-dimensional model.

*Table 5.*  
*Comparison of MDS Models by Dimension*

Dimensions	Stress-1	Convergence
2	.17	Yes-16 iterations
3	.12	Yes-232 iterations
4	.09	No convergent solutions after 500 tries

A point map was created based on the x-y coordinates that resulted from the two-dimensional model (see Figure 4). Points that are closer in distance to one another represent statements that were sorted together whereas points that are farther apart represent dissimilar statements. For example, statement number 51 (Law enforcement may not be aware of the intricacies of trauma and the needs of the client/case) and number 37 (Discrepancy between resolution of case between law enforcement and client perspective) toward the top of the point map are more similar to one another than statement number 64 toward the bottom of the map (Lack of education of sex abuse and child abuse as a crime).

Participants were asked to rate each statement on two dimensions: prevalence of the barrier and capacity to change the barrier. Ratings were completed on 5-point scales. Regarding the prevalence scale, a value of 1 indicated that the barrier rarely occurs and a

value of 5 indicated that the barrier occurs almost all of the time. Regarding the capacity to change dimension, a value of 1 indicated that this barrier is very difficult to address and a value of 5 indicated that this barrier is very easy to address. Statements with the highest and lowest average prevalence ratings are provided in Table 6. Average statement ratings for prevalence ranged from 2.69 to 4.23. Statements with the highest and lowest average capacity to change ratings are provided in Table 7. Average statement ratings for capacity to change ranged from 1.67 to 4.38, indicating a wider range between statements regarding capacity to change particular barriers in the community. The complete list of statements by average ratings can be found in Appendix I.

In addition to a point map, point ratings maps were created using the x-y coordinates resulting from the two-dimensional MDS model in conjunction with the rating information by prevalence and capacity to change. Rating information was displayed by point size such that higher ratings are illustrated by larger points on the point rating maps (see Figures 5 and 6). Larger points on the prevalence point rating map indicate that the barrier occurs very often whereas larger points on the capacity to change rating map indicate that a barrier is easier to change. The figures 5 and 6 below are colored by cluster grouping of a 7-cluster solution and the cluster solution and names will be discussed in greater detail in the following section. Points that are colored the same color belong to the same cluster grouping. For example, point numbers representing statements 37, 50, 51, and 74 at the top of the point rating maps are all colored in magenta, thus represent the same cluster grouping.

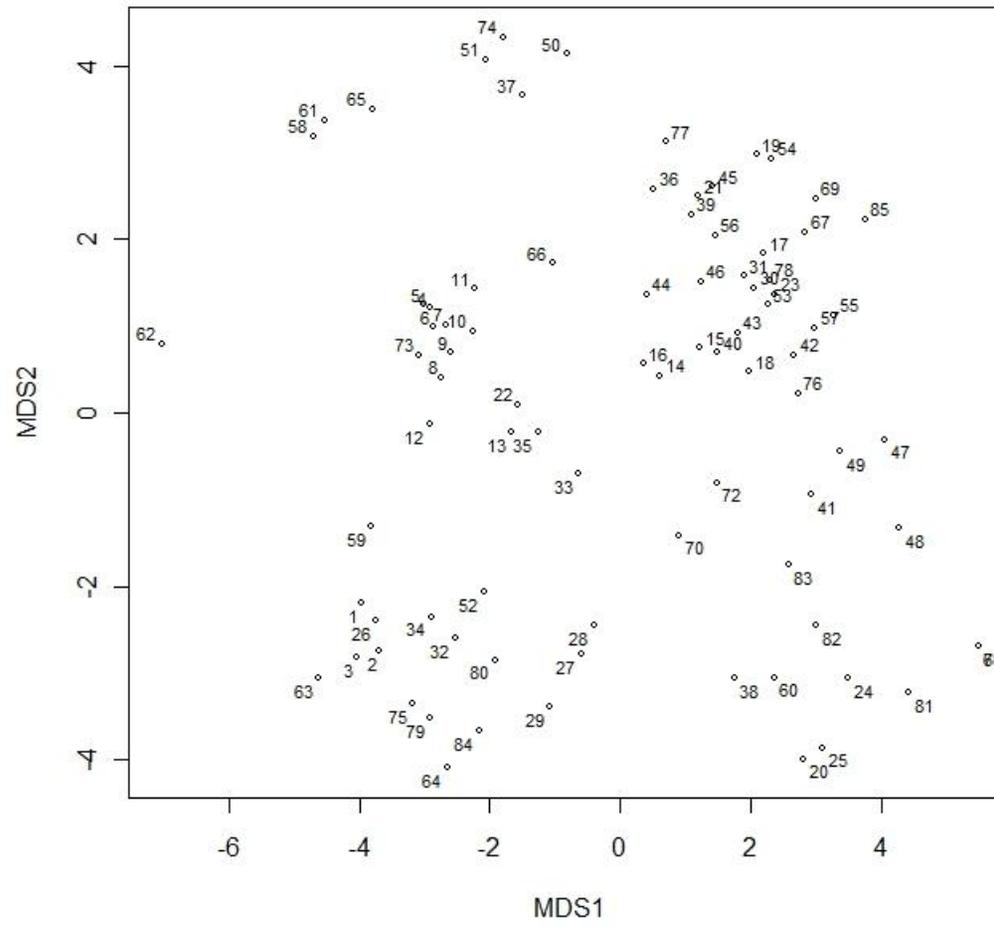


Figure 4. Point Map for Two-Dimensional MDS.

*Table 6.  
Statements with the Highest and Lowest Mean Ratings for Prevalence of Barrier*

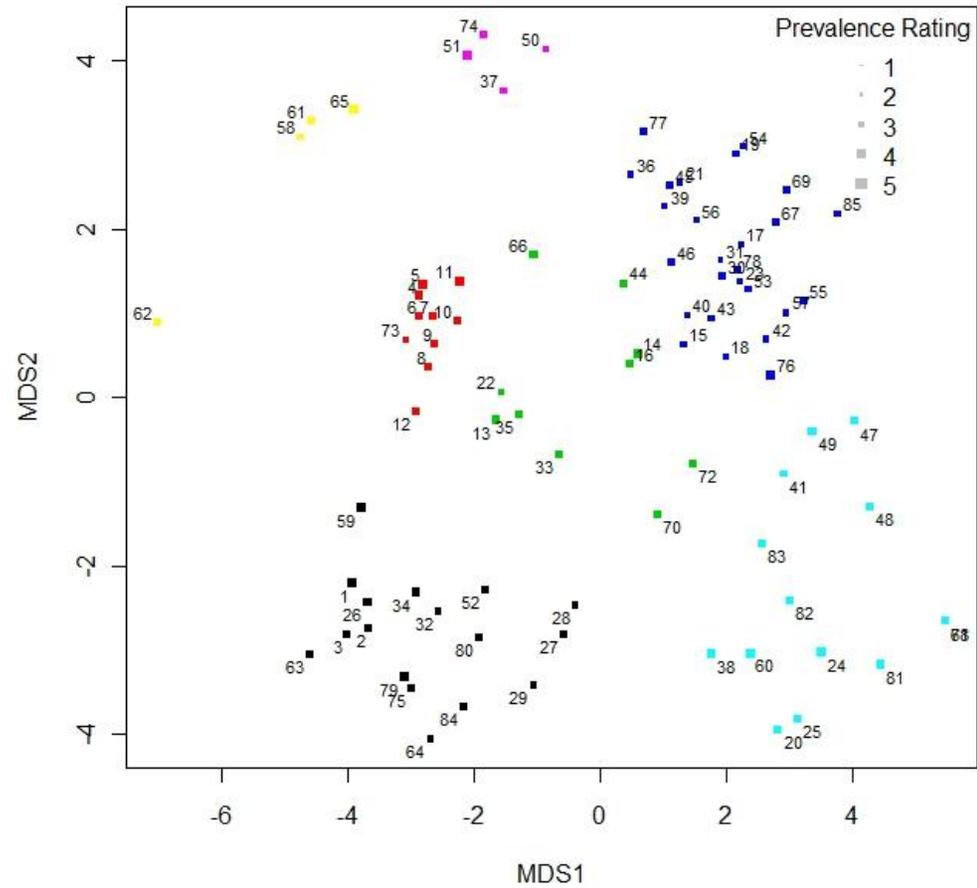
Statement	Average Rating
(59) Family may think that it is a choice to report the incident (victim and perpetrator in the same family)	4.23
(1) Families and individuals don't understand or minimize the impact or potential impact that trauma might have on development	4.15
(60) Lack of juvenile sex offender services in the county (unless prosecuted)	4.15
(76) 8:00-5:00 Office hours of providers (no weeknight or weekend availability)	4.15
(4) Bad experiences with the system	4.08
(21) Lack of explanation of the benefits of services	2.85
(39) Clients did not get the services promised or received	2.85
(23) No one answers the phone at provider agencies	2.77
(31) Providers are not listening to clients during the referral process	2.69
(54) Lack of open dialogue with the clients	2.69

*Note.* Statements with higher ratings indicate that respondents rate the particular barrier as highly prevalent.

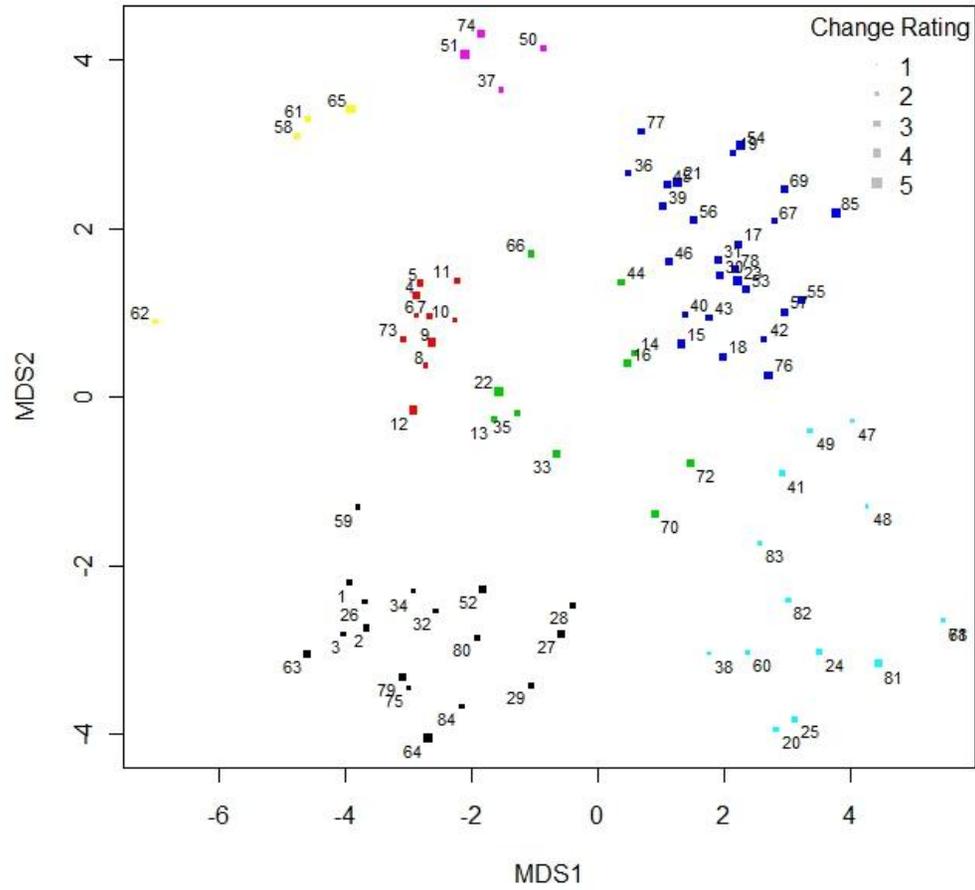
*Table 7.*  
*Statements with the Highest and Lowest Mean Ratings for Capacity to Change Barrier*

Statement	Average Rating
(21) Lack of explanation of the benefits of services	4.38
(54) Lack of open dialogue with the clients	4.38
(23) No one answers the phone at provider agencies	4.08
(64) Lack of education of sex abuse and child abuse as a crime	4.00
(12) Families may not have a concrete idea of what services are going to look like or what services consist of	3.92
(38) Legal status influencing access to services (e.g., citizenship)	1.92
(47) Public funds for system of care limit means of service provision (e.g., time, order of services provided)	1.92
(68) Insurance	1.92
(6) Long history with DSS	1.85
(48) Value options (part of NC mental health and substance abuse services delivery related to insurance)	1.67

*Note.* Statements with higher ratings indicate that respondents rate the particular barrier as easy to change.



*Figure 5. Point Rating Map for Prevalence of Barrier by Cluster Grouping.*  
*Note.* Points that are colored the same color belong to the same cluster grouping.



*Figure 6. Point Rating Map for Capacity to Change Barrier by Cluster Grouping.*  
*Note.* Points that are colored the same color belong to the same cluster grouping.

Findings from the hierarchical cluster analysis were integrated with the MDS coordinates to create a point cluster map. After assessing between six and 10 cluster solutions, a seven-cluster solution was retained for interpretation purposes. G-CRI staff were presented with the statements by cluster and point cluster map. Next, staff were asked to label the clusters in a way that characterizes the statements within each cluster. Staff provided the following names for the clusters representing different community or systems barriers to accessing services for children who witness violence or experience trauma: Understanding of Trauma, Trust, Service Engagement and Coordination, Workforce Development, Access to Care, Perceptions of the Criminal Justice System and Traumatic Stress, and Faith-Community Partnerships (see Figure 7). Labels for clusters are worded positively as decided by G-CRI staff. However, statements represented within each cluster represent barriers to the cluster named. Cluster names are described below.

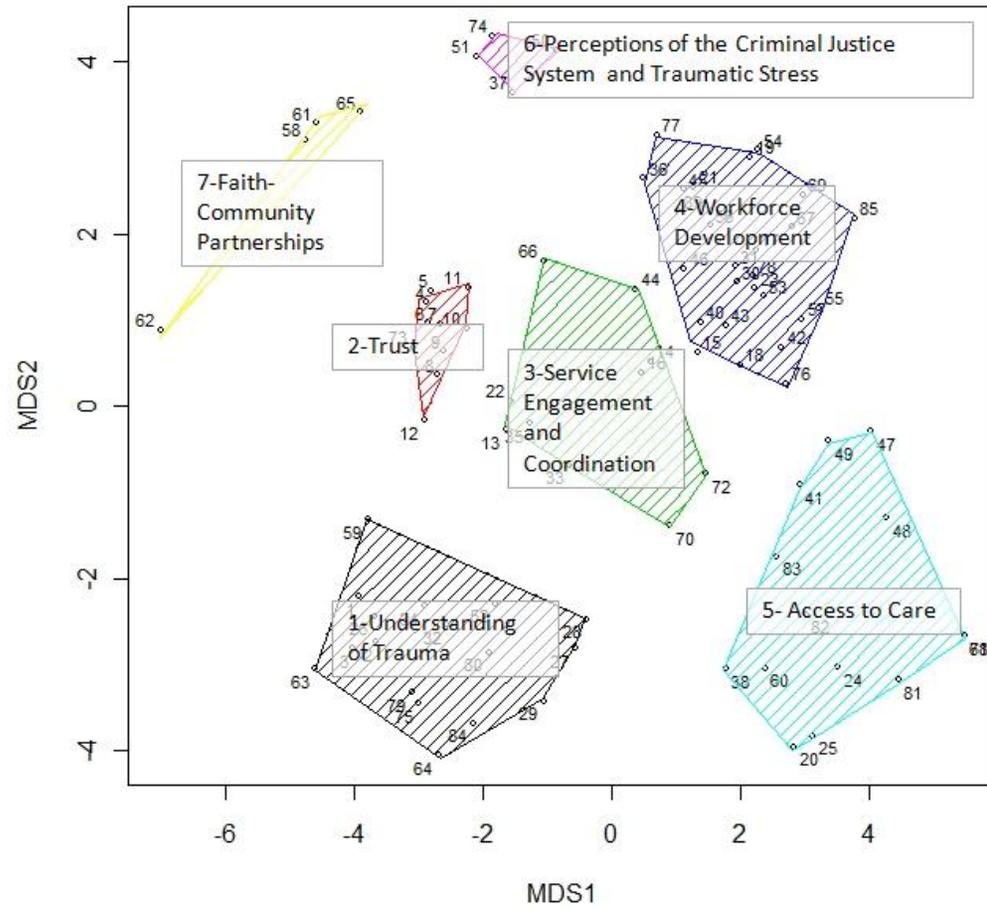


Figure 7. Point Cluster Map for a Seven-Cluster Solution.

The cluster named ‘Understanding of Trauma’ refers to community, family, and children’s understanding of trauma. This cluster reflects the community and client understanding of trauma and trauma services. Staff noted two separate aspects of understanding of trauma within this cluster; a general understanding of trauma and the understanding of how to access trauma services. However, staff noted that these two aspects are both related to understanding traumatic symptoms and the stages of trauma in general. For example, if a client does not understand the symptoms of trauma, he/she may not know to seek help or where to seek help.

The cluster labeled ‘Trust’ refers to a lack of client trust within the trauma system of care. Clients’ distrust with systemic factors include law enforcement, social services, and additional services provided to clients who are victims of trauma. Many statements describe bad experiences with the system and misconceptions of various services within the trauma system of care.

The ‘Service Engagement and Coordination’ cluster describes barriers within the provider network related to service provision. Statements that characterize this cluster discuss the time delay of services and a lack of communication and coordination of services. Staff noted that many of the statements related to customer service issues such as consistency of services within the trauma provider system of care.

The cluster labeled ‘Workforce Development’ describes a group of statements that refer to challenges in workforce development using trauma-informed care. Staff stated that many statements describe insufficient preparation for trauma treatment on the providers’ part. Areas described within the statements include a lack of engagement with

families and providers, flexibility in service provision (e.g., hours of operation), sensitivity to secondary trauma during trauma treatment as well as a need for greater empowerment of families and clients.

The 'Access to Care' cluster refers to barriers to accessing care within the community and the system. Many statements within this cluster refer to logistical issues such as money, insurance, language and legal barriers, and transportation.

The cluster labeled 'Perceptions of the Criminal Justice System and Traumatic Stress' refers to the perceptions and understanding of trauma-informed care within the criminal justice system. Staff noted that these statements describe a need for more integrated, trauma-informed training of law enforcement.

The cluster labeled 'Faith-community Partnerships' refers to the role that faith-based organizations play in the context of trauma service provision. Staff noted that statements describe a need to clarify and identify the roles of the faith community in cases of trauma. In addition, staff noted a need to understand how community partnerships such as G-CRI can coordinate care or collaborate with the faith-based community to increase awareness and provide education on trauma.

In addition to a point cluster map, cluster rating maps were presented to G-CRI staff to demonstrate the average cluster rating of the statements within a given cluster by prevalence and capacity to change (see Figures 8 and 9). Each layer of a cluster represents an interval of the range of average cluster scores. Cluster scores were split into five equal layers to represent the range of values for the ratings of scores for prevalence and capacity to change scores. For example, average prevalence ratings ranged from 3.22

to 3.68 on a 5-point scale. The range of the average prevalence score (0.46) was divided by five in order to create intervals. As seen in Figure 8, the cluster labeled ‘Understanding of Trauma’ had an average prevalence rating of 3.55 and is represented by a four-layered polygon whereas the cluster labeled ‘Perceptions of the Criminal Justice System and Traumatic Stress’ had an average rating of prevalence rating 3.25 and is represented by a one-layered polygon (see Table 8 for all average cluster ratings).

*Table 8.*  
*Average Cluster Ratings by Prevalence and Capacity to Change Barrier*

Cluster Number	Prevalence	Capacity to Change
1	3.55 (.35)	2.91 (.49)
2	3.68 (.37)	2.91 (.65)
3	3.56 (.33)	3.28 (.36)
4	3.22 (.36)	3.47 (.44)
5	3.57 (.24)	2.37 (.45)
6	3.25 (.28)	2.88 (.60)
7	3.63 (.25)	3.04 (.53)

*Note.* Standard deviations are reported in parentheses.

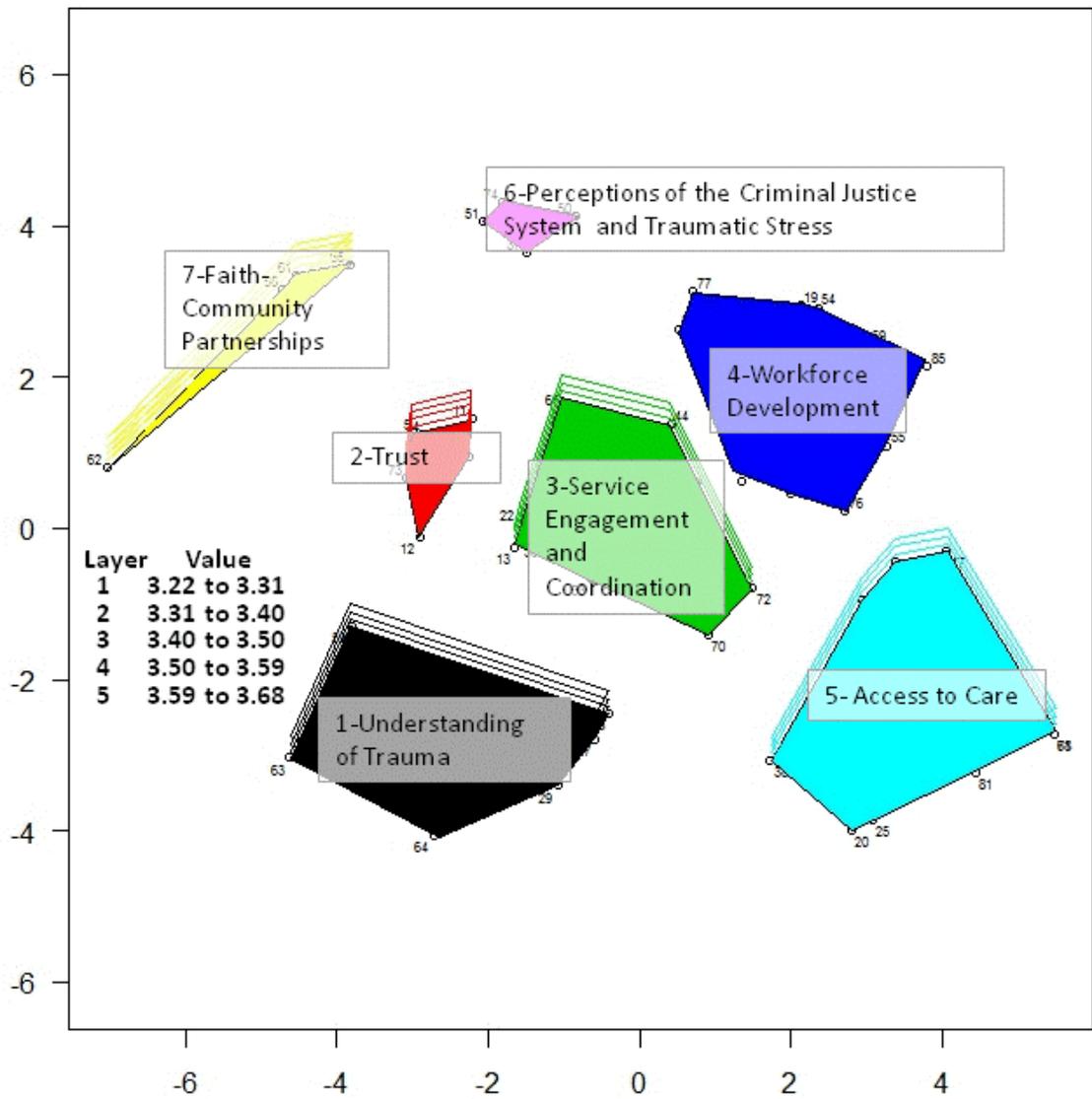


Figure 8. Cluster Rating Map for Prevalence of Barrier.

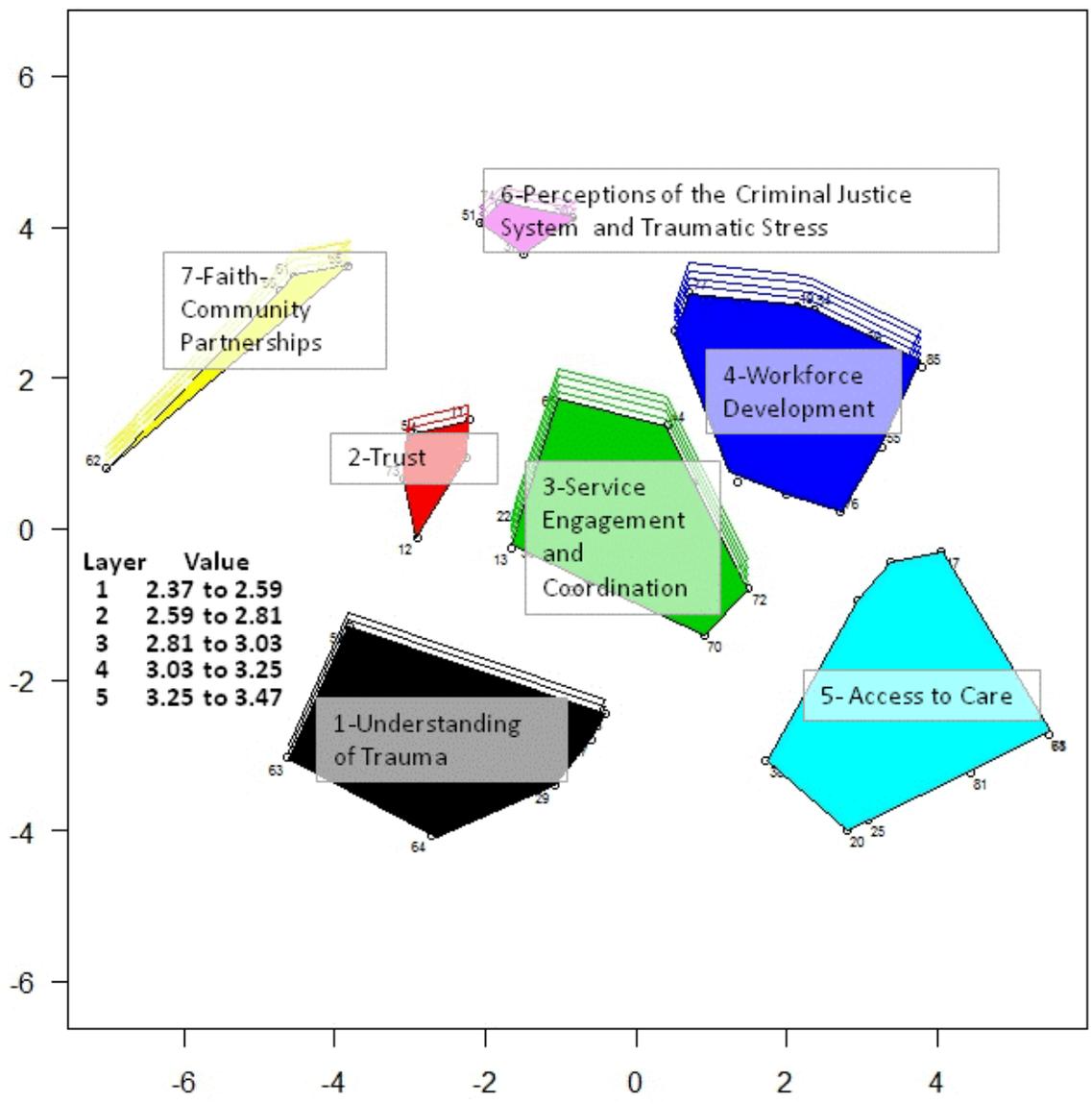


Figure 9. Cluster Rating Map for Capacity to Change Barrier.

Another way that average cluster ratings were presented to G-CRI staff was in the form of a ladder graph or pattern match display (see Figure 10). This visualization enabled G-CRI staff to compare the order of the average ratings by cluster group and rating dimension. For example, cluster number four (Workforce Development) was rated as easiest to change but was rated as the least prevalent cluster. However, cluster number five (Access to Care) was rated as the most difficult to change and was rated as a highly prevalent barrier. These ratings may provide a different perspective on how to address the different cluster groupings of barriers. Pearson product-moment correlations were conducted in order to compare the rankings of the clusters based on prevalence and capacity to change ratings. The Pearson product-moment correlation between these two ratings was  $r = -.39$ . For the majority of the ratings, as the prevalence of a barrier increased, the capacity to change the barrier was noted as more difficult. However, the range in average cluster scores was less than 1.5 points on the 5-point rating scale. Overall, average prevalence scores tend to be higher than the average capacity to change scores for their respective clusters.

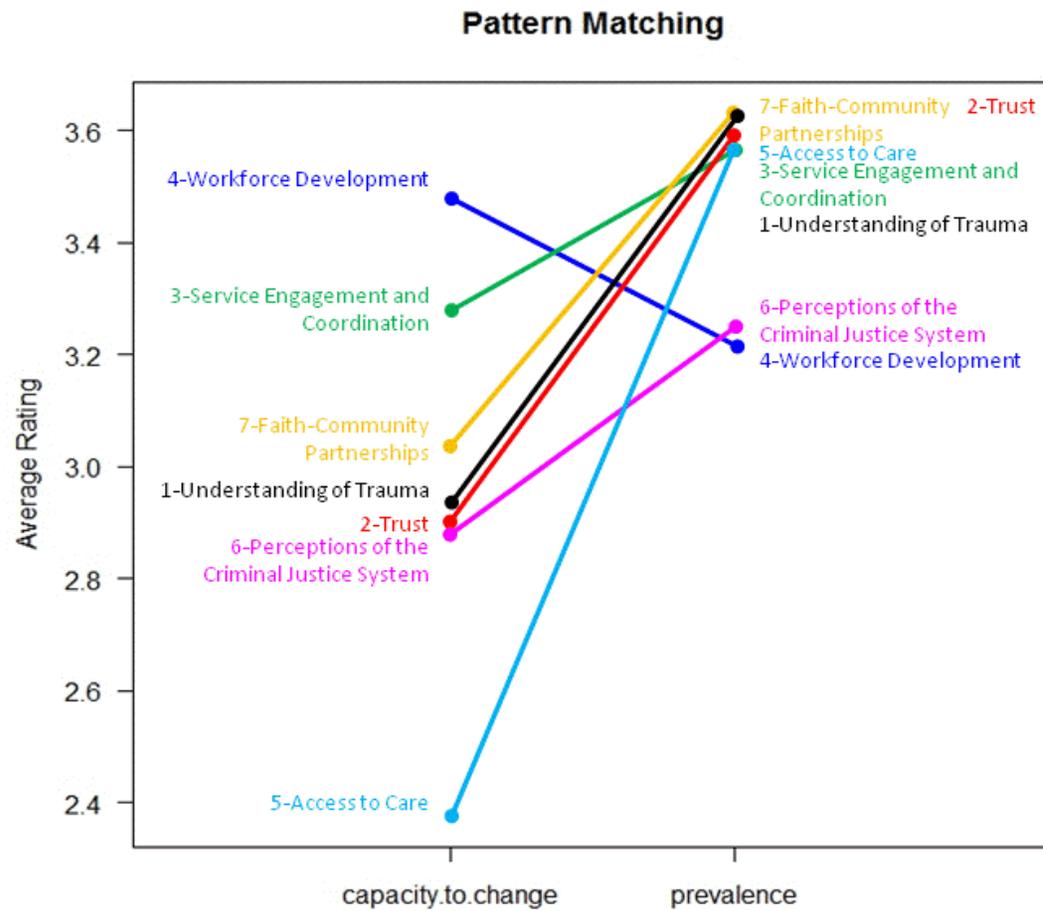


Figure 10. Pattern Match Visualization Comparing Prevalence and Capacity to Change Ratings by Cluster.

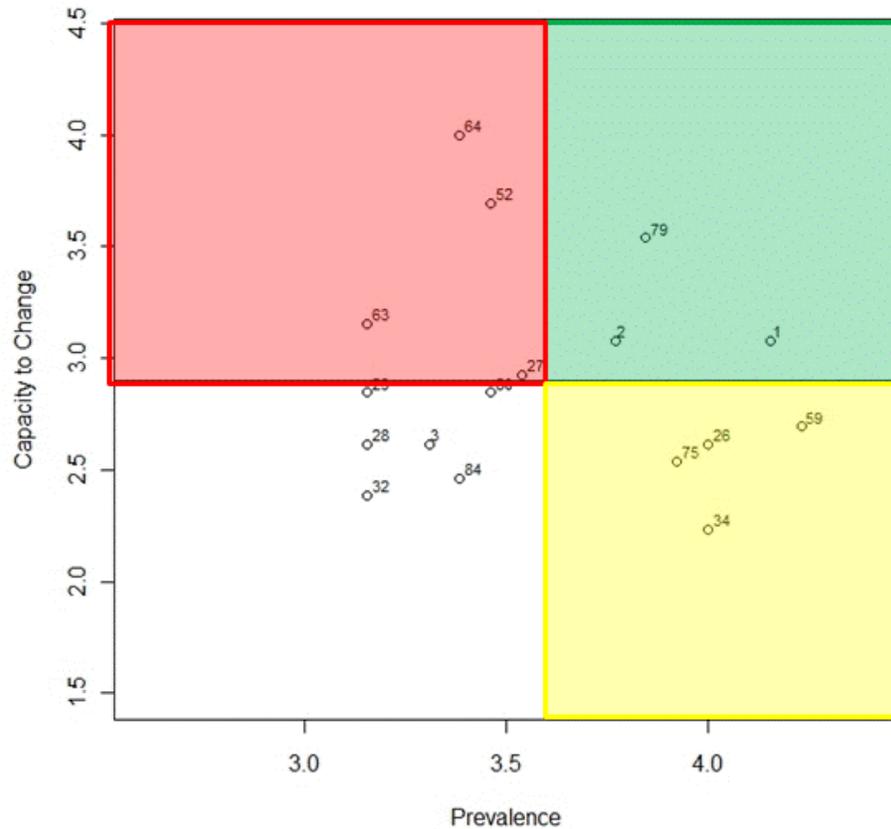
Go-zone displays were created for each of the resulting seven clusters using the point ratings for each statement (see Figures 11-17). These displays are divided into quadrants by the average ratings of prevalence (horizontal dimension) and capacity to change (vertical dimension). The most actionable statements are represented in the upper, right quadrant (occurring very often with a high capacity to change) whereas lower priority barriers are represented in the lower, left quadrant (rarely occurring with a low capacity to change). Statements in the upper, left quadrant are barriers that do not occur often with a high capacity to change, thus may be a lower priority. Statements in the lower, right quadrant represent barriers that are highly prevalent with a low capacity to change, indicating potentially challenging barriers to accessing services.

Go-zone visualizations were presented by cluster to G-CRI staff. Statements represented in the green quadrants of the visualization were provided to facilitate dialogue regarding what actions could be taken to address barriers that are highly prevalent and easy to change within the community. G-CRI staff were asked whether or not these barriers were currently being addressed in any way as well as the types and amount of resources that would be necessary to actionably address these barriers. Each cluster was addressed separately and actions that G-CRI staff suggested are provided below.

Regarding the ‘Understanding of Trauma’ cluster, staff noted a need for family and community education about trauma (see Figure 11). Staff stated that one action that that could be taken by the G-CRI or the Greensboro community included “providing workshops for families on trauma and how to access trauma-related services”. Additional

ways that staff discussed raising awareness about trauma included developing public service announcements and educational brochures to provide to parents and families about what trauma is and where to seek help. Other suggestions included developing trainings for parent advocates in order for information sharing to take place one-on-one as well as creating a centralized location where integrated services can be accessed.

## Cluster 1

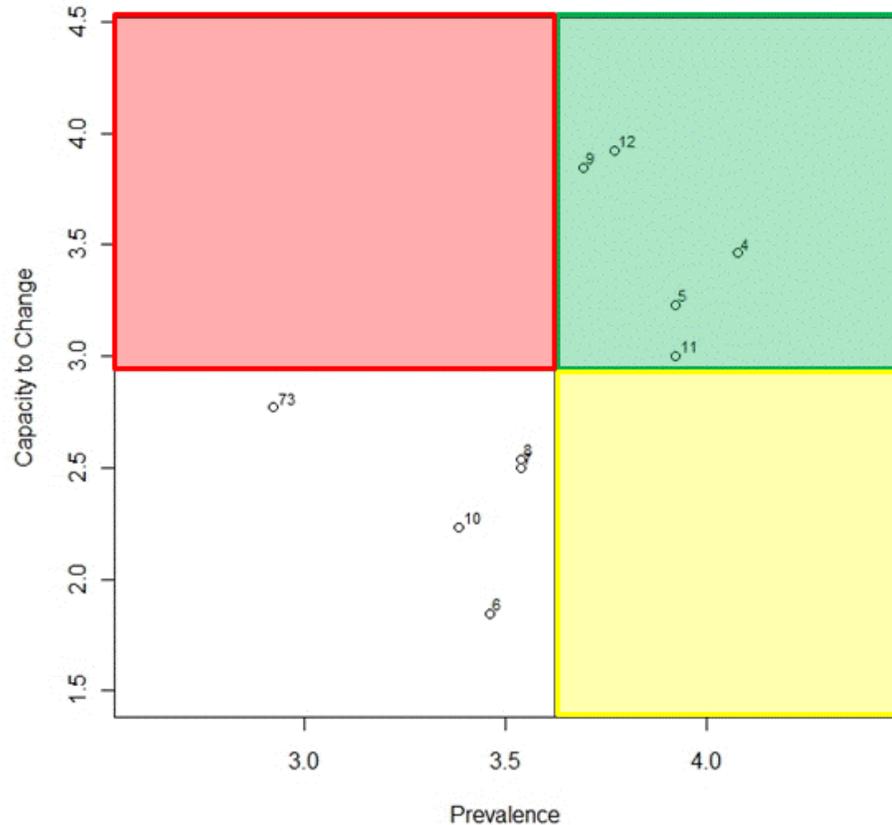


*Figure 11. Go-zone Map by Prevalence and Capacity to Change for Understanding of Trauma Cluster.*

Staff provided a number of actionable suggestions on the cluster labeled ‘Trust’ (see Figure 12). Many actionable suggestions were related to increasing the community dialogue about the trauma system of care. Staff stated that providers who work within the system of care must be willing to hear concerns of clients and community members’ experiences with the system. Common misunderstandings could be addressed in a frequently asked questions brochure regarding trauma and service provision. In addition, G-CRI staff noted a need for those within the trauma system of care to trust the system.

One staff member stated “we need to trust the system, if not, [clients] are never going to trust us”. Actions to address this barrier include increasing understanding and establishing trust between all of the different providers within a trauma system of care. Staff also noted a need to understand the difficulties and stressors within the system of care in order to improve and nurture the system. Staff stated that the trauma system of care “is packed and traumatized itself”. Specific actions that could be taken to address this barrier include increasing training for providers in the office and in the field and addressing the impact of secondary trauma and stress on both the client and provider levels.

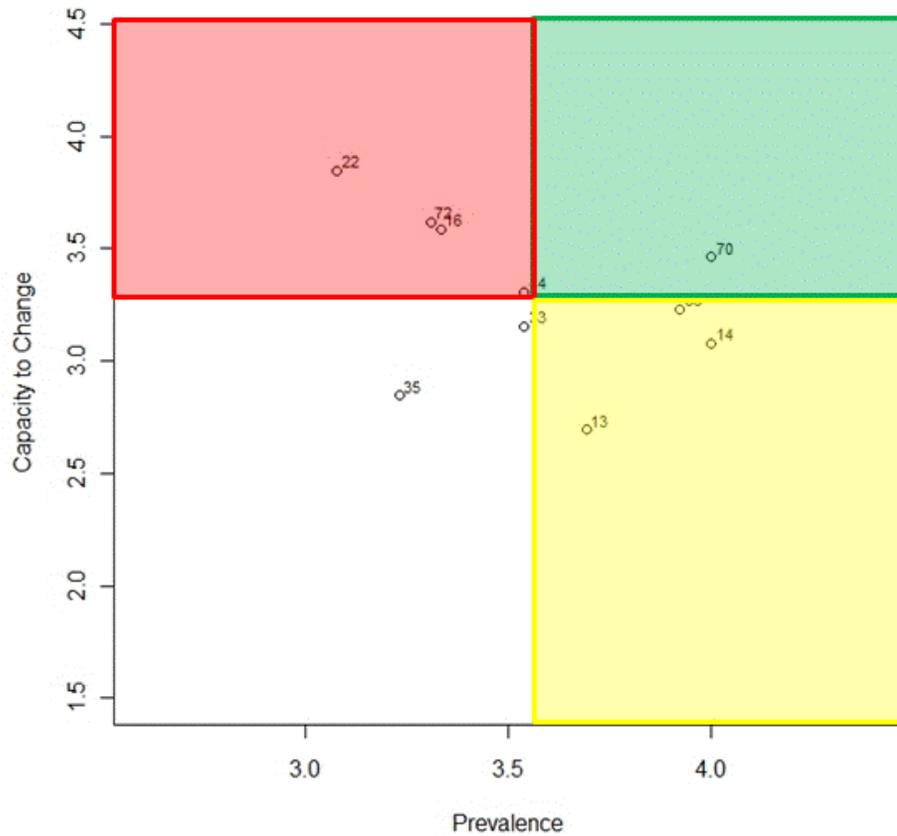
## Cluster 2



*Figure 12. Go-zone Map by Prevalence and Capacity to Change for Trust Cluster.*

Regarding the ‘Service Engagement and Coordination’ cluster, the G-CRI staff noted the need to stress the importance of G-CRI referrals as an immediate concern in order to facilitate quicker referral to services (see Figure 13). The most actionable statement noted with high prevalence and capacity to change within this cluster was a “time delay between the incident and the time help arrives to assist the children.” The G-CRI staff mentioned they could revisit policies and procedures for identifying and referring cases to improve early intervention of services.

### Cluster 3



*Figure 13. Go-zone Map by Prevalence and Capacity to Change for Service Engagement and Coordination Cluster.*

The G-CRI staff stated that the ‘Workforce Development’ cluster’s most actionable statements related to trauma-informed care (see Figure 14). Workshops for providers on trauma-informed care and practices would be beneficial to improve the community-based initiative and the workforce that serves clients who are victims of trauma. Staff noted that bridging the relationships between providers who work in slightly different fields (e.g., domestic violence and mental health providers) may increase service coordination. The G-CRI staff restated the need for a centralized location

that provides services (e.g., a family justice center) that makes services accessible beyond non-traditional work hours as trauma and violence can occur at any time.

#### Cluster 4

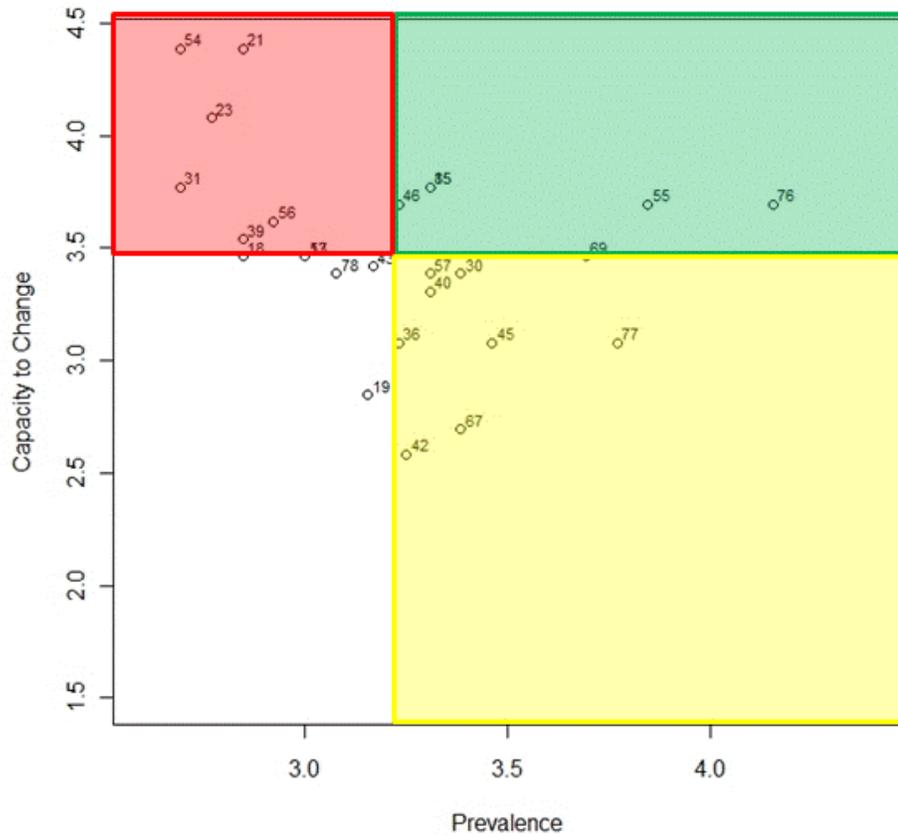
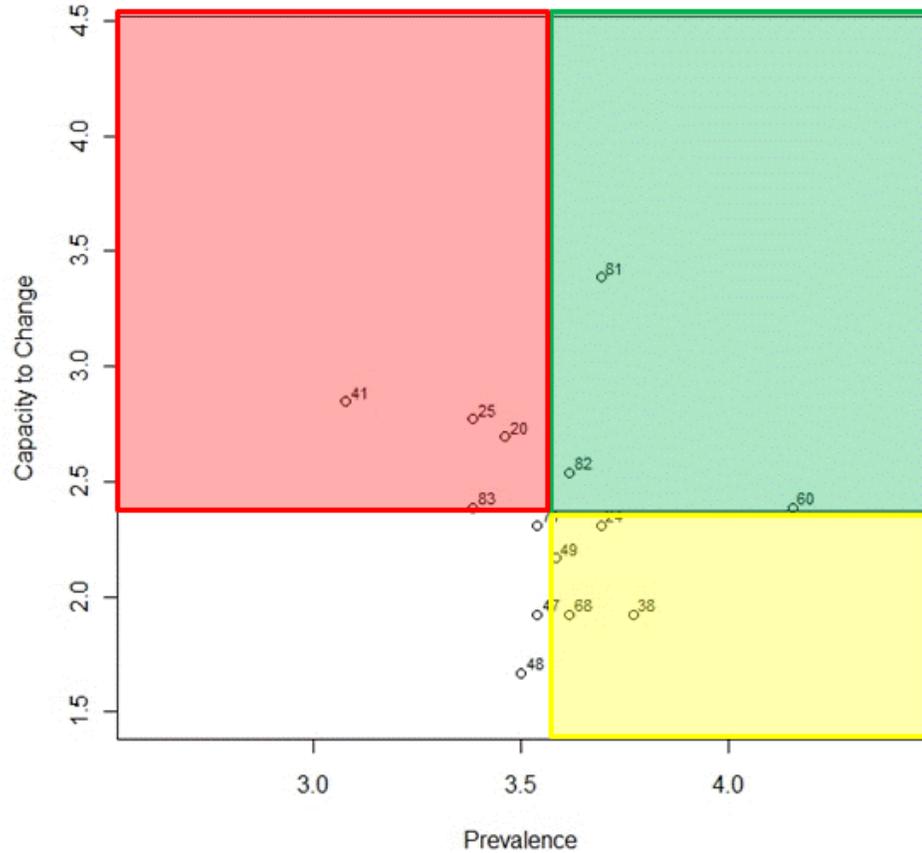


Figure 14. Go-zone Map by Prevalence and Capacity to Change for Workforce Development Cluster.

The G-CRI staff provided actionable steps the community could take to address the cluster labeled 'Access to Care' (see Figure 15). Community-based changes include providing more mental health screenings and fairs within the community as well as providing mobile crisis unit services to increase access to trauma care services throughout the community. Expanding the number of therapists that speak multiple languages may

address some of the language and cultural barriers in the community described by stakeholders as prevalent in the community.

### Cluster 5

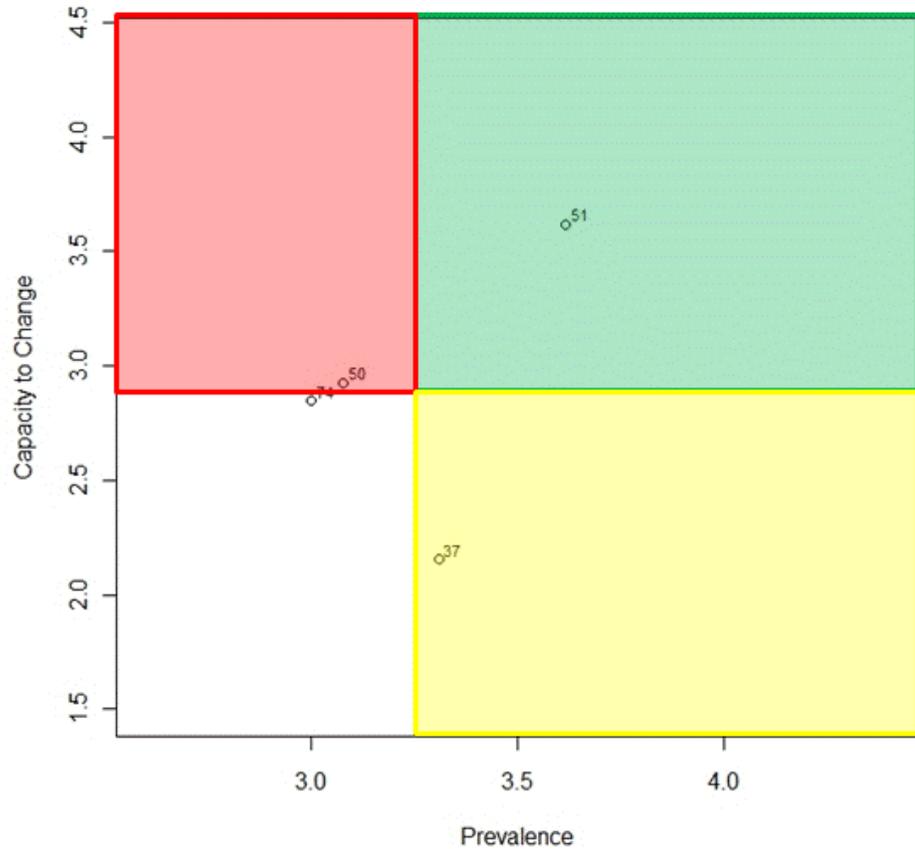


*Figure 15. Go-zone Map by Prevalence and Capacity to Change for Access to Care Cluster.*

The G-CRI staff noted ways to improve actions related to the cluster titled ‘Perceptions of the Criminal Justice System and Traumatic Stress’ (see Figure 16). Currently, G-CRI staff are examining the possibility of providing a small training on trauma for new law enforcement officers in the community within the basic training for

new police officers. In addition, continuing education as a portion of the professional law enforcement training on trauma-informed care would reinforce the ways to address clients who are victims of trauma. Staff noted that in order to provide continuing education, there would have to be policy changes enacted through the North Carolina Justice Academy. Trainings could be provided by instructional videos or in-person. Staff specifically noted the need to provide in-depth training to detectives on trauma-informed care as they tend to have more contact with children and families who are victims of violence or trauma.

## Cluster 6

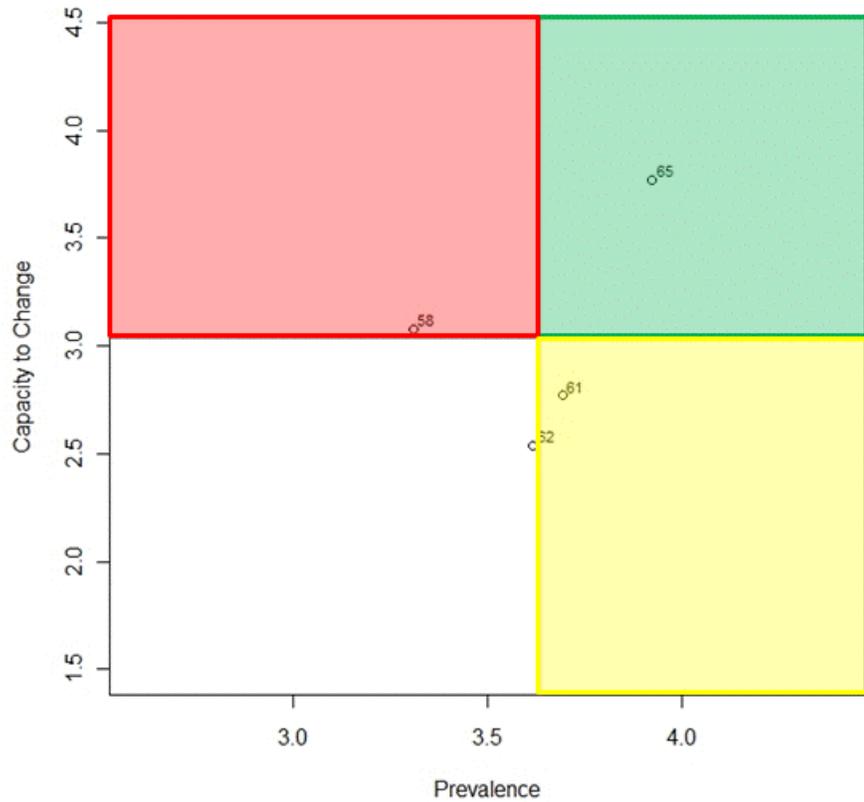


*Figure 16. Go-zone Map by Prevalence and Capacity to Change for Perceptions of the Criminal Justice System Cluster.*

The G-CRI staff stated the need to identify the roles of the faith community in the cluster 'Faith-Community Partnerships' (see Figure 17). Understanding how community providers can coordinate care with the faith community may decrease the number of clients who do not seek help within the mental health system by raising awareness of the symptoms and effects of trauma. Staff noted a need to work with the faith community to educate the faith community about the resources that exist within the community related to trauma-informed services. Additionally, G-CRI providers noted the need to have an

open dialogue about the roles of a spiritual counselor and when clients should be referred to law enforcement or a mental health provider.

### Cluster 7



*Figure 17. Go-zone Map by Prevalence and Capacity to Change for Faith-Community Partnerships Cluster.*

## Research Question 2

*Research Question #2: Are stakeholder perceptions consistent with one another? What is the degree of similarity among stakeholder perceptions regarding barriers to accessing services?*

Stakeholder groups represented in the concept mapping process included law enforcement officers (n = 5), mental health providers (n = 3), and G-CRI staff (n = 5). Due to the small sample size of the overall sample (n = 13) and subsamples, separate MDS and hierarchical cluster analyses were not conducted by stakeholder group. However, stakeholder perceptions were compared at the cluster level using the ratings on the two dimensions, prevalence and capacity to change the barrier. Average cluster ratings were compared by stakeholder group and are presented in the pattern match visualizations below (see Figures 18 and 19). Comparatively by cluster, G-CRI staff rated all clusters with higher average prevalence ratings than law enforcement and mental health providers (see Table 9). Regarding capacity to change ratings, ratings were not as disparate between stakeholder groups with the exception of the Faith-Community Partnerships cluster (see Table 10). Mental health providers rated the Faith-Community Partnerships as the most difficult barrier to change whereas G-CRI staff and law enforcement rated this cluster among one of the easiest barriers to change.

Pearson product-moment correlations were computed to assess the relationships between stakeholder group ratings (see Table 11). The Table 11 illustrates the relationship between prevalence ratings by stakeholder group above the diagonal and capacity to change ratings below the diagonal. All correlations between stakeholder

groups were positive. However, there was greater similarity between law enforcement officers and mental health providers regarding the prevalence of the barriers by cluster ( $r = 0.49$ ). Regarding capacity to change, there was greater similarity between law enforcement officers and G-CRI staff.

*Table 9.*  
*Average Prevalence Cluster Rating by Stakeholder Group*

Cluster Number	G-CRI Staff	Law Enforcement	Mental Health Providers
1	3.69 (.48)	3.58 (.49)	3.45 (.12)
2	4.04 (.62)	3.36 (.57)	3.37 (.46)
3	3.85 (.58)	3.34 (.61)	3.47 (.46)
4	3.32 (.23)	3.05 (.38)	3.32 (.72)
5	3.93 (.74)	3.45 (.44)	3.17 (.48)
6	3.65 (.76)	3.10 (.45)	2.83 (.14)
7	4.20 (.60)	3.25 (.85)	3.33 (1.01)

*Note.* Standard deviations are reported in parentheses.

*Table 10.*  
*Average Capacity to Change Cluster Rating by Stakeholder Group*

Cluster Number	G-CRI Staff	Law Enforcement	Mental Health Providers
1	2.86 (.29)	3.04 (.91)	2.75 (.62)
2	2.48 (.91)	3.29 (.69)	3.10 (.10)
3	2.99 (.47)	3.36 (.82)	3.63 (.31)
4	3.24 (.26)	3.62 (.56)	3.66 (.39)
5	2.29 (.58)	2.54 (.95)	2.29 (.68)
6	2.60 (.68)	3.25 (.59)	2.75 (.87)
7	3.00 (.59)	3.60 (.99)	2.17 (.63)

*Note.* Standard deviations are reported in parentheses.

### Prevalence of Barrier

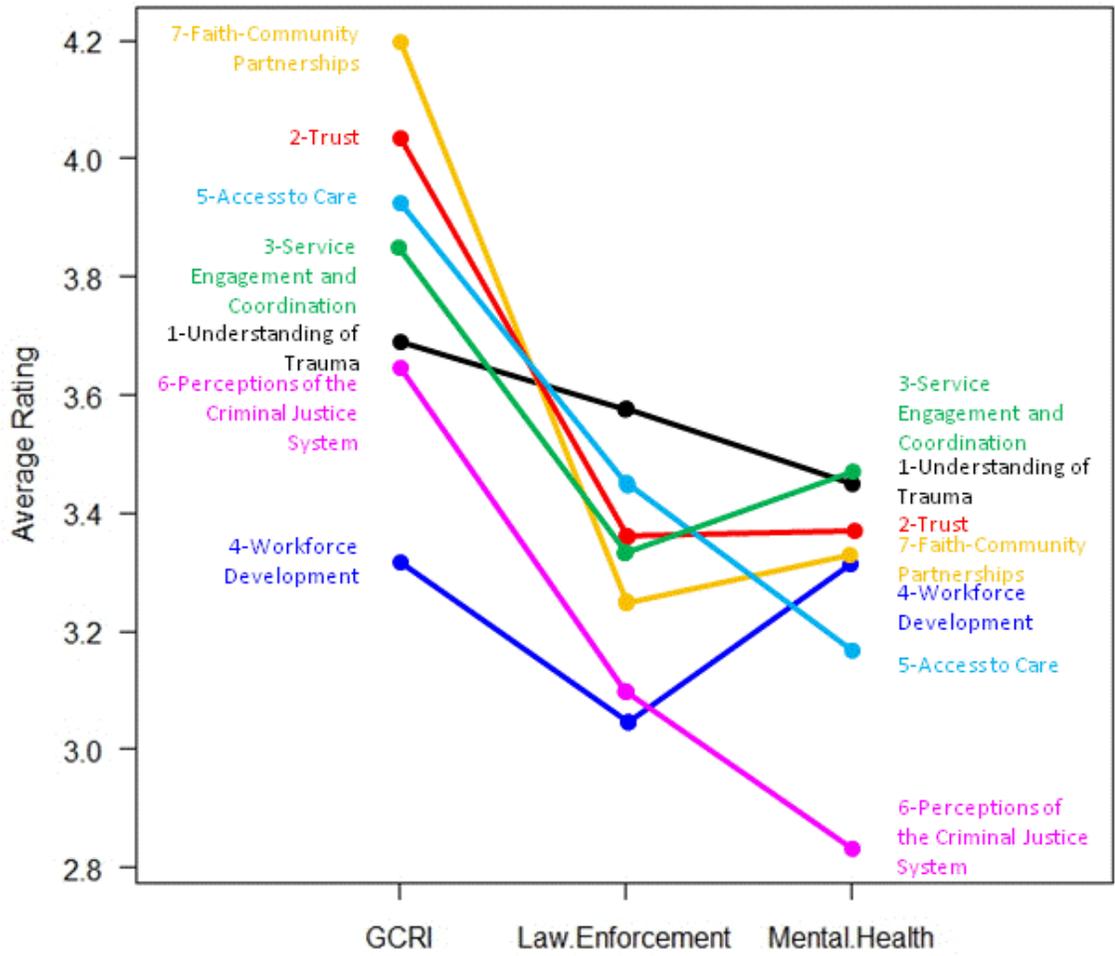


Figure 18. Pattern Match Visualization by Stakeholder Group for Average Prevalence Ratings of Clusters.

### Capacity to Change Barrier

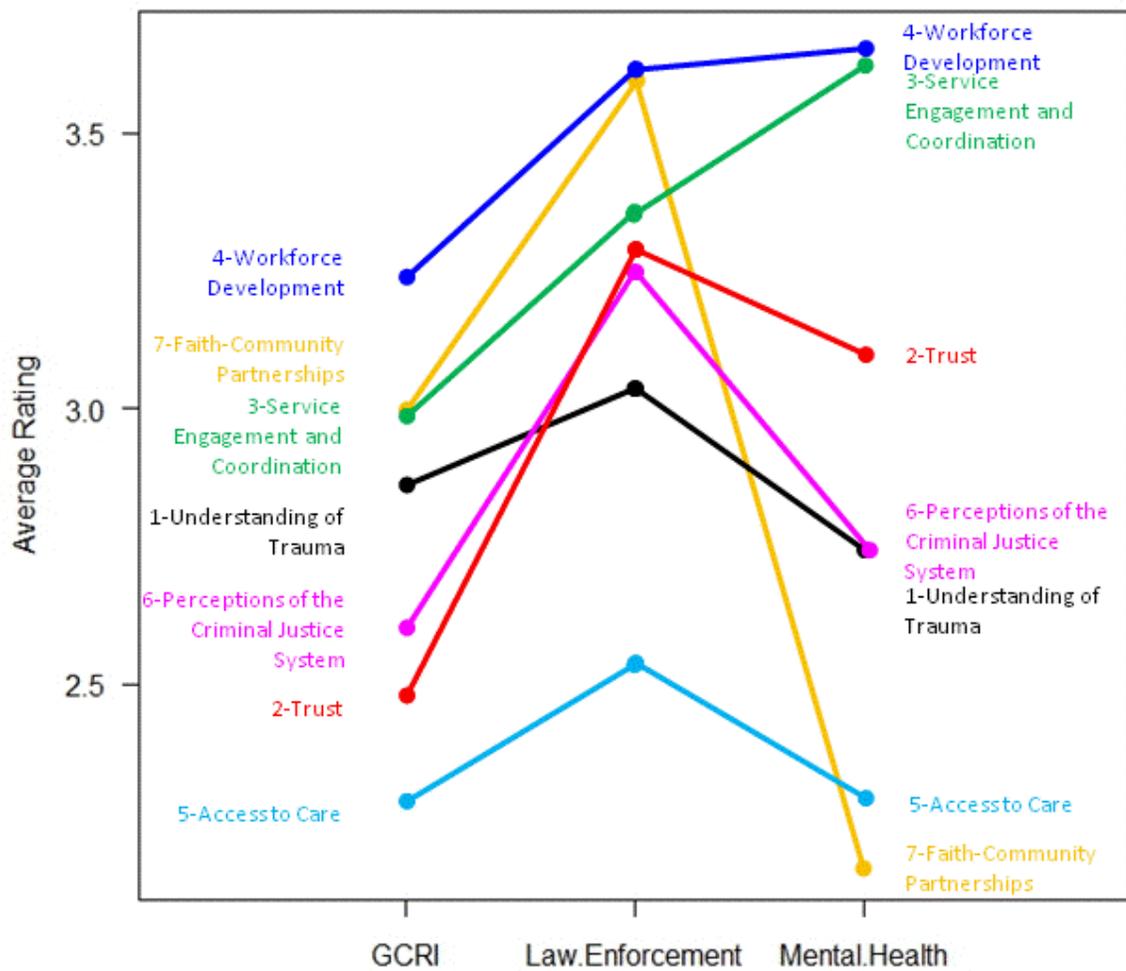


Figure 19. Pattern Match Visualization by Stakeholder Group for Average Capacity to Change Ratings of Clusters.

*Table 11.*  
*Pearson Product-Moment Correlations by Stakeholder Group*

	G-CRI Staff	Law Enforcement	Mental Health Providers
G-CRI Staff	1	.41	.17
Law Enforcement	.79	1	.49
Mental Health Providers	.50	.44	1

*Note.* Prevalence correlations are noted above the diagonal and capacity to change correlations are noted below the diagonal.

### **Research Question 3**

*Research Question #3: How do the perceived barriers to accessing services align with effective practices that are currently being implemented in victims’ assistance programs?*

The following research question addresses barriers to accessing trauma services in the community and how these barriers compare or contrast with effective victims’ assistance program practices. Similar to other victims’ assistance programs, G-CRI takes an integrated approach to service provision to serve children and families who are victims of violence or trauma. Community context for service provision is important to take into account for community-based initiatives like G-CRI. Some community factors that were identified as barriers include a lifestyle differences, demographic characteristics, and perceptions of services provided. These factors will be discussed below.

Lifestyle differences noted by stakeholders related to the intersection between spiritual beliefs and beliefs about reporting trauma. Stakeholders noted that some individuals within the community may seek spiritual counsel for trauma and may not receive services provided by G-CRI. Demographic characteristics noted as barriers include lack of money or insurance, language barriers, transportation barriers, legal

status, and limited access to services due to times available. Stakeholders noted that children and families may have different perceptions of services provided to due to having a bad or long history with law enforcement and social services or due to a lack of communication between parties when discussing what services directly entail.

One effective practice for community-based initiatives is collaboration and buy-in of partner organizations. Few statements provided by G-CRI stakeholder groups during the concept mapping statement generation phase discussed inter-agency collaboration as a barrier (see Table 12). These statements spanned three different clusters: service engagement and coordination, workforce development, and faith-community partnerships. However, statements in the Workforce Development cluster tended to be related to the coordination and collaboration of G-CRI service provider groups. Some limitations stated by G-CRI stakeholders are within the G-CRI provider network that includes mental health providers, peer advocates, and law enforcement whereas other barriers to collaboration are within the community (e.g., faith community).

Other factors noted in the literature related to effective victim's assistance programs that were noted as barriers in this study include intervening early and cultural appropriateness. The Service Engagement and Coordination cluster addresses the need to improve the time delay between traumatic incidents and when help arrives or when referrals for services are made. The Access to Care cluster addresses community barriers such as language and culture.

*Table 12.  
Statements Related to Interagency Collaboration*

<b>Statement Number</b>	<b>Statement</b>	<b>Cluster Represented</b>
44	Perceived lack of coordination of services (services may not be consistent)	Service Engagement and Coordination
65	Lack of collaboration and education with faith community	Faith-Community Partnerships
66	Lack of collaboration and education related to different cultural beliefs	Service Engagement and Coordination
67	Confidentiality and staffing cases limits discussing and coordinating cases between agencies statement	Workforce Development
69	Lack of communication between all parties involved (those that are involved need to be kept up to date "in the loop" for what the outcome is)	Workforce Development
85	Lack of coordination between mental health providers and domestic violence advocates	Workforce Development

A notable effective practice of victim’s assistance programs that G-CRI takes an integrated approach that is developmentally-appropriate and promotes positive social-emotional development in children and families affected by trauma and violence. Peer advocates match clients with community and mental health services based on their needs, insurance, and age. In addition, G-CRI providers are constantly assessing whether the needs of their community are met. For example, G-CRI providers are given a quarterly report in each division of the referrals and the demographics of referred clients. Law enforcement officers are asked if the referral statistics reflect the occurrence of certain criminal offenses during the same time period and mental health providers are asked if the referral types are reflective of the types of clients they see in their clinics. If there are inconsistencies in the prevalence of G-CRI referrals or community incidences of crime,

G-CRI providers discuss the rationale for discrepancies. If domestic violence was reported as the most prevalent incident by the police department, but children were not receiving mental health services, G-CRI may investigate the factors behind why children and families are not following up with services. Barriers noted in the cluster analysis may aid in this process.

Consistent with effective practices noted in the literature, G-CRI has representation from different parts of the community within the community-based initiative. Provider meetings bring law enforcement officers, mental health providers, and G-CRI staff together to discuss current community issues and events as well as ways to increase community awareness of the program. In addition, the concept mapping process incorporated stakeholder perspectives from all aspects of the G-CRI process. Providing the opportunity for all providers to be represented enables one to assess barriers in the community, before the referral process, during the referral process, and at follow-up.

#### **Research Question 4**

*Research Question #4: What are the perceptions of the stakeholders of the concept mapping process? How did the stakeholder groups view the process? What actions will be taken as a result of the findings?*

The researcher took notes during the concept mapping phases regarding participant reactions to and questions about the process itself. Moreover, the researcher asked G-CRI staff their perceptions of the concept mapping process through a facilitated discussion. Questions included: How can this information be used to create an action plan for G-CRI? Do you think that these visualizations reflect your perspectives of G-CRI?

What did you think of the concept mapping process? Please note any challenges or limitations as well as unique aspects of this process.

### *Overview of Concept Mapping*

The first time the concept mapping study was introduced at a provider meeting. Copies of the handout in Appendix B were distributed to G-CRI providers and were reviewed.

Providers did not have any questions about the process, but looked a bit puzzled about the information they were presented with. At the end of the meeting, one provider noted that she didn't really understand what the visualizations meant. Although it was important to review the purpose of the study with the providers, a less detailed discussion of how the information could be used may have been more appropriate.

### *Concept Mapping Process*

Regarding the statement generation and structuring phases, time was an issue faced by many participants. All participants volunteered their own time to participate in these phases of the process. The ability to generate statements was not noted as time-consuming by providers. In addition, participants noted that the number of statements to sort and rate were difficult to manage. Some participants stated that they didn't realize it would be that difficult to sort and arrange statements by similarity. Other participants commented that they hoped they completed the activity correctly or didn't realize it would take so long. Staff and participants noted that they were pleased with having the option of conducting the sorting and rating of statements online and participants did not seem to have any issues with completing the structuring phase online besides the length of time it took to sort the statements.

### *Utility of Information Provided from Findings*

Regarding the interpretation of findings stage, G-CRI staff participated in a two-hour teleconference with the researcher. Approximately one hour was spent on naming the seven clusters and discussing any inconsistencies in the cluster groupings. Many questions that staff asked about visualizing the data in a different way were displayed with various concept mapping visualizations. For example, staff were provided with the cluster rating maps to view the prevalence and capacity to change ratings separately for each cluster. One staff member asked if there was a way to compare the two ratings within the same plot. This question led staff into viewing the pattern matching or ladder graph visualizations comparing prevalence and capacity to change ratings and ratings by stakeholder groups.

Go-zone displays provided a concise format to discuss action planning by cluster. The ability for staff to see which statements in each cluster were rated as highly prevalent and were easier to change enabled staff to brainstorm actions that the community and G-CRI could take to address some of the issues (see Table 13 for recommendations by cluster).

Staff noted that the visualizations were most helpful to understanding the concept mapping findings. In particular, staff stated that the go-zone displays would be most useful when sharing information with G-CRI providers in order to create an action plan. Several suggestions for streamlining visualizations to make them easier to read were incorporated into the final graphics presented in this chapter. Suggestions included providing cluster labels and colors on the pattern matching visualizations.

*Table 13.  
Proposed Actionable Recommendations by Cluster*

Cluster Description	Recommendation
Understanding of Trauma	<ul style="list-style-type: none"> <li>• Provide workshops on trauma and how to access trauma-related services</li> <li>• Develop public service announcements and educational brochures</li> <li>• Provide training for parent advocates</li> </ul>
Trust	<ul style="list-style-type: none"> <li>• Create a frequently asked questions brochure on services provided</li> <li>• Increase trust between and within the provider system of care agencies</li> <li>• Increase provider training</li> </ul>
Service Engagement and Coordination	<ul style="list-style-type: none"> <li>• Improve early intervention of services</li> <li>• Revisit referral policies and procedures</li> </ul>
Workforce Development	<ul style="list-style-type: none"> <li>• Provide inter-agency workshops on trauma-informed care</li> <li>• Increase service coordination</li> </ul>
Access to Care	<ul style="list-style-type: none"> <li>• Provide more mental health screenings within the community</li> <li>• Increase the number of multilingual service providers</li> <li>• Obtain a centralized location for service provision</li> </ul>
Perceptions of the Criminal Justice System and Traumatic Stress	<ul style="list-style-type: none"> <li>• Provide training for new law enforcement officers</li> <li>• Provide continuing education on trauma-informed care</li> </ul>
Faith-Community Partnerships	<ul style="list-style-type: none"> <li>• Coordinate care with the faith community</li> <li>• Increase awareness of resources available within the community</li> <li>• Encourage open dialogue</li> </ul>

## CHAPTER V

### DISCUSSION

In this chapter, an overview and a discussion of the results in Chapter IV are presented in the order of the research question asked. Next, limitations of the current study are explained. Finally, implications for the use of concept mapping as a mechanism for consensus building in community-based initiatives are discussed as well as opportunities for future research.

#### **Overview**

Community-based initiatives address community issues by providing a multi-agency approach to prevention and intervention services (Connell et al.,1995). By incorporating multiple agencies, one challenge is obtaining multiple perspectives and gaining consensus on the priorities and direction for these initiatives. Currently, there is limited literature on the process of consensus building within community-based initiatives (Kreuter et al.,2000). This study employed a participatory approach to consensus building amongst stakeholder groups in a victims' assistance program called the G-CRI. This multiple-method technique provided visual representations of the findings assessing G-CRI providers' perceptions of barriers to accessing victim's assistance services for children and families who experience or witness violence. Conceptualizations of barriers to accessing services for children and families who are victims of violence or trauma based on this study identified community-, trauma systems-

of care-, and client-level barriers. Structuring these data by sorting and rating provided a visual representation of the 85 statements generated by G-CRI providers. Visualizations created organized findings into interpretable groups of statements to label and provide actionable next steps.

Several results of interest emerged from this study. First, there are varying community and system facets that G-CRI providers perceive to be barriers to children's and families' access to care. Some barriers are within the trauma provider system of care whereas other barriers are perpetuated within the community. In addition, G-CRI stakeholders rated barriers based on their prevalence and capacity to change in the community. Average ratings varied by cluster with distrust of the trauma system of care as the most prevalent cluster and workforce development as the cluster noted as the easiest to change. Stakeholder group ratings for prevalence of all clusters was higher for G-CRI staff than ratings from law enforcement officers and mental health providers whereas ratings for capacity to change were in greater agreement between stakeholder groups overall. Moreover, G-CRI staff noted that the concept mapping process and visualizations provided them with a means to discuss actionable steps with G-CRI providers as a whole. Results are discussed in greater detail below by research question.

### **Research Question 1**

*Research Question #1: What do different stakeholders perceive as community- or systems-factors that affect individuals' access to services after witnessing violence or experiencing trauma? How are these factors conceptualized within the given context?*

Research question one was designed to understand the current barriers to accessing victim's assistance services in Eastern and Southern Greensboro. During the time of this study, the G-CRI expanded from the Eastern Division of Greensboro into the Southern Division of Greensboro as well. This expansion led to training additional staff and providers, including a division of the police department who were not previously familiar with the G-CRI referral process or follow up. Barriers perceived by each provider stakeholder group were noted during the statement generation phase of the concept mapping process.

Law enforcement officers, mental health providers, and G-CRI staff provided a variety of statements that were sorted and organized into clusters. Many statements were provided in response to the focus prompt and were structured and grouped using MDS and cluster analysis. The most favorable cluster interpretation for this study was a 7-cluster solution, providing distinct clusters that were characteristic of different aspects of barriers within the trauma system of care and the community at large. These clusters were labeled by the G-CRI staff to reflect statements that were characteristic of each cluster with a title that best summarized the barriers noted. Clusters names in the order of clusters presented were: Understanding of Trauma, Trust, Service Engagement and Coordination, Workforce Development, Access to Care, Perceptions of the Criminal Justice System and Traumatic Stress, and Faith-Community Partnerships.

Naming clusters was an additional exercise in consensus building amongst the staff. Dialogue between the staff and the researcher began with a description or summary of the statements within a cluster from each person. Condensing these descriptions into a

concise cluster name was more difficult for some clusters than others, particularly the ‘Understanding of Trauma’ and ‘Perceptions of the Criminal Justice System and Traumatic Stress’ clusters.

The cluster ‘Understanding of Trauma’ was the second largest cluster in the 7-cluster solution. Some staff members thought that this cluster characterized two distinct concepts: (a) a general understanding of trauma and (b) an understanding of how to access trauma services. However, one staff member noted that these aspects may be interrelated and may be a symptom of the traumatic process. Reluctance to seek help and resistance to assistance may be a result of clients and/or families being in denial that a traumatic event has occurred. However, G-CRI staff noted that all of the statements in this cluster were barriers that referred to the misunderstanding of trauma and trauma services amongst the community and clients (children and families).

There was some difficulty in coming to consensus on a cluster name for the cluster ‘Perceptions of the Criminal Justice System and Traumatic Stress’. Although this cluster consisted of four statements, these statements discussed law enforcement officers and lawyers, thus increasing the difficulty of creating a concise cluster name. Statements within the same cluster that addressed different aspects of the criminal justice system made it difficult to come to a consensus on the title of the overall cluster. Staff noted that the statements within this cluster described the need for law enforcement and mental health providers to interact in a positive way in order to provide more trauma-informed care. In addition, an interesting discussion amongst G-CRI staff and the researcher arose

when assessing this cluster. Staff asked for clarification regarding which stakeholders created certain statements within this cluster.

The G-CRI staff wanted to clarify whether law enforcement officers generated these cluster statements or if these statements were generated by different stakeholder groups. Staff were reminded that statements were generated by all three provider groups and statements were not categorized by the stakeholder who created them. The rationale for this question revolved around naming the cluster ‘perceptions *of* the criminal justice system’ as opposed to ‘perceptions *in* the criminal justice system’.

Overall, staff agreed with the representation of statements by the 7-cluster solution. One point of contention was the cluster titled ‘Understanding of Trauma’ because some staff members were concerned that this cluster represented two distinct concepts. In returning to the different cluster solutions, statements in the cluster titled ‘Understanding of Trauma’ would have remained as a single group until the 9-cluster solution. However, the 8-cluster solution would have split the ‘Workforce Development’ cluster into two clusters that the staff did not determine to be distinct clusters. In addition, the hypothesized breakdown of the ‘Understanding of Trauma’ cluster into a general understanding of trauma and an understanding of how to access trauma services was not clearly delineated in the 9-cluster solution, thus seven clusters were retained. If additional time allowed, the G-CRI staff or a subset of staff members could have reviewed multiple cluster solutions prior to the cluster labeling and interpretation session.

Regarding the clusters and ratings of statements, G-CRI staff noted that findings were not contradictory to their current perspectives on prevalence of barriers and capacity

to change these barriers within systems and the community. The most prevalent barriers to accessing services were ‘Trust’ and ‘Faith-Community Partnerships’. Distrust of the trauma system of care was also rated as one of the most difficult barriers to change. Staff reacted to the most prevalent barriers by stating that it is difficult to change an entire trauma system of care, especially if some system-level barriers have a long history of occurring within an organization (e.g., certain procedures or policies that have always been implemented a certain way). Trust from both within the system of care between providers and agencies were noted to be as important as clients trusting the system to provide assistance during a sensitive time of need. Although distrust rated highly prevalent and difficult to change, other barriers noted provide promising means to address some cultural and organizational changes. Both workforce development and service engagement and coordination clusters were rated as relatively easy to change in comparison to the other clusters rated. Changes in these two areas may result in increased trust within the trauma system of care.

Faith-community partnerships were noted as a community-level barrier that affects individuals’ access to services after witnessing violence or experiencing trauma. Statements within this cluster describe a lack of collaboration and education between the faith community and the trauma system of care. Perhaps the multi-systemic or multi-agency approach to trauma could expand to include other community organizations in the dialogue. Understanding the types of services that faith-based organizations provide to children and families or why the faith community is reluctant to report traumatic incidences may assist in providing more comprehensive services to clients.

Kataoka et al. discussed the opportunity to provide health promotion services through religious organizations to underserved populations who are victims of violence or trauma (2006). Characteristics of effective church-based health promotion programs include collaborative partnerships, promotion of positive health values, availability of services, access to facilities, focus on community and contextual issues, facilitate behavioral health changes, and provide supportive relationships (Peterson, Atwood, & Yates, 2002). Successful church-based health-promotion programs include health screenings such as mammograms and heart health, weight loss, and substance abuse assistance programs (Blank, Mahmood, & Guterbock, 2002; Kataoka et al., 2006; Peterson et al., 2002).

One study surveyed a network of faith-based organizations regarding the provision of mental health services within the faith-based organization (Dossett, Fuentes, Klap, & Wells, 2005). Respondents reported that informal mental health counseling was provided, but the level of training of those providing the counseling was unknown. In addition, barriers to providing mental health services included limited staff, lack of training, and lack of support for services. Moreover, respondents reported conflicting findings regarding the role of the faith community in providing mental health services and the level of stigma patients received. Some respondents believed that mental health services should be provided separately from faith-based services and some respondents reported greater stigmatization of persons who sought mental health services through a faith-based avenue. If community initiatives such as G-CRI understood the needs and expectations of the faith community regarding mental health, perhaps faith-based

organizations would be more likely to refer to existing community services. Allowing open-provider meetings for some G-CRI meeting sessions or having meetings with churches in the area may provide community organizations with a better idea of what services the G-CRI provides.

The G-CRI staff noted the need to be cautious when discussing the counseling services that the faith community can provide regarding trauma-informed care. Mental health services provided by faith-based organizations may require additional training to be effective. Trauma-informed care is a service delivery approach throughout all levels of an organization that takes into account how trauma may affect the lives of individuals and families seeking services in order to provide support and avoid retraumatization (Substance Abuse and Mental Health Services Association [SAMHSA], 2012). Referrals and access to trauma-informed services is a time-sensitive process in order for clients to receive appropriate, evidence based models of care. Stronger faith-community partnerships could increase access to services by underserved populations that may initially seek help from their faith-based organization to receive continuous care. Viewing the faith-community as a “valuable collaborator” in providing positive mental health care may increase the reach and effectiveness of community-based initiatives (Blank et al., 2002).

Context plays a key role in the implementation and execution of programs and with G-CRI’s multi-agency community approach, access to care was rated as highly prevalent as well as the most difficult barrier to change. Although Guilford County, the county in which the city of Greensboro resides, is perceived as resource-rich by

providers, access to care was noted as one of the most prevalent barriers to accessing services as well as the most difficult barrier to change. A recent white paper on health care access in Guilford County noted similar disparities in accessing health care services compared to the ‘Access to Care’ cluster in the current study (Hall et al., 2012). The white paper discusses the “5 A’s of access” which include availability of sufficient providers to meet the service demands, affordability of care to patients as compared to the perceived value of service, physical accessibility of services by location, accommodation of services (e.g., hours of operation, ease of scheduling appointments), and acceptability of providers to patients’ sociocultural context (Hall et al., 2012; Penchansky & Thomas, 1981; Ricketts & Goldsmith, 2005).

The barriers to accessing services described in the recent white paper are paralleled in the current study’s ‘Access to Care’ cluster as well as within the ‘Workforce Development’ cluster. Affordability of services parallels with the financial barriers and the large number of uninsured individuals residing in Guilford County (Hall et al., 2012). Accommodation of services is an apparent barrier within the ‘Workforce Development’ cluster due to standard hours of service provision and difficulty scheduling appointments. Developing a greater understanding of barriers to accessing health care and mental health care within the Greensboro community may assist with creating innovative, actionable steps to address specific community issues.

## **Research Question 2**

*Research Question #2: Are stakeholder perceptions consistent with one another? What is the degree of similarity among stakeholder perceptions regarding barriers to accessing services?*

These research questions were designed to assess differences in stakeholder perceptions during the concept mapping process. Rating information provided on the prevalence and capacity to change barriers was used to compare average ratings by stakeholder group. Stakeholder groups represented were law enforcement, mental health providers, and G-CRI staff.

Regarding the prevalence of barriers, G-CRI staff rated all clusters with higher average prevalence ratings than law enforcement and mental health providers. Perhaps this is due to the roles of G-CRI staff, who serve as the liaisons between law enforcement, mental health providers, and clients. Law enforcement officers refer clients to G-CRI staff to arrange optimal services for the client and their family. Mental health care providers receive referrals from G-CRI staff after G-CRI staff has talked with the client or family in order to gain a better understanding of the client/family history, needs, and desired type of resources/assistance. G-CRI staff may have to work with coordinating care with faith-based organizations, services within the trauma system of care, and other logistical issues that may arise prior to the initiation of services. In addition, clients may feel more comfortable describing barriers to accessing services to someone who is assisting with service coordination, thus influencing the prevalence ratings of G-CRI staff. Due to the role that G-CRI staff play in the community-based initiative, barriers

may be perceived as more salient to individuals in this role. This may also be why the rank ordering of the cluster ratings vary by stakeholder group. Groups may view different aspects of community- and system-level barriers and may influence their ratings of which barriers they perceive to be most prevalent or easiest to change.

Regarding capacity to change ratings, these ratings were not as disparate between stakeholder groups. Ratings by stakeholder group were in a similar rank order, with the exception of the 'Faith-Community Partnerships' cluster. Mental health providers rated the Faith-Community Partnerships as the most difficult barrier to change whereas G-CRI staff and law enforcement rated this cluster among one of the easiest barriers to change. It may be of interest to follow-up with mental health providers to gain a greater understanding of their perceptions regarding to faith-community partnerships and the services that G-CRI provides.

'Workforce Development' and 'Service Engagement and Coordination' clusters were rated by all groups as easier barriers to change. Providing more coordinated, trauma-informed services could ameliorate other barriers such as 'Trust', 'Understanding of Trauma', and 'Access to Care'. Engaging clients and families in services may increase client and family empowerment to trust the trauma system of care. Furthermore, providing services in a timely manner as well as explaining services and being attentive to the clients' needs may increase trust and client understanding of trauma.

The G-CRI staff noted with interest that the least prevalent barriers noted by G-CRI providers were related to law enforcement and mental health providers. Staff noted there may have been selection bias in the ratings. When stakeholders rated statements

about their own stakeholder group this may have skewed some of the results. Further dialogue between provider groups may provide insight into whether these ratings accurately reflect different perspectives and how these barriers are perceived throughout the community. Additional perspectives from community groups and clients could validate provider ratings.

### **Research Question 3**

*Research Question #3: How do the perceived barriers to accessing services align with effective practices that are currently being implemented in victims' assistance programs?*

The intent of research question three was to determine if barriers to accessing services in two areas within the Greensboro community paralleled effective practices in community-based victims' assistance programs. Context plays a large role in the effectiveness and receptiveness of the community to community-based initiatives (Kegler et al., 2011). A strength of this study is that G-CRI providers have access to community provider perceptions of barriers to accessing the services they provide. G-CRI providers understand the history of the program and how it is viewed within the community. Understanding the prevalence of barriers to accessing services in the community is critical to making sure that the community need is met.

Previous literature found that effective victims' assistance programs for children are comprehensive approaches that are developmentally-appropriate, intervene early, promote positive social-emotional development, take an interactive approach, are based on theory, and are culturally-appropriate (Dusenbery et al., 1997; Nation et al., 2003). Statements organized by the cluster analysis in this study revealed that providers noted

barriers to effective practices within the community and trauma system of care. Although G-CRI is implementing effective practices in their integrated approach to providing resources and referrals to clients, statements from this study may provide insight to areas for improvement.

The barriers ‘Understanding of Trauma’ and ‘Trust’ are foundational aspects that should be addressed in order for clients and families to be open to receiving victims’ assistance services. If families do not understand trauma symptoms or know where to seek help, then G-CRI or other community-based programs cannot be maximally effective. Moreover, if clients and families can identify symptoms but do not trust the system due to unfavorable previous experiences or do not have sufficient information on what services will be provided, clients and families may be reluctant to seek help.

The G-CRI is a comprehensive approach to trauma intervention and prevention of secondary traumatization. However, improvements in collaboration and coordination between and within provider agencies may make this community-based initiative more effective. The ‘Service Engagement and Coordination’ and ‘Workforce Development’ clusters describe service-related barriers to accessing services such as a time delay or inaccessibility of services due to limited hours of operation. In addition, statements note that providers should take the time to listen to and fully assess their clients’ needs in order to provide the most appropriate care. Appropriateness of care may refer to a type of service, developmental appropriateness, or cultural appropriateness. Coordination of care may expand to other community service providers such as the criminal justice system and the faith community.

The G-CRI staff discussed ways that services could be more coordinated in the county or in the two divisions where G-CRI currently operates. These actions include the development of a family justice center for centralized, integrated services. A family justice center is a place where multiple agencies and disciplines are housed in the same location to provide coordinated care to victims of violence (National Family Justice Center Alliance [NFJCA], 2012). Disciplines within a family justice center include law enforcement, peer advocates, lawyers, legal aide, spiritual support, social services, financial and employment assistance, advocacy, medical and mental health services. This model of coordinated and “co-located” care is regarded as a best practice by the U.S. Department of Justice (United States Department of Justice [USDJ], 2007). The family justice center model has increased victim safety and empowerment, decreased homicides, and increased service provision and coordination amongst providers (NFJCA, 2012; USDJ, 2007).

A process and outcome evaluation of the Nampa Family Justice Center noted that collaboration and communication amongst providers was most effective to addressing client needs (Giacomazzi, Hannah, & Bostaph, 2008). Agency directors and service providers interviewed noted increases in the quality of services provided and access to services. Moreover, clients reported that they were satisfied with the services provided at the family justice center.

With coordinated training, characteristics of the family justice center model could improve G-CRI practices and extend the initiative’s reach throughout the community. In addition to a centralized location, in order to increase accessibility of services for those

who may have transportation barriers, this justice center could be on a main bus line or there could be mobile crisis units and community mental health screenings that reach out into the community.

#### **Research Question 4**

*Research Question #4: What are the perceptions of the stakeholders of the concept mapping process? How did the stakeholder groups view the process? What actions will be taken as a result of the findings?*

G-CRI staff noted that the visualization of concept mapping results is a big strength for this approach to consensus building. They noted that the go-zone maps were most helpful and could be presented to the G-CRI provider group as a whole to facilitate discussion and develop an action plan that represented all groups involved in the community-based initiative. G-CRI staff noted that the go-zone maps would be very helpful for law enforcement officers and mental health providers to interpret as a large group. The go-zones provide a concise summary of the overall process with priority quadrants to address actionable items in a systematic way.

Participants seemed to be most engaged in the statement generation process. In person, participants were eager to provide barriers to accessing services. However, during the structuring phase, many stakeholders viewed the concept mapping process as lengthy. Comments about the amount of time and difficulty of sorting many statements were made by participants throughout the sorting phase and during the reflection process. However, the duration of concept mapping stages was not atypical from procedures noted by Kane and Trochim (2007).

Regarding the interpretation phase, the statements were reviewed in clusters via teleconference. Ideally, this process would have taken place in-person, but was not possible due to relocation of the researcher. Facilitating cluster naming and reviewing the findings was achieved over the phone, but would have been a smoother process in person. Different visualizations for the findings were suggested by the G-CRI staff in order to summarize the data for future stakeholder discussion of all G-CRI providers. Aggregating all of the go-zone maps into one go-zone map for all of the clusters may provide a more concise way to address the most actionable items with the highest prevalence and highest capacity to change ratings regardless of the cluster. Staff noted that the concept mapping process was helpful for identifying existing community needs and understanding how different stakeholder groups perceived these barriers.

G-CRI staff asked if there may be a ways to link go-zone actions to particular outcome in the literature and determine whether or not a certain approach may be effective. For example, if the statement “clients do not know how to access these services” is highly prevalent with a high capacity to change, is there literature structured in this particular way that G-CRI can look to in order to decide how to best raise community awareness of services? This is a potential avenue for community-based researchers to share their experiences with effective practices in facilitating community change.

Stakeholders also noted that there was a lack of a voice from children and families or the client perspective in general. This reflection is discussed further below in the limitations section.

## **Limitations**

Several limitations were noted by G-CRI providers and the researcher throughout the concept mapping process. They include: time, data collection methods, participant involvement, and community representation. Each is discussed in further detail below.

Time was noted as a limitation of the concept mapping methodology. Stages of the concept mapping process took between 30 minutes to 2 hours to participate. A participant who took part in each session may have volunteered approximately four hours of their own time in addition to their daily program activities. G-CRI providers take time out of their work days to participate in monthly meetings and events and adding time to complete these stages may have increased participant burden. However, participants were provided with multiple means to participate in the concept mapping stages.

Participants were provided the option of participating in-person or online. More participants participated in the statement generation phase online. Although more participants participated in the statement structuring phase in-person, G-CRI staff noted that some participants would have preferred to conduct the structuring phase online. Previous research indicated that conducting concept mapping phases in person provided greater completion rates (Rosas & Kane, 2012). It is important for all statements to be sorted by each participant in order to create a complete similarity matrix for MDS and cluster analysis. Future research involving concept mapping techniques could assess differences in completion rates in-person or online to determine if findings are consistent with Rosas and Kane's results (2012).

Another limitation to this study is the number of participants. Fewer participants participated in the sorting and rating of statements phase of this study. All of the visualizations and analyses were based on the sorts and ratings from this phase of the concept mapping process. Kane and Trochim note that concept mapping can involve as many or as few people as desired, however, between 10-20 participants may be a manageable number (2007). This study's sample size fell within the recommended range; however, one concern regarding the number of participants in the study is the representativeness of perceptions relevant to the issue at hand. Although representation from each stakeholder group was obtained in this study, there may be a wider spectrum of perceptions on how statements are sorted together or on prevalence and capacity to change ratings between and within G-CRI provider groups that may not have been fully captured within this study.

Future research may ease participant burden and increase representativeness of the sample by conducting purposive sampling. One approach to conducting the concept mapping study in the future would be to have all participants participate in the statement generation phase of the concept mapping process to ensure that statements capture the breadth of provider concerns. Next, a subgroup of providers that meet certain qualifications (e.g., length of time with G-CRI, length of time working in the community, provider role) could be selected to participate in the sorting and rating phases of the study. This process could be shortened by selecting a random sample of statements generated for the sorting process if needed. Although all statements generated would not

be addressed in the visualizations, this process would provide insight into some context-specific community concerns.

It is important to note that all statements generated, sorted, and rated were generated by G-CRI providers. Additional stakeholder groups such as clients (children and families) and other community groups such as the faith community did not provide their perspectives on barriers to accessing care. These perspectives may provide additional barriers to note as well as differences in rating the prevalence and capacity to change certain barriers within systems and the community.

### **Implications for Practitioners**

This study served as a systematic means of consensus building for providers of trauma-informed services and resources. Many community-based initiatives exist and note the importance of collaboration and buy-in from representatives involved, however, procedures to gain consensus amongst these initiatives are not discussed. Concept mapping serves as one way for community providers to gain multiple perspectives to engage in planning, monitoring, and evaluation of a community-based initiative. Stakeholders who are part of a community-based initiative can use concept mapping methodology to identify strengths or challenges within their community that can be addressed. In addition, an action plan can be created using go-zone displays describing areas of community concern at any given time (e.g., prevalence, severity, importance).

Concept mapping is one approach that practitioners could use or adapt to meet their needs. This study identified the need to understand approaches to consensus building and collaboration amongst different groups within an inter-agency initiative.

Understanding where different provider groups are coming from may improve communication and service provision. In addition, practitioners may wish to measure inter-agency collaboration and come together to increase mental health and trauma literacy throughout the community. This process provided practitioners a basis with which to conduct action planning for their initiative.

### **Implications for Evaluators**

Evaluators could use concept mapping as a tool to aid in planning, monitoring, and evaluation of community-based initiatives. Consensus building could be used in the planning stages of a community-based initiative to conduct a needs assessment of the community. Identified needs could be tracked and monitored over time by creating performance metrics and setting targets for community change.

Moreover, interventions like G-CRI could undergo a process evaluation to identify the strengths and challenges of G-CRI policies and procedures. For example, an in-depth investigation into how the community currently raises awareness of trauma services available may provide areas to improve this client-level barrier to accessing services. Focus groups or interviews with community members could target highly prevalent barriers noted by providers to gain an in-depth understanding of the client's perspective. A public service campaign or awareness campaign intervention could be created based on the findings and evaluated to determine if client and community awareness of trauma services increased.

Other implications for evaluators include understanding how stakeholders can best use concept mapping findings. Working with different providers who have varying

levels of familiarity with research and statistics provided insight into optimal data collection procedures and explanation of findings.

Prior to data collection, the researcher provided an overview of the concept mapping process to all G-CRI providers. This overview contained the purpose of concept mapping, how it applies to G-CRI, and an example from a previous study with visualizations. This approach was not well-received by all providers; many did not understand the process or the visualizations presented. Perhaps this approach to presenting the study was too abstract and could have been shortened by describing the first steps of the process. Reiterating how the concept mapping process can be used to organize next steps to improve service provision may be helpful in the future.

G-CRI staff provided suggestions and recommendations for presenting data in more effective ways to the G-CRI provider group as a whole. The staff recommended that go-zone displays would be the best to explain and understand information to a larger group. Researchers and/or evaluators may ask their stakeholder groups the best way to present and summarize large amounts of data. Understanding optimal ways to present findings to stakeholders may increase stakeholder engagement in the discussion and utility of study findings.

### **Future Research**

Future studies could ask clients, community members, faith-based organizations, and other community groups to participate in the statement generation and statement structuring phases in order to provide representation of additional perspectives. G-CRI providers may note barriers in a slightly different way or may not know all of the reasons

why clients do not currently access services. Different concept maps could be created to compare client and provider conceptualizations of barriers based on statements generated by the different stakeholder groups. Understanding how to better serve clients through their own perspectives and voices would provide a well-rounded picture to addressing community issues.

Initial findings from this study could be used to create measures to see how barriers change over time. Measures could be created to assess changes in each cluster grouping over time based on actions taken by G-CRI providers. For example, if changes were made to improve service engagement and coordination, a measure assessing how changes in the prevalence of this barrier occurred may provide evidence-based outcomes for the increased effectiveness of G-CRI. In addition, the concept mapping process could be repeated in order to see if conceptualizations changed over time due to programmatic changes.

The G-CRI was recently granted funding to expand citywide. This study could provide priority action items to screen or address during the expansion of the program. For example, trainings provided to additional provider partners who join the G-CRI provider network could be more collaborative, stress the need for trauma-informed care, and provide suggestions on how to empower clients and families during a sensitive time.

### **Conclusions**

This study employed a multiple-method technique to build consensus among stakeholders of a community-based initiative for children who witness violence or experience trauma. Findings indicated barriers at the client-, system-, and community-

levels as well as how often these barriers occur and the capacity to change them within the community. This process provided a systematic approach to organizing and visually representing information from multiple provider perspectives. G-CRI staff identified actionable steps for the G-CRI program as well as access to services throughout the community. Greater provider collaboration and communication through trauma-informed care is needed in order to engage clients and families in order to identify the need for and trust in services if needed. Coordinated care within provider agencies and between community agencies may increase community awareness of trauma and promote greater access to care.

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## APPENDIX A

### IRB NOTICE



Korinne Chiu <k\_chiu@uncg.edu>

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## IRB Notice

4 messages

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IRB <irbcorre@uncg.edu>

Wed, Jan 18, 2012 at 3:00 PM

To: taackerm@uncg.edu

Cc: k\_chiu@uncg.edu, irbcorre@uncg.edu

To: Terry Ackerman  
Ed Research Methodology  
232 School of Education Building

From: UNCG IRB

Date: 1/18/2012

RE: Determination that Research or Research-Like Activity does not require IRB Approval

Study #: 12-0019

Study Title: Concept Mapping for Planning and Evaluation of a Community-Based Initiative

This submission was reviewed by the above-referenced IRB. The IRB has determined that this submission does not constitute human subjects research as defined under federal regulations [45 CFR 46.102 (d or f)] and does not require IRB approval.

**Study Description:**

The purpose of this study is to understand how different stakeholders interpret community needs and access to resources as compared to how services are currently delivered.

If your study protocol changes in such a way that this determination will no longer apply, you should contact the above IRB before making the changes.

CC: Korinne Chiu

## APPENDIX B

### HANDOUT PROVIDED TO G-CRI PROVIDERS

#### **Concept Mapping and G-CRI**

##### What is Concept Mapping?

- Concept mapping is a way to organize ideas from different groups (e.g., mental health providers and law enforcement) in a common visual framework
- Provides visual representations of group perspectives to assist in program planning and improvement in three stages
  - First, participants generate statements
  - Next, participants sort and rate statements
  - Finally, participants review and interpret the visual findings from the maps that are created based on participant

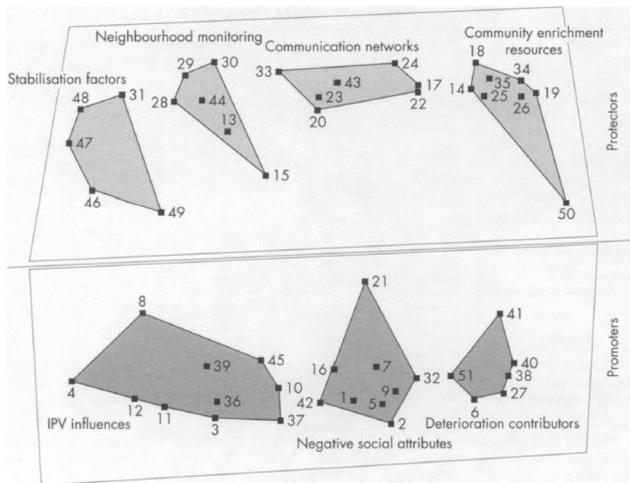
##### Why Use Concept Mapping?

- Each participant has a voice in the process
- Can take different agencies/participants into account-The more people who participate, the more representative and reflective of the entire group
- Is a means of consensus building and organizing program priorities

##### What Can Concept Mapping Tell Us?

An example of a concept mapping project (O'Campo et al., 2005)

- Used concept mapping to understand neighborhood factors that affected the prevalence and severity of intimate partner violence (IPV).
- Women who were residents of a particular neighborhood were asked to “generate a list of items that describe characteristics of neighborhoods that could relate in any way, good or bad, to women’s experience with IPV



Numbers refer to statements generated for each cluster. Statements that are similar are clustered together.

Community enrichment resources

- Women’s groups (34)
- Hotlines (25)
- Outreach centers (35)
- Emergency Assistance Programs (26)
- Access to public health facilities (14)
- Community Centers (19)
- Recreation Centers for Children (18)

Maps created can also display which clusters of statements are perceived as most important. Higher stacks indicate greater importance.

Clusters can also be compared on different dimensions for planning purposes. Statements that are important and have high action potential can be addressed first in evaluation and program planning.

How Can G-CRI Use Concept Mapping?

- To understand barriers to accessing services
- “Generate statements that describe specific community or systems factors that are barriers to accessing services for children who witness violence or experience trauma”.
- Sort statements into groups that make sense to you
- Rate statements based on the prevalence of the barrier (e.g., how often this barrier occurs) and the capacity to change this barrier (e.g., feasibility to improve or action potential)
- Obtain valuable input from law enforcement, providers, and advocates on current G-CRI program practices
  - Opportunity to provide information on day-to-day experiences with G-CRI children and families to improve services
- Understand current G-CRI areas for improvement and action
- Regroup to review concept maps and action items during a time of program expansion

## APPENDIX C

### STATEMENT GENERATION PROTOCOL

#### **Greensboro Child Response Initiative Brainstorming Session Protocol**

The Greensboro Child Response Initiative (G-CRI) evaluation team is interested in learning more about potential barriers to children and families accessing services provided by G-CRI. To assist in these efforts, this project aims to gather information in order to better assist children and families in the community as well as with future G-CRI program planning efforts. Our goal for this brainstorming session is to gather information on the perceived barriers of children and families to accessing services for children who witness or experience violence or trauma.

You will be asked to generate statements based off of the following focus prompt:

“Generate statements that describe specific community or systems factors that are barriers to accessing services for children who witness violence or experience trauma”.

Please respond to this statement in any way you would like based on your experiences as a part of G-CRI. Provide a statement that completes or answers the focus prompt. You may respond with as many statements as you like. All statements in response to the focus prompt will be recorded. Please do not criticize or discuss the legitimacy of statements generated. If brainstorming participants or the facilitator needs clarification of the focus prompt or statements generated, they may ask at any time.

An updated list of all statements generated during this session will be provided to you via email. You may provide additional statements using the link provided. The link will take you to a private survey where you can enter additional statements.

## APPENDIX D

### PRELIMINARY BRAINSTORMING SESSION STATEMENTS GENERATED

- 1) Families and individuals don't understand or minimize the impact or potential impact that trauma might have on development
- 2) Parents because of their own (whatever) are lacking some of the skills or nurturing to really prioritize their children's needs
- 3) Parents don't have the emotional IQ/EQ to prioritize the needs of their children
- 4) Bad experiences with the system
- 5) Bad experiences with law enforcement
- 6) Long history with DSS
- 7) Misconception of DSS/law enforcement (DSS is bad/law is bad)
- 8) Misunderstanding of the benefits and help that can be provided by current systems in place
- 9) Parents were not protected when they were a child by law enforcement or DSS or the system and are reluctant to engage in the system ("I am not putting my child through that for nothing to happen")
- 10) Parents are worried about who is going to get in trouble
- 11) May not have a concrete idea of what services are going to look like or what services consist of
- 12) Stigma of services
- 13) Too slow
- 14) Some services that work with the child and the child's needs, but do not communicate with the parent what the child is learning and what the parents can learn as well to try to change too
- 15) People don't think that their voices are heard well enough
- 16) Professionals "pretend to listen" but then do what they want to do anyway
- 17) Lack of respect for clients/being spoken down to
- 18) Class differences
- 19) Physical access to services may be more of a hassle than services are worth
- 20) Lack of explanation of the benefits of services
- 21) Misperception of the risk/benefits of services
- 22) No one answers the phone
- 23) Financial barriers
- 24) High cost of activities for children-for families and children to have a break
- 25) Families do not have a concept of trauma because that is all they have ever known (trauma is the norm)

- 26) It is a norm for families to have services recommended over and over again in the same type of recommendations that they never engage in
- 27) Trauma is never resolved despite services provided
- 28) Trauma cycle is never broken
- 29) Services referred are ineffective
- 30) Clients are not being heard
- 31) Listening during the referral process
- 32) Information is discounted/not absorbed
- 33) People are reluctant to having the status quo change
- 34) Lack of follow-up for services from clients
- 35) Caregiver required to do some work
- 36) Parents want to provide their child with assistance, but do not want to put in the work (“here’s my child, fix him”)
- 37) Jumping from service to service (think that maybe an agency is ineffective, so try a new one)
- 38) Discrepancy in perspective between client and provider
- 39) Discrepancy between resolution of case between law enforcement and client perspective
- 40) Legal status influencing access to services
- 41) Consequences of changes in mental health services
- 42) Not gotten services promised or received
- 43) Lack of follow-up or follow-through with services
- 44) Professional anxiety in the system about future of mental health services
- 45) Unplanned changes in the system-system puts changes into place and does not plan for changes before they start
- 46) Client hoarding
- 47) Keep clients in order keep their job instead of sending them to the appropriate service
- 48) CABHAs
- 49) Perceived lack of coordination of services (services may not be consistent)
- 50) Fragmented system of care approach to recovery
- 51) Providers may be unclear of which services are most appropriate at which time
- 52) Public funds for system of care limit means of service provision (e.g., time, order of services provided)
- 53) Value options
- 54) Waitlist
- 55) Law enforcement downplaying what is occurring

- 56) Law enforcement may not be aware of the intricacies of trauma and the needs of the client/case
- 57) Families may not feel validated in what they may need
- 58) Shortcutting or not paying appropriate attention to collaborating with the client on what type of problems/issues they have and what types of services they want
- 59) Open dialogue with the clients
- 60) Need for more trauma-informed care
- 61) Inaccurate comments
- 62) Comment that stigmatizes the whole recovery process
- 63) Secondary traumatization due to procedures/trauma-insensitive dialogue
- 64) Churches are reluctant to report to law enforcement and DSS
- 65) Family may think that it is a choice to report the incident (victim and perpetrator in the same family)
- 66) Do not have juvenile sex offender services in the county (unless prosecuted)
- 67) Churches may take on issue as a spiritual issue instead of a mental health issue (people may feel like they failed spiritually)
- 68) Understanding of mental health may get confused in spiritual counseling
- 69) Many people still view child sex abuse and child abuse as a family matter (not a crime)
- 70) Lack of education of sex abuse and child abuse as a crime
- 71) Collaboration and education with faith community
- 72) Collaboration and education with cultural beliefs
- 73) Confidentiality and staffing cases (discussing cases between agencies)
- 74) Knowing which agencies have a case (coordination between agencies)

## APPENDIX E

### EDITED LIST OF FINAL STATEMENTS

1. Families and individuals don't understand or minimize the impact or potential impact that trauma might have on development
2. Parents are lacking some of the skills or nurturing to really prioritize their children's needs
3. Parents don't have the emotional IQ/Emotional intelligence to prioritize the needs of their children
4. Bad experiences with the system
5. Bad experiences with law enforcement
6. Long history with DSS
7. Misconception of DSS (e.g., DSS is bad)
8. Misconception of law enforcement (e.g., Law is bad)
9. Misunderstanding of the benefits and help that can be provided by current systems in place
10. Parents were not protected when they were a child by law enforcement or DSS and are reluctant to engage in the system ("I am not putting my child through that for nothing to happen")
11. Parents are worried about who is going to get in trouble when reporting a case
12. Families may not have a concrete idea of what services are going to look like or what services consist of
13. Stigma of accessing services
14. Services are too slow
15. Some services work with the child and the child's needs, but do not communicate with the parent what the child is learning and what the parents can learn as well to try to change too
16. Clients don't think that their voices are heard
17. Professionals "pretend to listen" but then do what they want to do anyway
18. Lack of respect for clients/being spoken down to
19. Class differences in service provision
20. Physical access to services may be more of a hassle than services are worth
21. Lack of explanation of the benefits of services

22. Misperception of the risk/benefits of services
23. No one answers the phone at provider agencies
24. Financial barriers
25. High cost of activities for children and families
26. Families do not have a concept of trauma because that is all they have ever known (trauma is the norm)
27. It is a norm for families to have services recommended over and over again in the same type of recommendations that they never engage in
28. Trauma is never resolved despite services provided
29. Trauma cycle is never broken
30. Services referred are ineffective
31. Providers are not listening to clients during the referral process
32. Clients are reluctant to having the status quo change
33. Lack of follow-up for services from clients
34. Parents want to provide their child with assistance, but do not want to put in the work (“here’s my child, fix him”)
35. Clients jump from service to service (think that maybe an agency is ineffective, so try a new one)
36. Discrepancy in perspective between client and provider
37. Discrepancy between resolution of case between law enforcement and client perspective
38. Legal status influencing access to services (e.g., citizenship)
39. Clients did not get the services promised or received
40. Lack of follow-up or follow-through with services
41. Professional anxiety in the system about future of mental health services
42. Unplanned changes in the system-system puts changes into place and does not plan for changes before they start
43. Client hoarding by providers (e.g., providers may keep clients in order keep their job instead of sending them to the appropriate service)
44. Perceived lack of coordination of services (services may not be consistent)
45. Fragmented system of care approach to recovery
46. Providers may be unclear of which services are most appropriate at which time
47. Public funds for system of care limit means of service provision (e.g., time, order of services provided)
48. Value options (part of NC mental health and substance abuse services delivery related to insurance)
49. Long waitlists for services
50. Law enforcement downplaying what is occurring

51. Law enforcement may not be aware of the intricacies of trauma and the needs of the client/case
52. Families may not feel validated in what they may need
53. Shortcutting or not paying appropriate attention to collaborating with the client on what type of problems/issues they have and what types of services they want
54. Lack of open dialogue with the clients
55. Need for more trauma-informed care
56. Inaccurate comments made by service providers may stigmatize the whole recovery process
57. Secondary traumatization due to procedures/trauma-insensitive dialogue
58. Churches are reluctant to report to law enforcement and DSS
59. Family may think that it is a choice to report the incident (victim and perpetrator in the same family)
60. Lack of juvenile sex offender services in the county (unless prosecuted)
61. Churches may take on a traumatic event as a spiritual issue instead of a mental health issue (people may feel like they failed spiritually)
62. Understanding of mental health may get confused in spiritual counseling
63. Many people still view child sex abuse and child abuse as a family matter (not a crime)
64. Lack of education of sex abuse and child abuse as a crime
65. Lack of collaboration and education with faith community
66. Lack of collaboration and education related to different cultural beliefs
67. Confidentiality and staffing cases limits discussing and coordinating cases between agencies
68. Insurance
69. Lack of communication between all parties involved (those that are involved need to be kept up to date "in the loop" for what the outcome is)
70. Time delay between the incident and the time help arrives to assist the children
71. Money for services
72. Lack of communication between the children/parents and the resources
73. Parent or family has heard about or experienced victimization from law enforcement personnel (such as juvenile detention staff) and avoid all services out of fear
74. Lawyers are discouraged by the system and have suggested to the parent or child that their efforts will not result in a positive outcome
75. Family not feeling safe to access services due to offender still being in household
76. 8:00-5:00 Office hours of providers (no weeknight or weekend availability)
77. DSS workers are oftentimes unfriendly and even less sensitive to needs

78. Providers not being patient enough, failing to share services that are available if needed
79. Clients do not know how to access these services
80. Client resistance to assistance
81. Transportation barriers
82. Language and cultural barriers
83. Legal guardians must be present and give consent for children to have services
84. Willingness of family to make contact or seek assistance for the children
85. Lack of coordination between mental health providers and domestic violence advocates

## APPENDIX F

### IN-PERSON AND ONLINE SORTING DIRECTIONS

#### **Greensboro Child Response Initiative Sorting, Ranking, and Rating Protocol** **(in-person)**

A list of statements was compiled based on the previous brainstorming session and follow-up surveys based on the following focus prompt:

“Generate statements that describe specific community or systems factors that are barriers to accessing services for children who witness violence or experience trauma”.

You were provided with a packet of information. The packet contains:

- a consent form
- a demographics information sheet
- one long, white envelope filled with the statements generated in the brainstorming session
- 10 colored envelopes

#### **Sorting Statements**

Please sort or group the statements into piles in a way that makes sense to you. Some restrictions to sorting include:

- All statements cannot be put into a single pile
- All statements cannot be put into their own separate piles (although *some* statements may be grouped by themselves).
- Each statement can be placed in only one pile (i.e., a statement can't be placed in two piles at the same time)
- Remember, you do not have to use as many piles as there are boxes displayed.

In order to sort the statements, place statement cards into piles that represent the same category.

- 1) Place statements that you would like to group together into the same envelope (there are 10 envelopes in your packet). If you have additional categories, please staple or clip the cards together.
- 2) Seal the envelope with the statements inside.
- 3) Please name your groups/categories of statements on the front of each envelope. If your cards are clipped, please write the category name on the top card.
- 4) Place all envelopes and clipped statements back into the large 8 ½ x 11 envelope.

## Online Qualtrics Survey Directions and Layout

Q5

**Greensboro Child Response Initiative Sorting, Ranking, and Rating Protocol** A list of statements was compiled based on the previous brainstorming session and follow-up surveys. The statements are provided below.

**Sorting Statements**

Please sort or group the statements into piles in a way that makes sense to you. Some restrictions to sorting include:

- All statements cannot be put into a single pile
- All statements cannot be put into their own separate piles (although some statements may be grouped by themselves).
- Each statement can be placed in only one pile (i.e., a statement can't be placed in two piles at the same time)
- Remember, you do not have to use as many piles as there are boxes displayed.
- Each statement must be placed into one of the boxes on the right-hand side of the screen (there should not be any items left over in the items box).

In order to sort the statements, drag and drop the statements into the boxes on the survey.

- 1) Place statements that you would like to group together into the same box.
- 2) Please name your groups/categories of statements at the top of each box in the next set of questions below.

If at any point during this activity you have any questions, feel free to contact Korinne Chiu at [k\\_chiu@uncg.edu](mailto:k_chiu@uncg.edu) or (305) 905-0712. Thank you!

- | Items  |
|--|
| 1) Families and individuals don't understand or minimize the impact or potential impact that trauma might have on development  |
| 2) Parents are lacking some of the skills or nurturing to really prioritize their children's needs   |
| 3) Parents don't have the emotional IQ/Emotional intelligence to prioritize the needs of their children  |
| 4) Bad experiences with the system   |
| 5) Bad experiences with law enforcement  |
| 6) Long history with DSS   |
| 7) Misconception of DSS (e.g., DSS is bad)   |
| 8) Misconception of law enforcement (e.g., Law is bad)   |
| 9) Misunderstanding of the benefits and help that can be provided by current systems in place  |
| 10) Parents were not protected when they were a child by law enforcement or DSS and are reluctant to engage in the system ("I am not putting my child through that for nothing to happen") |
| 11) Parents are worried about  |

Group 1	Group 2
Group 3	Group 4
Group 5	Group 6
Group 7	Group 8

## APPENDIX G

### R SYNTAX

```
sort<-read.table("sortdata.csv", sep="," , header=T)
sort

library(mcclust)
#this function allows me to convert my cluster groupings
into similarity
#matrices for each participant

#I could tidy this up by creating a for loop
cl1 <- sort[,1]
m1<-(Sim <- cltoSim(cl1))
m1

cl2 <- sort[,2]
m2<-(Sim <- cltoSim(cl2))
m2

cl3 <- sort[,3]
m3<-(Sim <- cltoSim(cl3))
m3

cl4 <- sort[,4]
m4<-(Sim <- cltoSim(cl4))
m4

cl5 <- sort[,5]
m5<-(Sim <- cltoSim(cl5))
m5

cl6 <- sort[,6]
m6<-(Sim <- cltoSim(cl6))
m6

cl7 <- sort[,7]
```

```

m7<-(Sim <- cltoSim(c17))
m7

c18 <- sort[,8]
m8<-(Sim <- cltoSim(c18))
m8

c19 <- sort[,9]
m9<-(Sim <- cltoSim(c19))
m9

c110 <- sort[,10]
m10<-(Sim <- cltoSim(c110))
m10

c111 <- sort[,11]
m11<-(Sim <- cltoSim(c111))
m11

c112 <- sort[,12]
m12<-(Sim <- cltoSim(c112))
m12

c113 <- sort[,13]
m13<-(Sim <- cltoSim(c113))
m13

#In order to create the final similarity matrix, I sum
across the above matrices
simm<-m1+m2+m3+m4+m5+m6+m7+m8+m9+m10+m11+m12+m13

#I write my table for future analyses
write.table(simm, file="simmatrix.csv", sep=",")
dist<-13-simm

write.table(dist, file="distance.csv", sep=",")

#for MDS analyses
library(vegan)
mydata <- dist
#2 dimensions
mydata.mds.ALT2 <- metaMDS(mydata, distance= "euclidean",
k=2, trymax=50, autotransform=FALSE)
points2<-mydata.mds.ALT2$points

```

```

write.table(points2, file = "mdspoints.csv", append =
FALSE, sep = " ,", col.names=T, row.names=T)
stress2<-mydata.mds.ALT2$stress
#stress=.17
#has 2 convergent solutions after 11 tries
gof2d<-goodness(mydata.mds.ALT2)
plot(mydata.mds.ALT2, display = "sites", type = "n")
points(mydata.mds.ALT2, display = "sites", cex = gof2d/2)
stressplot(mydata.mds.ALT2, dis, pch, p.col = "blue", l.col
= "red", lwd = 2)

```

```

#3 dimensions
mydata.mds.ALT3 <- metaMDS(mydata, distance= "euclidean",
k=3, trymax=500, autotransform=FALSE)
points3<-mydata.mds.ALT3$points
write.table(points3, file = "mdspoints3.csv", append =
FALSE, sep = " ,", col.names=T, row.names=T)
stress3<-mydata.mds.ALT3$stress
#stress=.12
#solution did not converge after 50 tries

```

```

#4 dimensions
mydata.mds.ALT4 <- metaMDS(mydata, distance= "euclidean",
k=4, trymax=500, autotransform=FALSE)
points4<-mydata.mds.ALT4$points
write.table(points4, file = "mdspoints4.csv", append =
FALSE, sep = " ,", col.names=T, row.names=T)
stress4<-mydata.mds.ALT4$stress
#stress=.09
#solution did not converge after 50 tries

```

```

#MDS plot of 2-D points
points2plot<-cbind(1:85,points2)
plot(mydata.mds.ALT2)
library(calibrate)
textxy(points2plot[,2], points2plot[,3], points2plot[,1])
# Ward Hierarchical Clustering

```

```

#for metaMDS
clust<-plot(hclust(dist(mydata.mds.ALT2$points),
method="ward"))
#metaMDS plots
d <- dist(mydata.mds.ALT2$points)

```

```

fitmeta <- hclust(d, method="ward")
plot(fitmeta) # display dendrogram
groups <- cutree(fitmeta, k=7) # cut tree into 5 clusters
# draw dendrogram with red borders around the 5 clusters
rect.hclust(fitmeta, k=6, border="red")

#regular MDS point map

pdf("MDSptmap.pdf")
plot(points2, type="p",cex = .5)
textxy(points2plot[,2], points2plot[,3], points2plot[,1],
cx=.7)
dev.off()

#MDS point map with clusters indicated by color
pdf("MDSptclustermap.pdf")
plot(points2, type="p",cex = .7,col=groups, pch=19)
textxy(points2plot[,2], points2plot[,3], points2plot[,1],
cx=.7)
dev.off()

#plot with prevalence ratings as point size
pdf("MDSptratingprevmap.pdf")
plot(points2, type="p",cex =
ptrate$prevalence/8,col=groups, pch=15)
textxy(points2plot[,2], points2plot[,3], points2plot[,1],
cx=.7)
dev.off()

#plot with prevalence ratings as point size
pdf("MDSptmap.pdf")
plot(points2, type="p",cex =
ptrate$prevalence/5,col=groups, pch=15)
textxy(points2plot[,2], points2plot[,3], points2plot[,1],
cx=.7)
legend("topright", title= "Prevalence Rating", pt.cex=leg,
bty="n",bg=par("bg"),legend=1:5, pch=15, cex=1, col=8)
dev.off()

#plot with capacity to change ratings as point size
plot(points2, type="p",cex = ptrate$captochg/5,col=groups,
pch=15)
textxy(points2plot[,2], points2plot[,3], points2plot[,1],
cx=.7)

```

```

legend("topright", title= "Change Rating", pt.cex=leg,
btty="n",bg=par("bg"),legend=1:5, pch=15, cex=1, col=8)

rate<-read.table("ratings.csv", sep=",", header=T)

ptbygp<-read.table("ptbygp.csv", sep=",", header=T)

ptrate<-cbind(ptbygp,rate)
#for polygons for each cluster border

library(grDevices) # load grDevices package
df1 <- data.frame(X = c(-3.960046983,-3.686484313,-
4.03917413,-3.733970184,-0.591659827,-0.400675232,
-1.076364925,-2.522184669,-2.900488262,-2.0812385,-
3.813270024,-4.615414904,-2.653042567,
-3.173934932,-2.904283098,-1.918858141,-2.162363498),
                Y = c(-2.188110969,-2.743967652,-
2.821703222,-2.398562326,-2.781312342,-2.454779077,
-3.391118777,-2.595380858,-2.349887206,-2.064727843,-
1.303880549,-3.056602168,-4.088737747,
-3.344551993,-3.513609584,-2.842498214,-3.664215222)) #
store X,Y together
con.hull.pos1 <- chull(df1) # find positions of convex hull
con.hull1 <-
rbind(df1[con.hull.pos1,],df1[con.hull.pos1[1],]) # get
coordinates for convex hull
lines(con.hull1)

df2 <- data.frame(X = c(-2.923474307,-3.006587403,-
2.873122176,-2.664633521,
-2.735794865,-2.590606307,-2.262998618,-2.219899106,-
2.917092946,-3.079702981),
                Y =
c(1.209269405,1.245522024,0.988968675,1.017894254,0.4056890
67,0.693509772,
0.945829645,1.426313122,-0.127024228,0.665297345)) # store
X,Y together
con.hull.pos2 <- chull(df2) # find positions of convex hull
con.hull2 <-
rbind(df2[con.hull.pos2,],df2[con.hull.pos2[1],]) # get
coordinates for convex hull
lines(con.hull2)

```

```

df3 <- data.frame(X = c(-1.66,0.62,0.36,-1.56,-0.63,-
1.26,0.41,-1.04,0.90,1.48),
                 Y = c(-0.22,0.42,0.56,0.09,-0.70,-
0.22,1.36,1.72,-1.41,-0.80)) # store X,Y together
con.hull.pos3 <- chull(df3) # find positions of convex hull
con.hull3 <-
rbind(df3[con.hull.pos3,],df3[con.hull.pos3[1],]) # get
coordinates for convex hull
lines(con.hull2)

df4 <- data.frame(X =
c(1.23,2.20,1.99,2.10,1.20,2.37,2.05,1.90,0.52,1.09,1.50,2.
67,1.80,1.43,1.23,2.27,
2.32,3.27,1.46,2.99,2.83,3.00,2.73,0.70,2.29,3.76),
                 Y =
c(0.75,1.83,0.47,2.97,2.50,1.37,1.44,1.58,2.58,2.28,0.69,0.
67,0.92,2.61,1.51,
1.24,2.93,1.12,2.04,0.98,2.08,2.46,0.22,3.12,1.53,2.23)) #
store X,Y together
con.hull.pos4 <- chull(df4) # find positions of convex hull
con.hull4 <-
rbind(df4[con.hull.pos4,],df4[con.hull.pos4[1],]) # get
coordinates for convex hull

df5 <- data.frame(X =
c(2.81,3.50,3.10,1.75,2.94,4.06,4.29,3.37,2.36,5.49,5.49,4.
44,3.01,2.59),
                 Y = c(-3.99,-3.06,-3.86,-3.06,-0.94,-
0.31,-1.33,-0.44,-3.05,-2.69,-2.69,-3.22,-2.45,-1.75)) #
store X,Y together
con.hull.pos5 <- chull(df5) # find positions of convex hull
con.hull5 <-
rbind(df5[con.hull.pos5,],df5[con.hull.pos5[1],]) # get
coordinates for convex hull

df6 <- data.frame(X = c(-1.50,-0.81,-2.06,-1.79),
                 Y = c(3.65,4.14,4.07,4.33)) # store X,Y
together
con.hull.pos6 <- chull(df6) # find positions of convex hull
con.hull6 <-
rbind(df6[con.hull.pos6,],df6[con.hull.pos6[1],]) # get
coordinates for convex hull

df7 <- data.frame(X = c(-4.71,-4.53,-7.03,-3.80),

```

```

                                Y = c(3.19,3.37,0.79,3.50)) # store X,Y
together
con.hull.pos7 <- chull(df7) # find positions of convex hull
con.hull7 <-
rbind(df7[con.hull.pos7,],df7[con.hull.pos7[1],]) # get
coordinates for convex hull

pdf("pointclustermap.pdf")
plot(points2, type="p",cex = .5)
textxy(points2plot[,2], points2plot[,3], points2plot[,1],
cx=.7)

plot(points2, type="p",cex = .7,col=groups, pch=19)
textxy(points2plot[,2], points2plot[,3], points2plot[,1],
cx=.7)

polygon(con.hull1, density=15,col=1)
polygon(con.hull2, density=15,col=2)
polygon(con.hull3, density=15, col=3)
polygon(con.hull4, density=15, col=4)
polygon(con.hull5, density=15, col=5)
polygon(con.hull6, density=15, col=6)
polygon(con.hull7, density=15, col=7)
dev.off()
#for ladder graph for prevalence and capacity to change
pdf("laddergraphratings.pdf")
x<-data.frame("capacity to change"=clustcaptchg[,2],
"prevalence"=clustprev[,2])
xx<-stack(x)
par(las=1) # horizontal axis labels
with(xx,
stripchart(values~ind, xlim=c(1,2),pch=19, main="Pattern
Matching",
ylab="Average Rating", vertical=TRUE, col=c("red",
"green")))
apply(x,1,lines,col="blue")
dev.off()
#for go-zone plots
clust1<-read.table("Clust1.csv", sep="," , header=T)
plot(clust1$prevalence,clust1$captchg, xlab="Prevalence",
ylab="Capacity to Change", xlim=c(2.6,4.4),
ylim=c(1.5,4.4))
abline(h=mean(clust1$captchg), v=mean(clust1$prevalence))

```

```

textxy(clust1[,6], clust1[,7], clust1[,1], cx=.7)

clust2<-read.table("Clust2.csv", sep="," , header=T)
plot(clust2$prevalence,clust2$captochg, xlab="Prevalence",
ylab="Capacity to Change", xlim=c(2.6,4.4),
ylim=c(1.5,4.4))
abline(h=mean(clust2$captochg), v=mean(clust2$prevalence))
textxy(clust2[,6], clust2[,7], clust2[,1], cx=.7)

clust3<-read.table("Clust3.csv", sep="," , header=T)
plot(clust3$prevalence,clust3$captochg, xlab="Prevalence",
ylab="Capacity to Change", xlim=c(2.6,4.4),
ylim=c(1.5,4.4))
abline(h=mean(clust3$captochg), v=mean(clust3$prevalence))
textxy(clust3[,6], clust3[,7], clust3[,1], cx=.7)

clust4<-read.table("Clust4.csv", sep="," , header=T)
plot(clust4$prevalence,clust4$captochg, xlab="Prevalence",
ylab="Capacity to Change", xlim=c(2.6,4.4),
ylim=c(1.5,4.4))
abline(h=mean(clust4$captochg), v=mean(clust4$prevalence))
textxy(clust4[,6], clust4[,7], clust4[,1], cx=.7)

clust5<-read.table("Clust5.csv", sep="," , header=T)
plot(clust5$prevalence,clust5$captochg, xlab="Prevalence",
ylab="Capacity to Change", xlim=c(2.6,4.4),
ylim=c(1.5,4.4))
abline(h=mean(clust5$captochg), v=mean(clust5$prevalence))
textxy(clust5[,6], clust5[,7], clust5[,1], cx=.7)

clust6<-read.table("Clust6.csv", sep="," , header=T)
plot(clust6$prevalence,clust6$captochg, xlab="Prevalence",
ylab="Capacity to Change", xlim=c(2.6,4.4),
ylim=c(1.5,4.4))
abline(h=mean(clust6$captochg), v=mean(clust6$prevalence))
textxy(clust6[,6], clust6[,7], clust6[,1], cx=.7)

clust7<-read.table("Clust7.csv", sep="," , header=T)
plot(clust7$prevalence,clust7$captochg, xlab="Prevalence",
ylab="Capacity to Change", xlim=c(2.6,4.4),
ylim=c(1.5,4.4))
abline(h=mean(clust7$captochg), v=mean(clust7$prevalence))
textxy(clust7[,6], clust7[,7], clust7[,1], cx=.7)
#prevalence data by cluster and stakeholder group

```

```

LEp<-c(3.58, 3.36, 3.34, 3.05, 3.45, 3.10, 3.25)
MHPp<-c(3.45, 3.37, 3.47, 3.32, 3.17, 2.83, 3.33)
GCRIp<-c(3.69,4.04,3.85, 3.32, 3.93, 3.65, 4.2)
prevclust<-cbind(LEp,MHPp,GCRIp)

write.table(prevclust, file = "prevalence groups.csv",
append = FALSE, sep = " ,",col.names=T)

#ladder graph for prevalence
p<-data.frame("GCRI"=GCRIp, "Law Enforcement"=LEp, "Mental
Health"=MHPp)
pp<-stack(p)
par(las=1)
par(mar=c(3.0, 3.0, 1.5, 1.5))
with(pp,
stripchart(values~ind, xlim=c(.75,3.25),pch=19,
main="Prevalence of Barrier",
ylab="Average Rating", vertical=TRUE, col=c(1:7, 1:7,
1:7)))
apply(p,1,lines,col="black")

#capacity to change data by cluster and stakeholder group
LEc<-c(3.04, 3.29, 3.36, 3.62, 2.54, 3.25, 3.60)
MHPc<-c(2.75, 3.10, 3.63, 3.66, 2.29, 2.75, 2.17)
GCRIC<-c(2.86, 2.48, 2.99, 3.24, 2.29, 2.60, 3.00)
captochgclust<-cbind(LEc,MHPc,GCRIC)

write.table(captochgclust, file = "capacitychg groups.csv",
append = FALSE, sep = " ,",col.names=T)

#ladder graph for capacity to change
c<-data.frame("GCRI"=GCRIC, "Law Enforcement"=LEc, "Mental
Health"=MHPc)

```

```

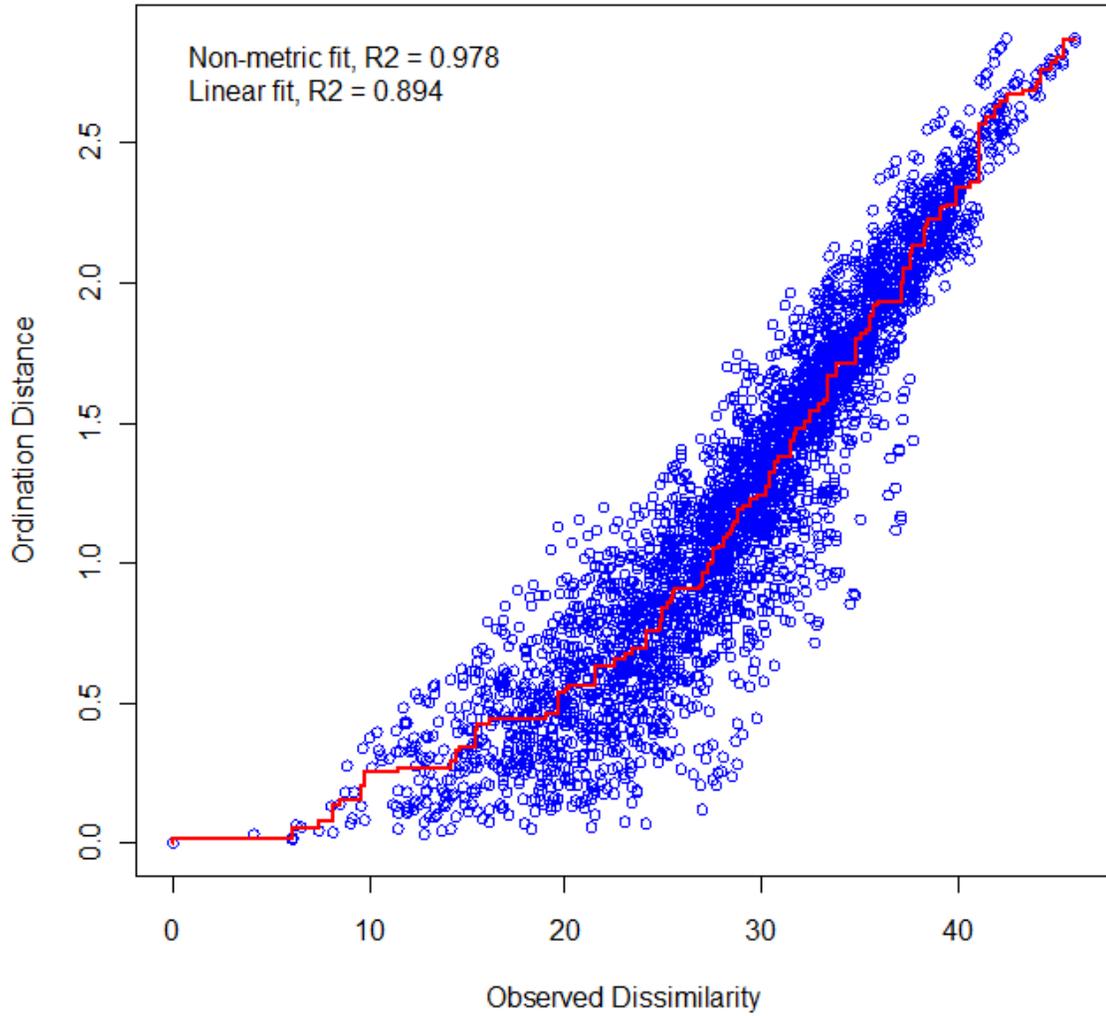
cc<-stack(c)
par(las=1)
par(mar=c(3.0, 3.0, 1.5, 1.5))
with(cc,
stripchart(values~ind, xlim=c(.75,3.25),pch=19,
main="Capacity to Change Barrier",
ylab="Average Rating", vertical=TRUE, col=c(1:7, 1:7,
1:7)))
apply(c,1,lines,col=1:7)
#for ladder graph for prevalence and capacity to change
pdf("laddergraphratings.pdf")
x<-data.frame("capacity to change"=clustcaptochg[,2],
"prevalence"=clustprev[,2])
xx<-stack(x)

par(las=1) # horizontal axis labels
with(xx,
stripchart(values~ind, xlim=c(1,2),pch=19, main="Pattern
Matching",
ylab="Average Rating", vertical=TRUE, col=c("red",
"green")))
apply(x,1,lines,col="blue")
dev.off()

```

APPENDIX H

SHEPARD DIAGRAM AND CLUSTER DENDOGRAM





## APPENDIX I

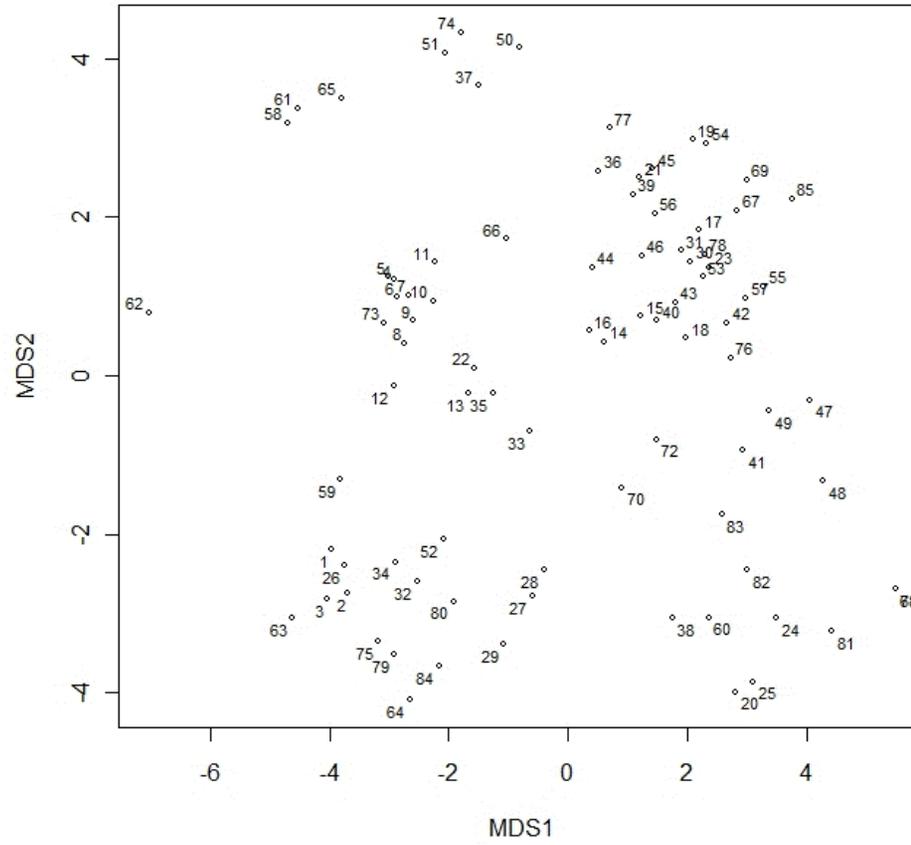
### INTERPRETATION AND REFLECTION SESSION SLIDES

# Concept Mapping Findings

- Based on the previous two stages of statement generation and sorting and rating statements, findings have been integrated and analyzed. You will be presented with the original, complete set of statements generated based on the focus prompt:
- “Generate statements that describe specific community or systems factors that are barriers to accessing services for children who witness violence or experience trauma”.

# Point Map

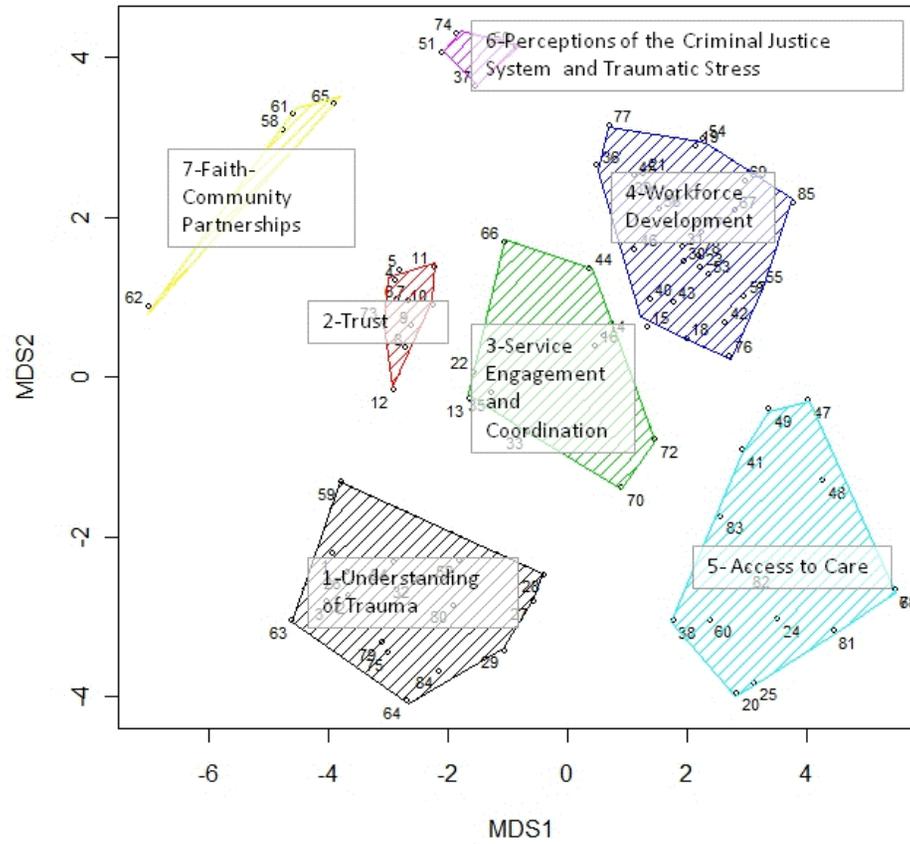
ISI



# Cluster Labeling

- Please refer to your list of statements by cluster
- Review each cluster of statements and think about a label that would best describe that group of statements.
- For a visual representation of the statements, please see the next slide. Cluster colors are noted on the statement list.

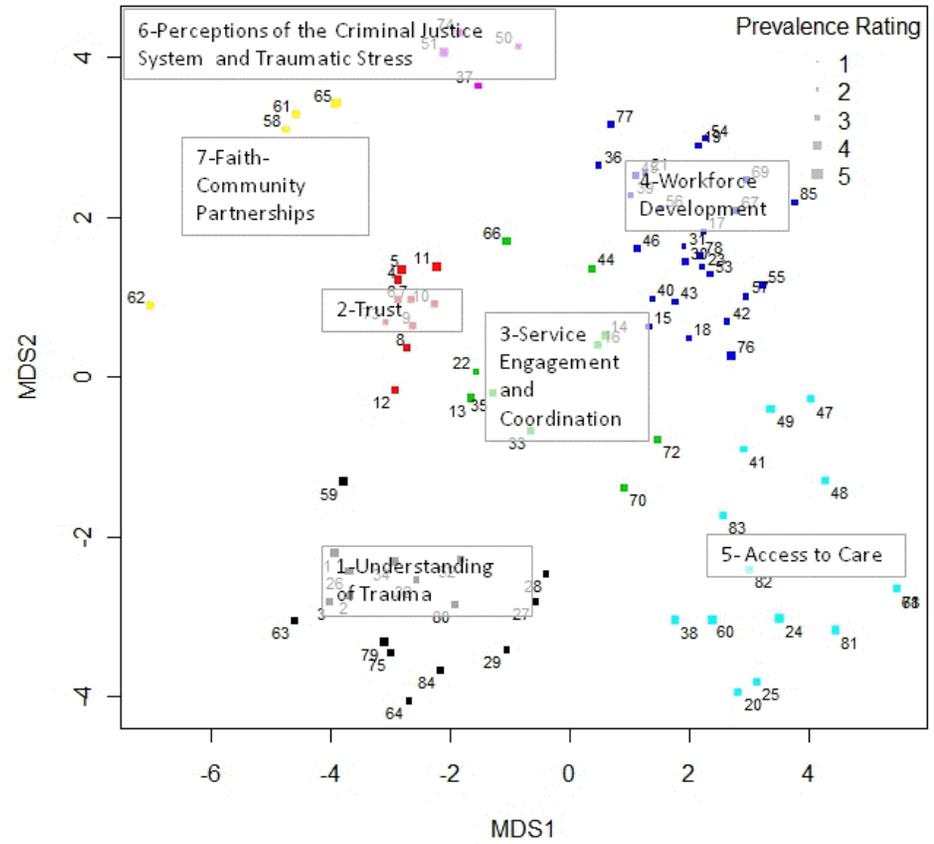
# Point Cluster Map



## Questions about Point Cluster Map

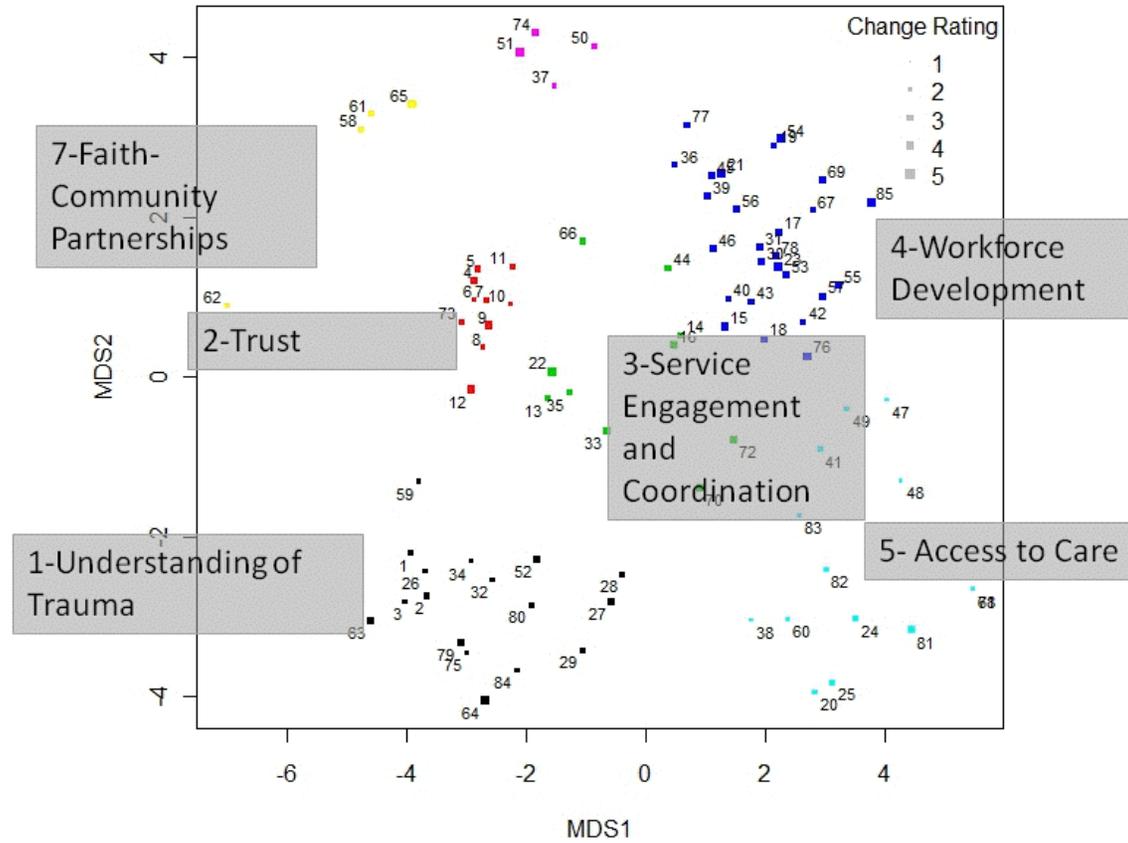
- Are all of the statements equally related to the cluster topic?
- What types of actions are suggested by the cluster contents?
- Are any of these actions already being addressed, partially or totally?

Point Rating Map for Prevalence of Barrier

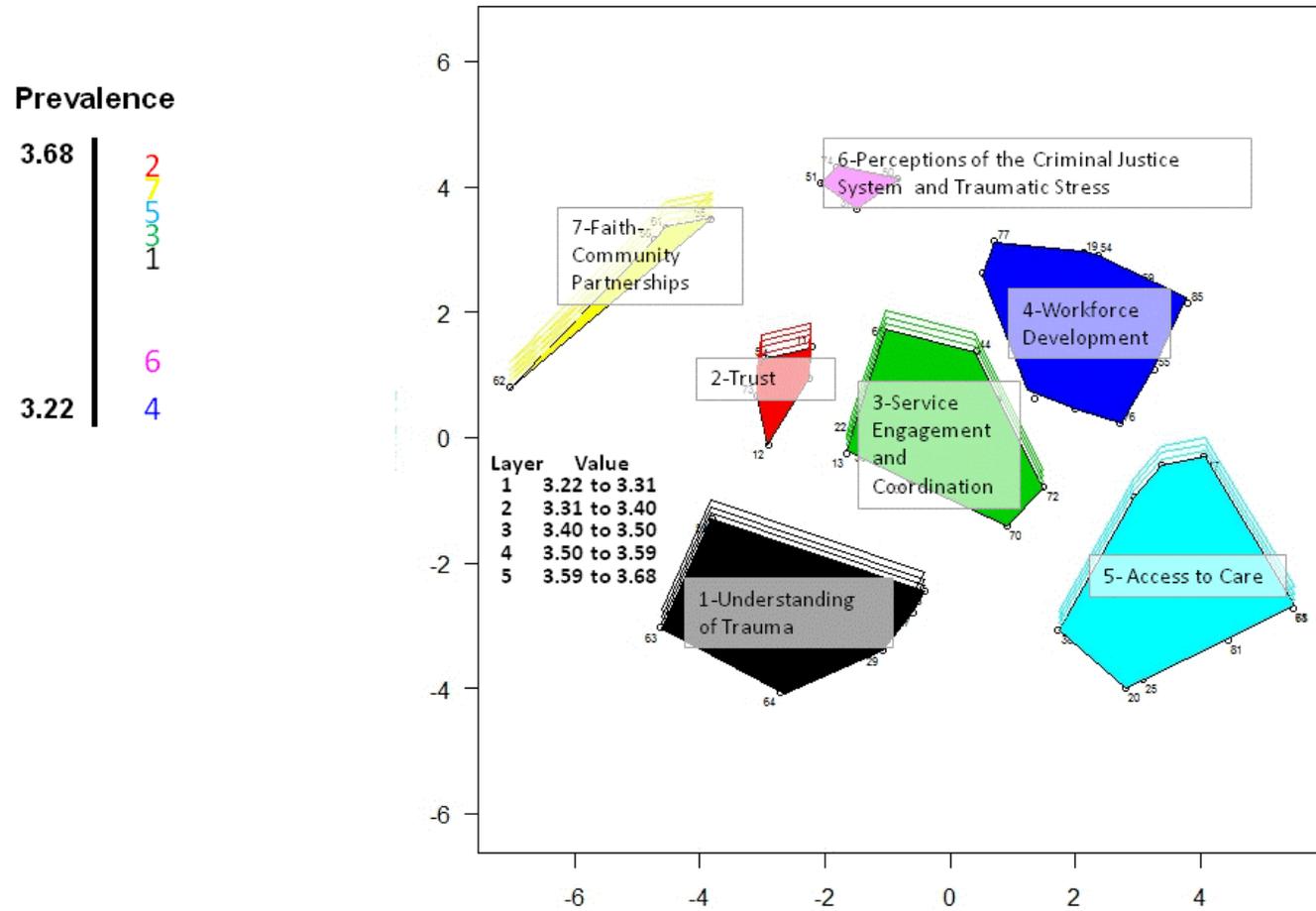


155

Point Rating Map for Capacity to Change Barrier



Cluster Rating Map for Prevalence of Barrier



Cluster Rating Map for Capacity to Change Barrier

Capacity to Change

3.47

4

3

7

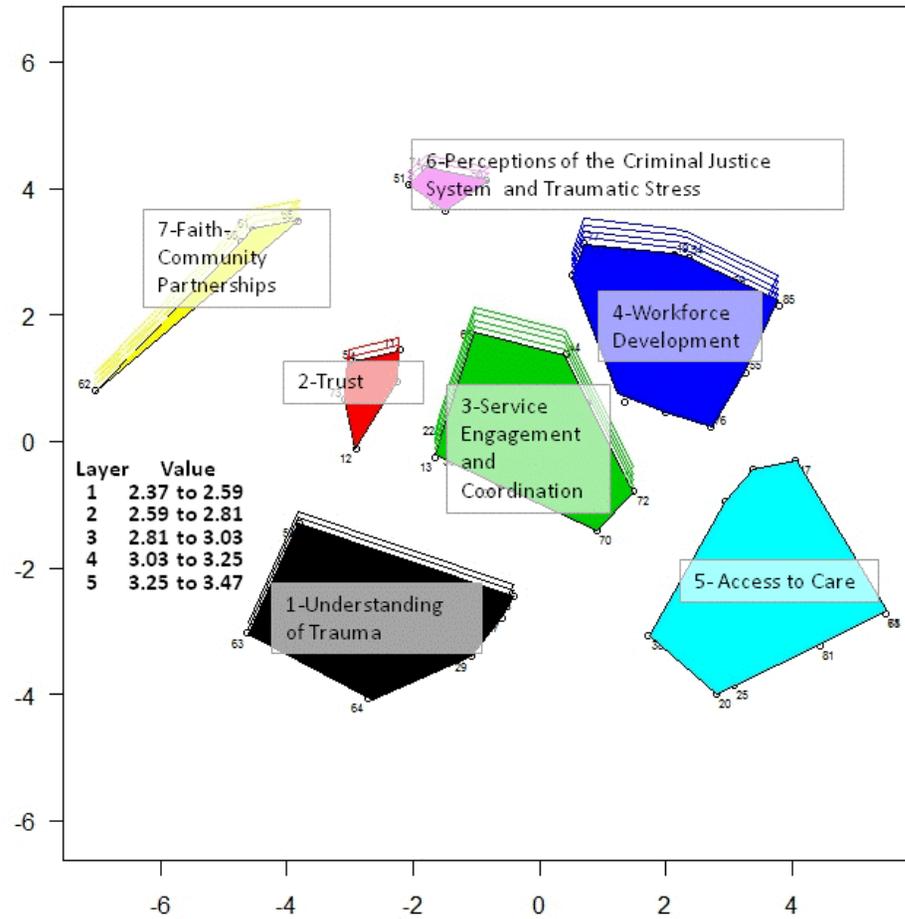
1

2

6

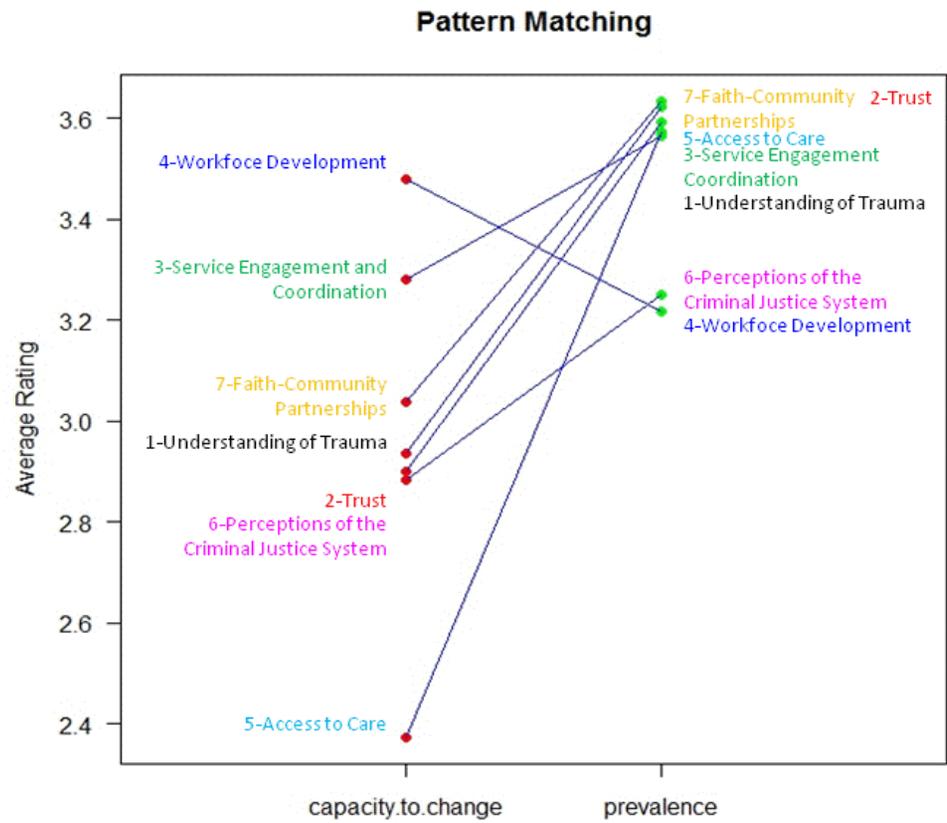
2.37

5



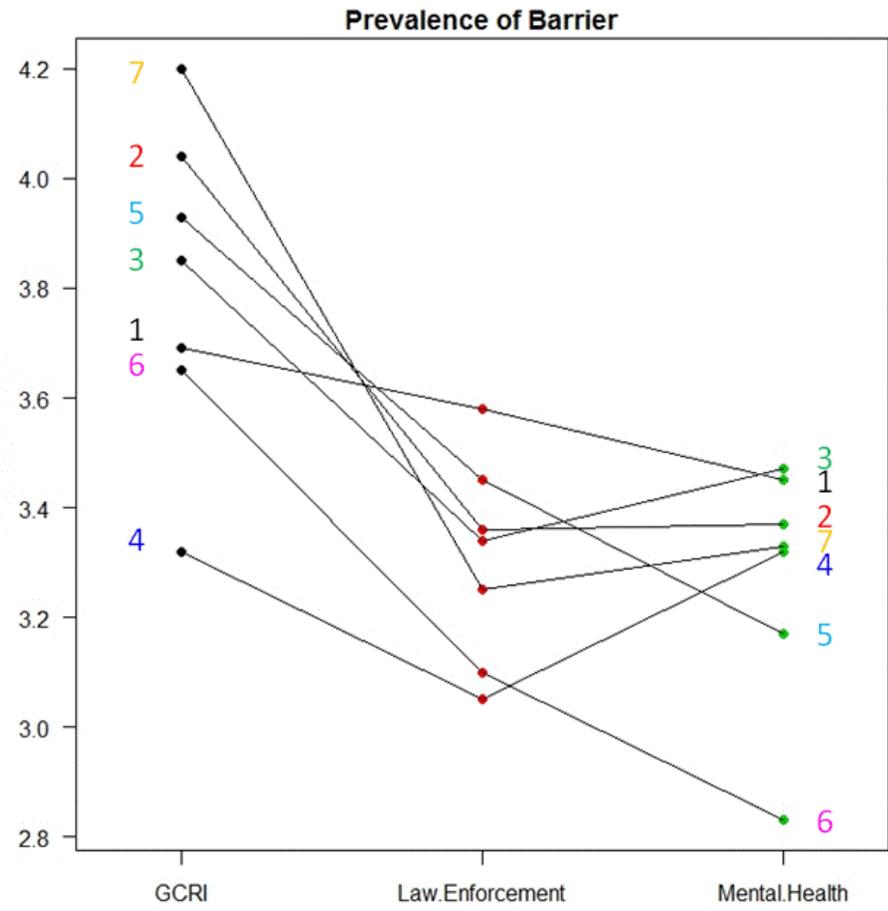
## Questions about Pattern Matching

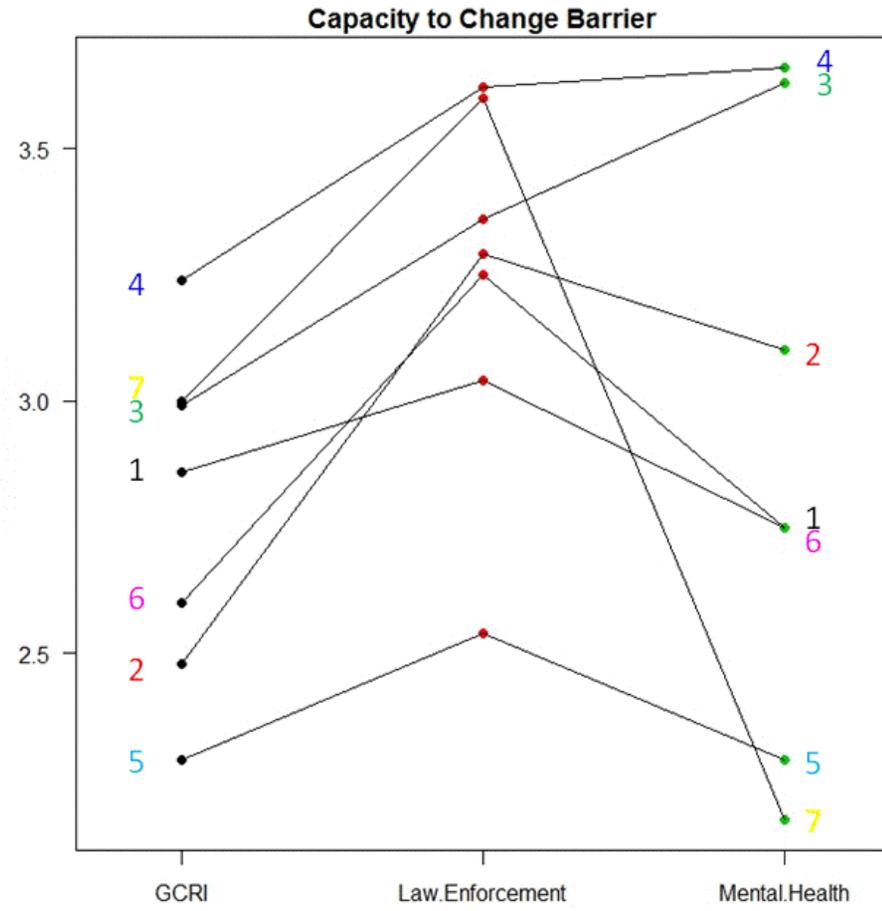
- What does this pattern matching visualization tell us about the prevalence and capacity to change clusters?



## Questions about Pattern Matching

- What do these pattern matching visualizations tell us about the differences in stakeholder perceptions by cluster?

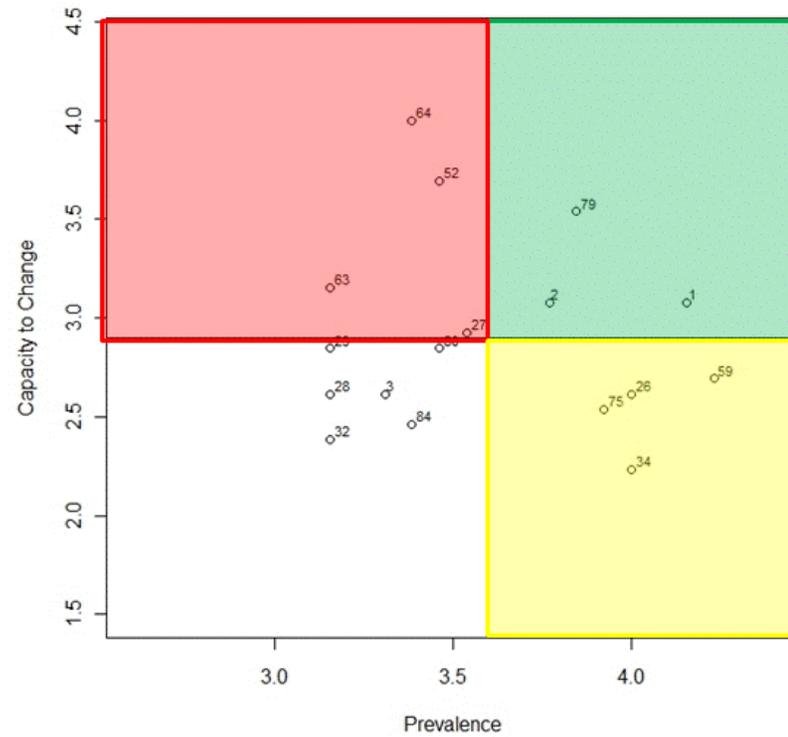




## Questions about Go-Zones

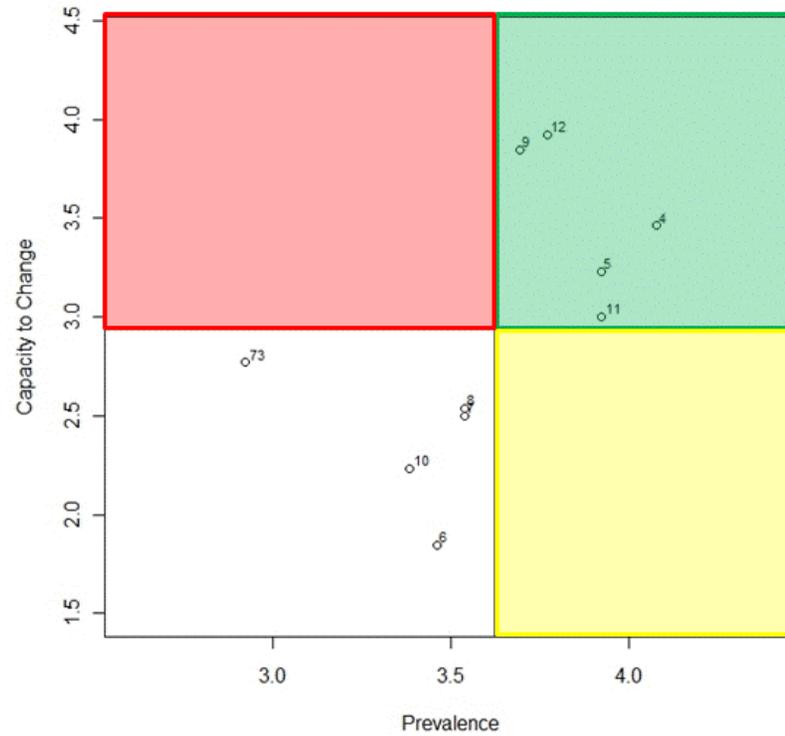
- What actions do go-zone quadrant displays suggest?
- What evidence is there about the need for each action and the level of resources (e.g., cost, personnel) that would need to be allocated for each action?

## Cluster 1-Understanding of Trauma



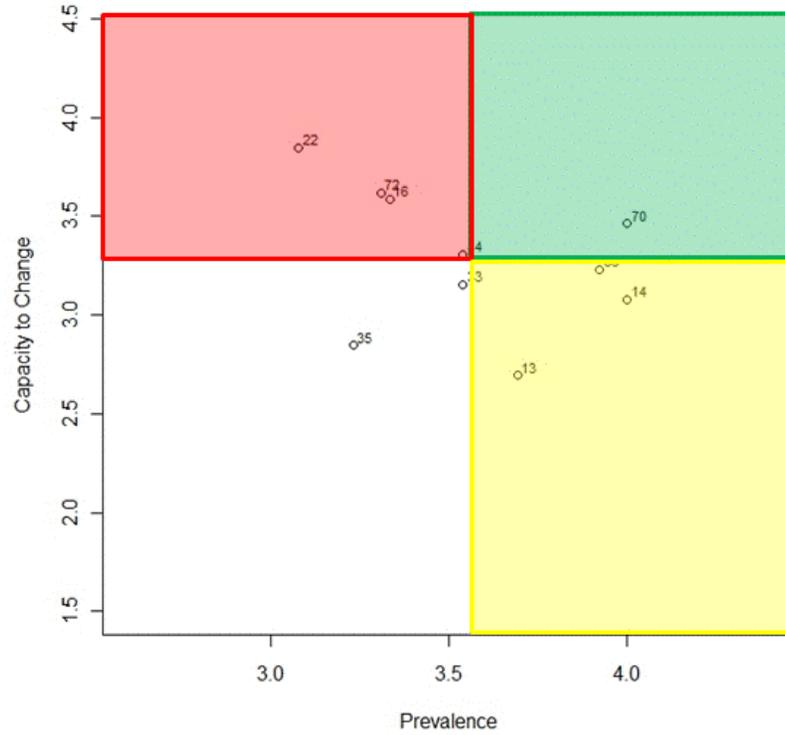
- 1- Families and individuals don't understand or minimize the impact or potential impact that trauma might have on development
- 2- Parents are lacking some of the skills or nurturing to really prioritize their children's needs
- 79- Clients do not know how to access these services

## Cluster 2-Trust



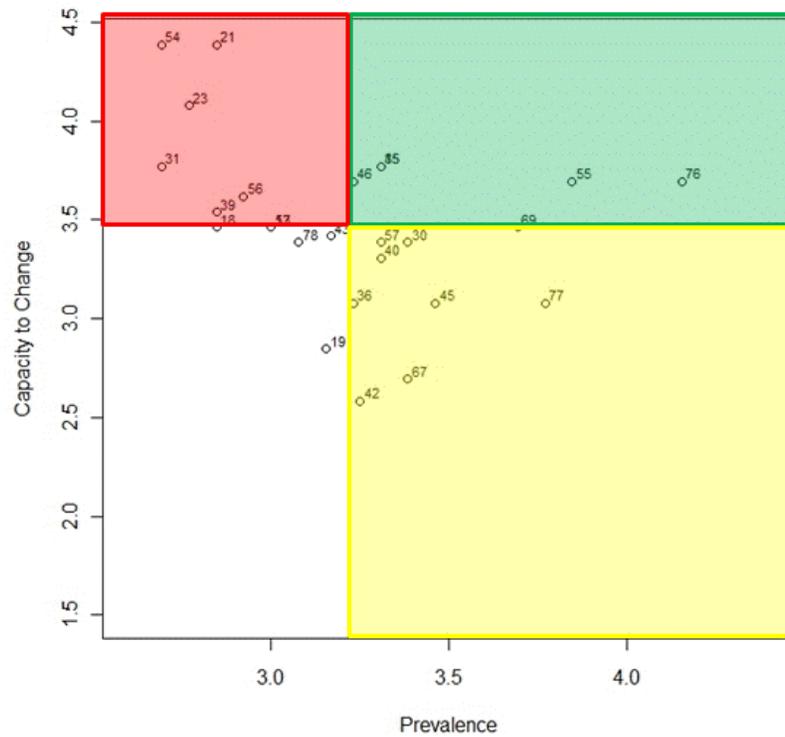
- 4- Bad experiences with the system
- 5- Bad experiences with law enforcement
- 9- Misunderstanding of the benefits and help that can be provided by current systems in place
- 11- Parents are worried about who is going to get in trouble when reporting a case
- 12- Families may not have a concrete idea of what services are going to look like or what services consist of

### Cluster 3-Service Engagement and Coordination



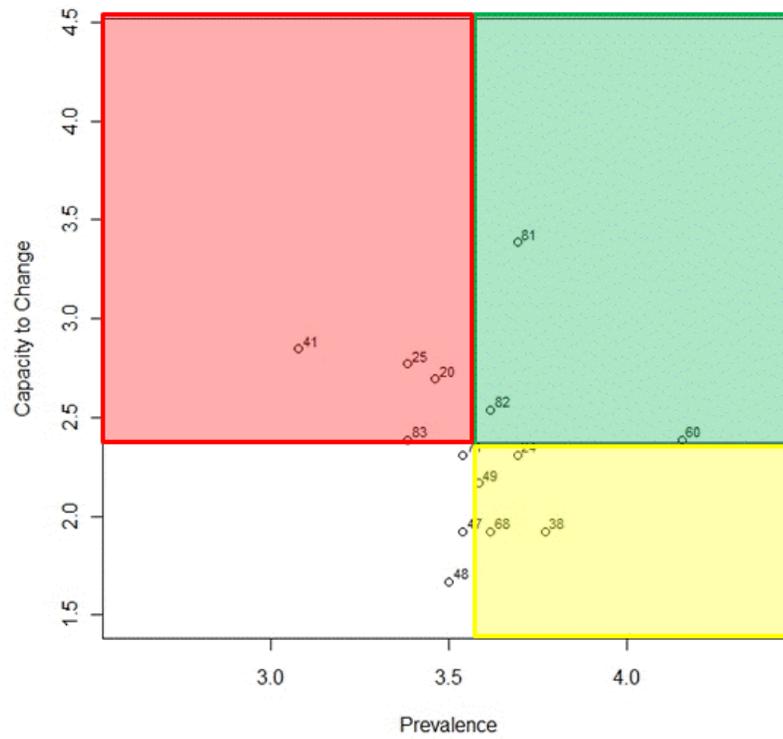
70- Time delay between the incident and the time help arrives to assist the children

### Cluster 4-Workforce Development



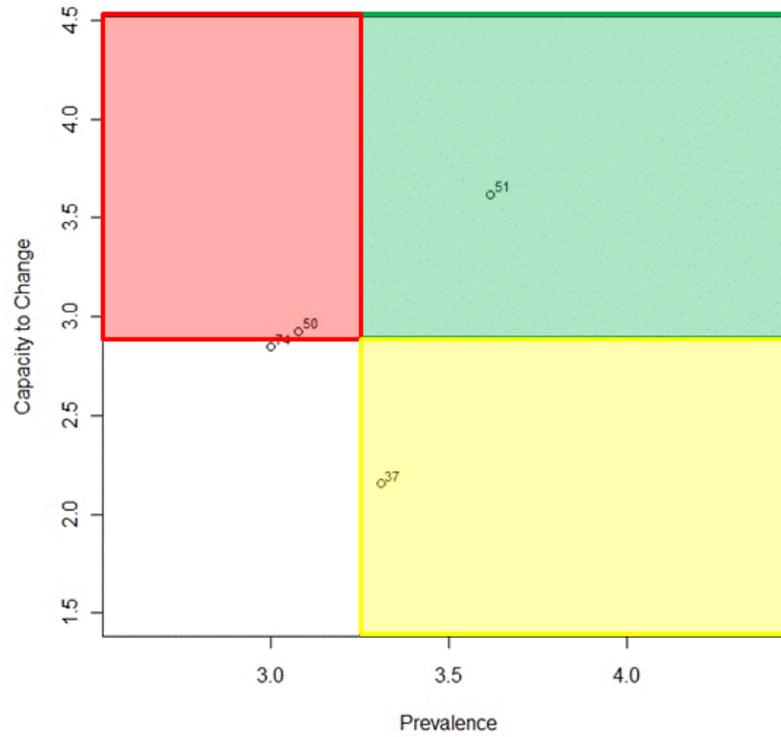
- 15- Some services work with the child and the child's needs, but do not communicate with the parent what the child is learning and what the parents can learn as well to try to change too
- 46- Providers may be unclear of which services are most appropriate at which time
- 55- Need for more trauma-informed care
- 76- 8:00-5:00 Office hours of providers (no weeknight or weekend availability)
- 85- Lack of coordination between mental health providers and domestic violence advocates

### Cluster 5-Access to Care



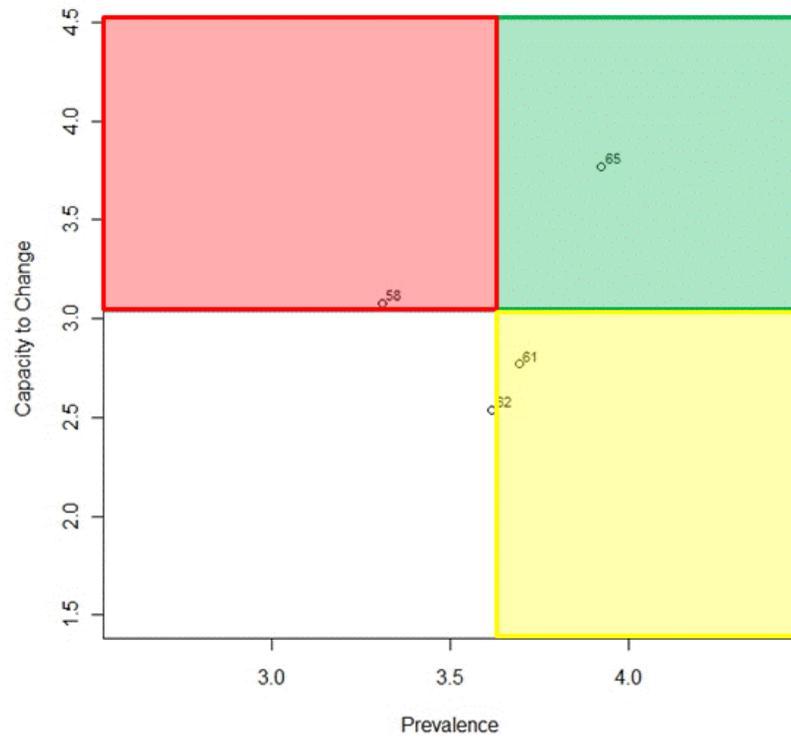
- 60- Lack of juvenile sex offender services in the county (unless prosecuted)
- 81- Transportation barriers
- 82- Language and cultural barriers

### Cluster 6-Perceptions of the Criminal Justice System and Traumatic Stress



51- Law enforcement may not be aware of the intricacies of trauma and the needs of the client/case

### Cluster 7-Faith-Community Partnerships



65- Lack of collaboration and education with faith community

## Reflection Questions

- How can this information be used to create an action plan for G-CRI?
- Do you think that these visualizations reflect your perspectives of G-CRI?
- What did you think of the concept mapping process? Please note any challenges or limitations as well as unique aspects of this process.

APPENDIX J

STATEMENTS BY AVERAGE RATING AND CLUSTER

Understanding of Trauma		
Statements in Cluster 1 (in black)	Prevalence	Capacity to Change
59) Family may think that it is a choice to report the incident (victim and perpetrator in the same family)	4.23	2.69
1) Families and individuals don't understand or minimize the impact or potential impact that trauma might have on development	4.15	3.08
26) Families do not have a concept of trauma because that is all they have ever known (trauma is the norm)	4.00	2.62
34) Parents want to provide their child with assistance, but do not want to put in the work ("here's my child, fix him")	4.00	2.23
75) Family not feeling safe to access services due to offender still being in household	3.92	2.54
79) Clients do not know how to access these services	3.85	3.54
2) Parents are lacking some of the skills or nurturing to really prioritize their children's needs	3.77	3.08
27) It is a norm for families to have services recommended over and over again in the same type of recommendations that they never engage in	3.54	2.92
52) Families may not feel validated in what they may need	3.46	3.69
80) Client resistance to assistance	3.46	2.85
64) Lack of education of sex abuse and child abuse as a crime	3.38	4.00
84) Willingness of family to make contact or seek assistance for the children	3.38	2.46
3) Parents don't have the emotional IQ/Emotional intelligence to prioritize the needs of their children	3.31	2.62
28) Trauma is never resolved despite services provided	3.15	2.62
29) Trauma cycle is never broken	3.15	2.85
32) Clients are reluctant to having the status quo change	3.15	2.38
63) Many people still view child sex abuse and child abuse as a family matter (not a crime)	3.15	3.15

Trust

Statements in Cluster 2 (in red)	Prevalence	Capacity to Change
4) Bad experiences with the system	4.08	3.46
5) Bad experiences with law enforcement	3.92	3.23
11) Parents are worried about who is going to get in trouble when reporting a case	3.92	3.00
12) Families may not have a concrete idea of what services are going to look like or what services consist of	3.77	3.92
9) Misunderstanding of the benefits and help that can be provided by current systems in place	3.69	3.85
7) Misconception of DSS (e.g., DSS is bad)	3.54	2.50
8) Misconception of law enforcement (e.g., Law is bad)	3.54	2.54
6) Long history with DSS	3.46	1.85
10) Parents were not protected when they were a child by law enforcement or DSS and are reluctant to engage in the system (“I am not putting my child through that for nothing to happen”)	3.38	2.23
73) Parent or family has heard about or experienced victimization from law enforcement personnel (such as juvenile detention staff) and avoid all services out of fear	2.92	2.77

### Service Engagement and Coordination

Statements in Cluster 3 (in green)	Prevalence	Capacity to Change
14) Services are too slow	4.00	3.08
70) Time delay between the incident and the time help arrives to assist the children	4.00	3.46
66) Lack of collaboration and education related to different cultural beliefs	3.92	3.23
13) Stigma of accessing services	3.69	2.69
33) Lack of follow-up for services from clients	3.54	3.15
44) Perceived lack of coordination of services (services may not be consistent)	3.54	3.31
16) Clients don't think that their voices are heard	3.33	3.58
72) Lack of communication between the children/parents and the resources	3.31	3.62
35) Clients jump from service to service (think that maybe an agency is ineffective, so try a new one)	3.23	2.85
22) Misperception of the risk/benefits of services	3.08	3.85

### Workforce Development

Statements in Cluster 4 (in royal blue)	Prevalence	Capacity to Change
76) 8:00-5:00 Office hours of providers (no weeknight or weekend availability)	4.15	3.69
55) Need for more trauma-informed care	3.85	3.69
77) DSS workers are oftentimes unfriendly and even less sensitive to needs	3.77	3.08
69) Lack of communication between all parties involved (those that are involved need to be kept up to date "in the loop" for what the outcome is)	3.69	3.46
45) Fragmented system of care approach to recovery	3.46	3.08
30) Services referred are ineffective	3.38	3.38
67) Confidentiality and staffing cases limits discussing and coordinating cases between agencies	3.38	2.69
15) Some services work with the child and the child's needs, but do not communicate with the parent what the child is learning and what the parents can learn as well to try to change too	3.31	3.77
40) Lack of follow-up or follow-through with services	3.31	3.31
57) Secondary traumatization due to procedures/trauma-insensitive dialogue	3.31	3.38

Statements in Cluster 4 (in royal blue)	Prevalence	Capacity to Change
85) Lack of coordination between mental health providers and domestic violence advocates	3.31	3.77
42) Unplanned changes in the system-system puts changes into place and does not plan for changes before they start	3.25	2.58
36) Discrepancy in perspective between client and provider	3.23	3.08
46) Providers may be unclear of which services are most appropriate at which time	3.23	3.69
43) Client hoarding by providers (e.g., providers may keep clients in order keep their job instead of sending them to the appropriate service)	3.17	3.42
19) Class differences in service provision	3.15	2.85
78) Providers not being patient enough, failing to share services that are available if needed	3.08	3.38
17) Professionals “pretend to listen” but then do what they want to do anyway	3.00	3.46
53) Shortcutting or not paying appropriate attention to collaborating with the client on what type of problems/issues they have and what types of services they want	3.00	3.46
56) Inaccurate comments made by service providers may stigmatize the whole recovery process	2.92	3.62
18) Lack of respect for clients/being spoken down to	2.85	3.46
21) Lack of explanation of the benefits of services	2.85	4.38
39) Clients did not get the services promised or received	2.85	3.54
23) No one answers the phone at provider agencies	2.77	4.08
31) Providers are not listening to clients during the referral process	2.69	3.77
54) Lack of open dialogue with the clients	2.69	4.38

Access to Care

Statements in Cluster 5 (in aqua)	Prevalence	Capacity to Change
60) Lack of juvenile sex offender services in the county (unless prosecuted)	4.15	2.38
38) Legal status influencing access to services (e.g., citizenship)	3.77	1.92
24) Financial barriers	3.69	2.31
81) Transportation barriers	3.69	3.38
68) Insurance	3.62	1.92
82) Language and cultural barriers	3.62	2.54
49) Long waitlists for services	3.58	2.17
47) Public funds for system of care limit means of service provision (e.g., time, order of services provided)	3.54	1.92
71) Money for services	3.54	2.31
48) Value options (part of NC mental health and substance abuse services delivery related to insurance)	3.50	1.67
20) Physical access to services may be more of a hassle than services are worth	3.46	2.69
25) High cost of activities for children and families	3.38	2.77
83) Legal guardians must be present and give consent for children to have services	3.38	2.38
41) Professional anxiety in the system about future of mental health services	3.08	2.85

Perceptions of the Criminal Justice System and Traumatic Stress

Statements in Cluster 6 (in magenta)	Prevalence	Capacity to Change
51) Law enforcement may not be aware of the intricacies of trauma and the needs of the client/case	3.62	3.62
37) Discrepancy between resolution of case between law enforcement and client perspective	3.31	2.15
50) Law enforcement downplaying what is occurring	3.08	2.92
74) Lawyers are discouraged by the system and have suggested to the parent or child that their efforts will not result in a positive outcome	3.00	2.85

### Faith-Community Partnerships

Statements in Cluster 7 (in yellow)	Prevalence	Capacity to Change
65) Lack of collaboration and education with faith community	3.92	3.77
61) Churches may take on a traumatic event as a spiritual issue instead of a mental health issue (people may feel like they failed spiritually)	3.69	2.77
62) Understanding of mental health may get confused in spiritual counseling	3.62	2.54
58) Churches are reluctant to report to law enforcement and DSS	3.31	3.08

## APPENDIX K

### INTERPRETATION AND REFLECTION PROTOCOL

#### **Greensboro Child Response Initiative Interpretation and Reflection Session**

Based on the previous two stages of statement generation and sorting, ranking, and rating statements, findings have been integrated and analyzed. You will be presented with the original, complete set of statements generated based on the focus prompt:

“Generate statements that describe specific community or systems factors that are barriers to accessing services for children who witness violence or experience trauma”.

The sorting, ranking, and rating of these statements allowed us to create visual representations of the statements. Statements that were categorized together are represented as closer together in two-dimensional space. You will be presented with a few visual displays of the findings. We would like to discuss the findings with you. One visual display is called a cluster map. Statements that are related to each other are represented by a cluster. Please take some time to review the map. We will discuss and interpret the map. A few questions to keep in mind include (questions from Kane & Trochim, 2007):

- 1) Are all of the statements equally related to the cluster topic?
- 2) What new information might be added to define the cluster topic more fully?
- 3) What types of actions are suggested by the cluster contents?
- 4) Are any of these actions already being addressed, partially or totally?
- 5) What evidence is there about the need for each action and the level of resources (e.g., cost, personnel) that would need to be allocated for each action?
- 6) What are the neighboring clusters on the map, and do these clusters suggest any additional actions that might be taken?
- 7) Do other adjacent areas of the map suggest potential for either cooperative actions or conflicts between topical issues?
- 8) What variables does the project compare using pattern matching?
- 9) What actions do go-zone quadrant displays suggest?
- 10) How can this information be used to create an action plan for G-CRI?
- 11) Do you think that these visualizations reflect your perspectives of G-CRI?